



### Hose construction

Basically, a hose consists of:

used.

1 Rubber tube
Designed to have the best resistance for the conveyance of the specific medium.

2 Reinforcement
Which allows the hose to withstand dynamic pressure, absorbs compression strain and gives dimensional stability to the hose.

3 Rubber cover
Is designed to protect the reinforcement against abrasion, aggressive media such as acids, oils, chemicals, ozone. Where extreme temperatures are involved, special outer protection covers can be



The above drawing illustrates a hose designed to resist pressure. For applications requiring resistance to vacuum, and suction, a steel wire helix is embedded into the hose body. The spiral also increases the flexibility of the hose.



## Fittings

#### Beaded ends

A steel ring is built into the hose end and fully embedded with the reinforcement.

The swivel flange allows ease of installation; the hose can be rotated, so that wear can be even distributed on all the hose circumference, for a longer hose life. This construction allows full flow and avoids contamination, abrasion and corrosion.



### Integral rubber flange

The flange is made of rubber reinforced with textile plies and steel ring. This construction allows full flow and avoids contamination, abrasion and corrosion.



### Built-in nipple

- The steel nipple is vulcanized into the hose body. It can be supplied with fixed or swivel flanges.
- This construction is also available with rubber coated nipples and flanges.





### Swaged

The fitting and hose body form an integral unit which gives exceptional strength against blowout and leakage. Fitting is crimped with external ferrules.





## Instructions for cleaning of food hoses

Food & Beverage hoses, requires to be cleaned, according to International Standards.

This will guarantee that no harmful or polluting substance can contaminate the transported edible products.

Please follow the below instructions, to guarantee ideal performance of the hoses, to avoid any influence on the smell or taste of carried products, and ensure a long hose life.

### Initial cleaning

New hoses usually do not have any effect on the smell or taste of the transported media. However, each hose should be treated before their initial use as follows:

- 1 Step Treat for 24 hours with 1% phosphoric acid (25°C)
- 2 Step To follow, treat with 2% sodium hydroxide solution or 2% sodium carbonate solution
- 3 Step Finally, rinse with clear water before the initial use

### Standard cleaning

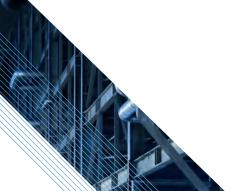
- 1 Step Treat briefly with 2% sodium hydroxide or 2% sodium carbonate at 80°C
- 2 Step Followed by flushing with clear hot and cold water

### Steam sterilization

A steam sterilization is suitable under the following conditions for all ROITER food quality hoses: Loose steam up to 120°C for max 15 min. This means, one end of the hose must be always kept open so that the steam can flow, and no pressure can be build-up.

### Resistance against cleaning agents

Cleaning under following conditions should not cause significant changes in hose properties.



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### Instructions for cleaning of food hoses

For hoses with NR and NBR tube please follow respectively, the maximum values for concentration and temperature, as indicated below ,without pressure:

Cleaning agents	Max. cleaning agent concentration	Max. temperature
Aqueous dilution of the prevalent acids phosphoric acid (H <sub>3</sub> PO <sub>4</sub> ), nitric acid (H <sub>N</sub> O <sub>3</sub> ) and sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) as well as cleaning agents based on these ingredients	max. 1-2%	up to max. +25°C
Aqueous alkaline solutions of sodium hydroxide (NaOH), potassium hydroxide (KOH), sodium bicarbonate (NaHCO3) and soda (Na2CO3) as well as cleaning agents based on these ingredients	max. 2%	up to max. +60°C
The disinfectants hydrogen peroxide ( $H_2O_2$ ), sodium hypochlorite (NaClO) and peracetic acid may only be applied in very high dilution to avoid massive chemical attack of the inner liner	max. 250 ppm	up to max. +25°C

Hoses with EPDM, UHWMPE and Butyl show higher resistance towards more challenging cleaning conditions, provided that the below indicated maximum concentrations and temperatures without pressure are rarely applied:

Cleaning agents	Max. cleaning agent concentration	Max. temperature
Aqueous dilution of the prevalent acids phosphoric acid (H <sub>3</sub> PO <sub>4</sub> ), nitric acid (HNO <sub>3</sub> ) and sulfuric acid (H <sub>2</sub> SO <sub>4</sub> ) as well as cleaning agents based on these ingredients	max. 2%	up to max. +40°C
Aqueous alkaline solutions of sodium hydroxide (NaOH), potassium hydroxide (KOH), sodium bicarbonate (NaHCO3) and soda (Na2CO3) as well as cleaning agents based on these ingredients	max. 5%	up to max. +80°C
The disinfectants hydrogen peroxide (H <sub>2</sub> O <sub>2</sub> ), sodium hypochlorite (NaClO) and peracetic acid may only be applied in very high dilution to avoid massive chemical attack of the Inner liner	max. 1000 ppm	up to max. +40°C

Please note that repeated application of the hose close to the given limits for longer periods can shorten the lifetime of the hose significantly. Please also refer to the respective datasheets for additional information.

Special cleaning agents: the suitability of special industrial cleaning agents and disinfectants (also for CIP facilities) depends on their actual composition. Supplier recommended concentrantion and temperature limits for rubber hoses, should be respected in any case. If doubts concerning chemical resistance towards a cleaning agent arise, our technical hose division may give advice based on the technical and safety datasheets of the agent.

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Characteristics of rubber compounds

Elastomer	Polychloroprene	Acrylonitrile-Butadiene	Naturar Rubber	Styrene-Butadiene	Isobutylene-Isoprene	Chlorinated Polyethylene	Cross Linked Polyethylene	Ultra High Molecular Weight Polyethylene	Chlorosulfonated Polyethylene	Ethylene-Propylene Diene	Ethylene-Propylene	Polyurethane	Fluoro-elasomer
Common name	Neoprene	Nitrile	Natural Rubber	SBR	Butyl	CPE	PE-X	UPE	Hypalon*	EPDM	EPR	Urethane	Viton*
ASTM designation	CR	NBR	NR	SBR	IIR	СМ	PE-X	UPE	CSM	EPDM	EPR	EU	FKM
Physical strength	+	+	+++	+	+	+	+	++	+++	+	+	+++	+
Resistance to:													
Abrasion	+	+	+++	+	+	+	+	+++	+	+	+++	+++	+
Ozone/Weather	+++			+	+++	+	+++	+++	+++	+++	+++	+	+++
Gas Permeation	+	+	+	+	+++	+	+	+++	+	+	+	+	+
Petroleum Oils	+	+++				+	+++	+++	+			+	+++
Gasolines	+	+++				+	+++	+++					+++
High Temperatures	+	+			+++	+++		+	+	+++	+++	+	+++
Low Temperatures	+	+	+	+	+	+	+		+	+	+	+++	+

\*Hypalon and Viton are registred trade-mark of Dupont





### Flexibility and bending radius

Flexibility and minimum bending radius are important factors in hose design and selection, if it is known that the hose will be subjected to sharp bendings in normal use. When bent at a sharper angle than suggested minimum bending radius, the hose may kink or flatten in the cross-section.

The reinforcement may also be unduly stressed or distorted and the hose life thereby shortened.

Adequate **flexibility** means the hose should be able to conform to the smallest anticipated bend radius without overstress. The minimum bending radius is specified for each hose in this catalogue. This is the radius in which the hose can be in service without damage or appreciably shortening life. The radius is measured on the inside part of the curvature:

Formula to determine minimum hose length given hose bending radius and degree of bend required:

$$\frac{A}{360^{\circ}} \times 2\pi \times BR = L$$

#### Where:

A = Angle of bend

BR = Given bend radius of hose

L = Minimum length of hose to make bend (Bend must be made equally along this portion of hose length).

**Example:** to make **90° bend** at the hose's rated minimum bend radius of **1200mm**.

Thus, the minimum hose lenght should be approximately 1884 mm. The bend radius used must be equal to or greater than the rated minimum bend radius. Bending the hose to a smaller bending radius than minimum, may kink the hose and cause damage and early failure.

$$\left\{ \left[ \left( \frac{90}{360^{\circ}} \right) \times 2 \times 3,14 \right] \times 1200 \right\} = 1884 \text{mm}$$

### Heat resistance

High temperatures may cause an aging effect on rubber and plastic materials, which may become hard and brittle. The higher the temperature, the faster the aging.

The normal life span of a hose is given at a temperature of 10°C.

### Max working temperature in air of some rubber compounds:

Type of rubber	12 months	1 month	1 week
NR	50°C	70°C	100°C
EPM	80°C	120°C	150°C
SBR	70°C	90°C	130°C
CR	70°C	100°C	150°C
NBR	70°C	100°C	140°C

Do not use this chart as a guide for the service temperature of the hose, as temperatures over 120°C affect the resistance of the reinforcement materials, reducing the bursting pressure of the hose.

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### Oil resistance - Definition and degree

Rubber hoses are used to convey petroleum products both, in the crude and refined stages.

The aromatic content of refineh gasoline is often adjusted to control the octane rating.

The presence of aromatic hydrocarbons in this fuel, generally has greater effect on rubber compounds than aliphatic hydrocarbons.

Aromatic materials in contact with rubber tend to soften it and reduce its physical properties.

For long lasting service, the buyer of gasoline hoses should inform the hose manufacturer of the aromatic content of the fuel, so that proper tube compounds can be recommended for the specific application.

The effects of oil on rubber vary on a range of factors, including:

- the type of rubber compound;
- the composition of the oil;
- the temperature and time of exposure.

Rubber compounds can be classified by their degree of oil resistance, based on their physical properties after exposure to a standard test with the specific fluid.

In this RMA classification, the rubber samples are submerged in ASTM n.3 oil at +100°C for 7Лhours.

(See ASTM Method D-471 for a detailed description of the oil and the testing procedure).

As a guide for oil transfer hose, the compound classes and corresponding descriptions are listed hereunder.

### Physical properties after exposure to oil

Oil resistance	Volume change maximum %	Tensile strength retained %
Class A very good	+25	-20
Class B good	+65	-50
Class C medium	+100	-60

### Electrical properties

The most common classification of rubber hoses, with reference to their electrical characteristics is

A Conductive, with resistance < 10° Ohm/Meter.

B Antistatic, with resistance between 10° and 10° Ohm/Meter.

C Insulating, with resistance > 10° Ohm/Meter.

The electrical characteristics of a rubber hose tend to change with use and age.

Please contact our technical department for any
special requirement you may have.

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## Orders and delivery terms



### Delivery quantity

For technical or manufacturing reasons, or because of length specifications or packing units, it may not always be possible to supply exact order quantities. We therefore reserve the right to vary the amount supplied and inoviced by 10% of the amount order.

Mandrel built hoses standard length: 40m delivered length: > 36m

Because of different production needs it might be possible that also lenghts shorter than 36m are delivered. Moreover, it could happen for customised orders that up to 10% of the deliveries are sent in short lengths from 10-35,9m at the same price.

In general length tolerances to EN ISO 1307:2006 are executed.

If different delivered lengths are required in individual cases, this must be clarified at the time of order. Unless otherwise agreed the above rules are applied.

### **Packing**

Standard packaging for rolled goods made on steel mandrels:

- Packaged as single items.

The following options are also availble on request:

Stretch-wrapped and/or banded in pallets;

Unpackaged;

Packed in wooden boxes;

Packed in cardboard half shells;

On drums.

### Minimum order quantity for manufacture items

Depending on product type, size and manufacturing technology, certain minimum order must be observed for manufactured items.

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### Tolerances, inner diameter

Mandrel Hoses (according to UNI EN ISO 1307/2006)

I.D. mm	I.D. (mm) Tolerance	O.D. (mm) Tollerance
da 3,3 a 10	± 0,40	± 0,50
da 10,1 a 20	± 0,60	± 0,80
da 20,1 a 25	± 0,80	± 1,00
da 25,1 a 40	± 1,00	± 1,20
da 40,1 a 63	± 1,20	± 1,40
da 63,1 a 90	± 1,40	± 1,60
da 90,1 a 127	± 1,60	± 2,00
da 127,1 a 152	± 2,00	± 2,00
da 152,1 a 203	± 2,50	± 2,50
da 203,1 a 315	± 3,00	± 3,00

### Long length Hoses (according to UNI EN ISO 1307/92)

I.D. mm	I.D. Tolerance (mm)	O.D. Tollerance (mm)
da 3 a 6	± 0,40	± 0,50
da 6,1 a 20	± 0,60	± 0,80
da 20,1 a 25	± 0,80	± 1,00

### Longitudinal tolerance

for specified cut lengths of hose

Length mm	Tolerance ±mm
up to 305	± 3.18
306 up to 610	± 4.80
611 up to 915	± 6.40
916 up to 1220	± 9.50
1221 up to 1830	± 12.70
from 1831	± 1%

## Longitudinal tolerance for hose built to length

Length m	Tolerance ±mm
up to 1.50	25.4
from 1.51 up to 3.00	38.0
from 3.01 up to 6.00	64.0
from 6.01	1%

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### Care, maintenance and storage

Hoses have a limited service life, and the user must be aware of signs of impending failure, particularly when the conditions of service include high working pressures and/or conveyance or containement of hazardous materials.

The periodic inspection and testing procedures described below, provide a schedule of specific measures which represent a minimum level of user actions to detect signs of hose deterioration or loss of performance, to prevent malfunctions or failures.

Safety warning: Follow the manufacturer's recommended procedures for the care, maintenance and storage of hoses. If not, it may results in its failure to perform in the intended way, and may result in possible damage to the property and serious injury. General instructions are also described for the proper storage of hose to minimize deterioration from exposure to the elements or environments which are known to be harmful to rubber products.

Proper storage conditions can enhance and extend substantially the utlimate life of the products.

### General care and Maintenance of Hose

Hoses should not be subjected to any form of abuse in service. They should be handled with reasonable care. Hoses should not be dragged over sharp or abrasive surfaces unless they are specifically designed for such service.

Attention should be taken to protect the hoses from severe end loads, for which the hose or hose assemblies were not designed. Hose should be used at or below its rated working pressure;

any change in pressure should be made gradually so as to not subject the hose excessive surge of pressure. Hose should not be kinked or run over by vehicles. When handling large size hose, dollies should be used whenever possible; slings or handling Scuff rings, properly placed, should be used to support heavy hoses in oil suction and discharge service, e.g. ship to shore.

### General Test and Inspection Procedures fo Hose

Inspections and hydrostatic tests should be made periodically to determine if a hose is suitable for continued service.

A visual inspection of the hose should be made to detect damaged covers, kinks, bulges or soft spots which might indicate broken or displaced reinforcement. The couplings or fittings should be closely examined and, if there is any sign of the coupling detatching from the hose, the hose should be removed from service immediately.

The periodic inspection should include hydrostatic test

for one minute at 150% of the recommended working pressure of the hose.

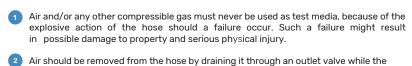
During the hydrostatic test, the hose should be laid straight, not coiled or in a kinked position.

Water is the usual test medium and, after the test, the hose may be flushed with alcohol to remove traces of moisture.

A regular schedule of testing should be pursued and inspection records duly filed.

**Safety warning:** before conducting any pressure test on hose, safety measures must be taken, to ensure the security of the personnel performing the test and to prevent any possible damage to the property. Only trained personnel, using proper tools and procedures should conduct any pressure tests.

hose is being filled with the test medium.



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### Care, maintenance and storage

- To perform properly a pressure test, the hose must be restrained by placing steel rods or straps close to each end, every 10 foot approx. (3m) intervals along its length, to keep the hose from "whipping" if failure occurs.
- 4 The steel rods or straps are to be anchored firmly to the structure, but in such a manner that the hose will be free to move.
- The outlet end of the hose should be protected in a way so that the fitting is contained in the case of failure or fitting blow-out.
- 6 Safety measures must be taken to protect testing personnel if failure occurs.
- Testing personnel must never stand in front of or behind the hose, while pressure tested.

When liquids such as gasoline, oil, solvent, or other hazardous fluids are used as the test fluid, precautions must be taken to protect against fire or other damage, should the hose fails, and test liquids be splashed in the surrounding area.

### Storage

Rubber hose products in storage can be affected adversely by temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids and fumes, insects, rodents and radioactive materials.

The appropriate method for storing hose depends to great extent on its size (diameter and length), the quantity to be stored and the way in which it is packaged.

Hose should not be piled or stacked to such an extent that the weight of the stack creates distorsions to the hoses stored at the bottom. Since rubber hoses vary considerably in size, weight and length, it is not pragtical to establish definite recommendations on this point.

Hoses having a very thin wall, will not support as much load as a hose having a thicker wall or a hose with wire reinforcement. Hose which are shipped in coils or bales, should be stored horizontally.

Whenever feasible, rubber hoses should be stored in their original shipping containers, especially when such containers are wooden crates or cardboard cartons which provide protection against the deterioration effect of oils, solvents and corrosive liquids; shipping containers also have function to protect against ozone and sunlight.

Certain rodents and insects can damage rubber hoses, and adequate protection from them should be provided.

Cotton jacketed hose should be protected against fungal growths if the hose is to be stored for long periods in humid conditions.

The ideal temperature for the storage of rubber products ranges from 50 °F to 70 °F (10-21 °C) with a maximum limit of 100 °F (38 °C). If stored below 32 °F (0 °C), some rubber products become stiff and would require warming before being placed in service. Rubber products should not be stored near sources of heat, such as radiators, base heaters, etc. should not be stored under conditions of high or low humidity.

To avoid the adverse effect of high ozone concentration rubber hoses should not be stored near electrical equipment that may generate ozone, or be stored for any long period in geographical areas known for high ozone concentration. Exposure to direct or reflected sunlight should also be avoided.

Uncovered hoses should not be stored under fluorescent or mercury lamps which generate waves harmful to rubber.

Storage areas should be relatived cool and dark, and free of dampness and mildew.

All Items should be stored on first-in, first-out basis, since even under the best conditions, an unusually long shelf life could cause deterioration of certain rubber products.

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## Flexible material handling hoses

Suitable for conveying concrete, plaster, grout, sand and gypsum. Designed for sandblast or plaster machines. Available up to 100 bar (1500 psi)



**AB 001 PARARUB** Abrasion resistant hose



AB 003 LAYFLAT

Layflat bulk materials discharge



**AB 010 LAYFLAT** 

Bulk materials delivery hose

3 Bar





AB 111 DELCEM Bulk materials premium quality

delivery hose 10 Bar



**AB 410 ASPICEM** 

S&D Cement hose

10 Bar



**AB 410 S** 

10 Bar

S&D Cement hose thick wall



AB 422 ASPICEM BULK

S&D Cement hose

20 Bar



AB 120 Betoncino Plaster spraying hose

AB 140 Betoncino

Plaster spraying hose

40 Bar



AB 110/70 Sandblast hose

10 Bar

20 Bar



AB 112/50

Sandblast hose 12 Bar



**AB 112 ABRAREX** 

Sandblast premium hose 12 Bar



**AB 119 HD** 

Sandblast hose

20 Bar



**AB 116 ICEBLAST** 

Dry Ice blasting hose

16 Bar

## Flexible material handling hoses



Suitable for conveying concrete, plaster, grout, sand and gypsum.

Designed for sandblast or plaster machines. Available up to 100 bar (1500 psi)



AB 385 Concrete pumping hose 85 Bar



AB 399 Concrete pump placement hose 100 Bar



AB 985 MULTITEX Concrete pumping hose 85 Bar



AB 285 Textile Concrete pumping hose 85 Bar



AB 500 ABRAVAC
Abrasion resistant suction
hose



AB 505 ABRAREX
Abrasion resistant premium hose
5 Bar



ADG 600 Abrasion suction hose 5 Bar



ABR 500 BULK
Abrasion suction hose
5 Bar



AB 406 VACUTRUCK
Bulk materials S&D hose
6 Bar



AB 603 Sand recovery hose 3 Bar



AB 235 HEVEA
Thick wall abrasion resistant
35 Bar

## **AB 001 PARARUB**

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### ABRASIVE MATERIALS LAYELAT

**Application:** no pressure discharge hose, for silos and hoppers, for abrasive materials as sand, gravel, cement. **Feature:** natural rubber tubing for abrasive material with no pressure.

**Note:** available in the version HEVEA® Premium red or yellow hose range, with superior abrasion resistance, or in the ACCORDION version, with embedded wide pitch spiral wire.

Temperature range: -40°C/ +70°C

Tube: brown, smooth NR rubber compound

Hardness Shore A 45 +/-5

Cover: brown, smooth cloth impression NR rubber

compound, Shore A 45 +/-5

Other colors available on request.



Interna	al Diameter	Wall thickness	External Dia	Weight approx	Coil length
mm	inch	mm	mm	Kg/m	(max) m
25	1	5	35	0,48	40
35	13/8	5	45	0,63	40
45	13/4	5	55	0,81	40
51	2	5	61	0,80	40
76	3	5	86	1,27	40
90	3 1/2	5	100	1,49	40
102	4	5	112	1,67	40
114	4 1/2	5	124	1,87	16
127	5	5	137	2,07	16
140	5 1/2	5	150	2,27	16
152	6	5	162	2,47	16
160	6 5/16	5	170	2,70	16
168	6 5/8	5	178	2,82	16
203	8	5	213	3,25	16
220	8 5/8	5	230	3,50	16
254	10	5	264	4,06	10
273	10 3/4	5	283	4,35	10
305	12	5	315	4,85	10
320	12 3/4	5	330	5,10	10
357	14	5	367	5,64	12
405	16	5	415	6,43	6
457	18	5	467	7,30	6
510	20	5	520	3,50	6
609	24	5	619	11,20	6

## AB 003 LAYFLAT BULK MATERIALS LAYFLAT



**Application:** used for discharge of wet and dry cement, sand and gravel.

**Feature:** lightweight, it can be rolled flat for transport and storage.

**Standards:** ISO 1307. Other colours, pressure and sizes available on request.

Temperature range: -40°C/ +70°C

Safety factor: 3,15 : 1

**Tube:** black, smooth, highly abrasion resistant antistatic

Reinforcement: synthetic plies reinforcement.

Cover: black smooth cloth finish, synthetic, antistatic rubber cover, abrasion, ozone and weather resistant.

Marking: continuous transfer tape: "ROITER® AB 003 BULK MATERIALS LAYFLAT - MADE IN ITALY".



Interi	nal dia	Wall thickness	External dia	Working Pressure	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
102	4	5	112	4	1,69	40
127	5	5,5	138	4	2,86	40
152	6	6	164	4	3,46	40
203	8	6	215	3	4,66	40
254	10	6	266	3	5,75	40
305	12	6	317	3	6,90	16
355	14	7	369	3	7,95	16
405	16	7	419	2	9,90	6
457	18	7	471	2	11,00	6
510	20	7	524	2	12,30	6

## **AB 010 LAYFLAT**

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### **BULK MATERIALS**

**Application:** used for discharge of highly abrasive bulk materials, such as cement, sand and gravel, dry or wet. ideal for conveying granulated materials.

**Feature:** universal medium duty lay-flat delivery hose with highly abrasion resistant tube. It can be rolled flat for transport and storage.

**Standards:** ISO 1307. Other colours, working pressure and sizes available on request. Also available with tan gum tube and with **polyurethane tube**, with antistatic copper wires.

Temperature range: -40°C/ +70°C

Safety factor: 3:1

**Tube:** black, smooth, highly abrasion resistant antistatic

Reinforcement: synthetic plies reinforcement. Cover: black smooth cloth finish, synthetic, antistatic rubber cover, abrasion, ozone and weather resistant. Marking: continuous transfer tape: "ROITER® AB 010 BULK MATERIALS LAYFLAT - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
51	2	6	63	10	1,10	40
63,5	2 1/2	6	75,5	10	1,40	40
76	3	6	88	10	1,80	40
90	3 1/2	7	104	10	2,50	40
102	4	7	116	10	2.85	40
127	5	7,5	142	10	3,95	40
152	6	8	168	10	4,50	40
203	8	10	223	10	7,20	40
254	10	10	274	10	9,00	40

## **AB 111 DELCEM** CEMENT DELIVERY HOSE



Application: premium silo hose with excellent tube quality, for filling and discharging silos and silo vehicles. Delivery hose for highly abrasive media such as cement, sand, gravel, granulated materials, pellets, etc.

Feature: very long service life due to abrasion resistant tube. Average wear of the tube 50 mm<sup>3</sup> (according to DIN ISO 4649:2014). hardwall construction.

Especially flexible and therefore easy to handle.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3,15:1

Tube: synthetic black rubber, highly abrasion resistant, electrically conductive, smooth. Alternatively pure NR Para blond, honey color available.

Reinforcement: synthetic plies reinforcement.

Cover: synthetic rubber, black, resistant to ozone and

weather, cloth impression.

Marking: continuous transfer tape, "ROITER® AB 111

DELCEM - WP 10 BAR - MADE IN ITALY".



Interna	l Diameter	Wall thickness	External Diameter	Working Pressure	Bending Radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	10	300	1,66	40
63,5	2 1/2	8	79,5	10	400	2,05	40
76	3	8	92	10	500	2,20	40
80	3 1/4	8	96	10	650	2,60	40
90	3 1/2	8	106	10	750	2,67	40
102	4	8	118	10	850	3,20	40
127	5	8	143	10	950	4,00	40
140	5 1/2	8	156	10	1000	4,40	40
152	6	10	172	10	1100	5,20	40
168	6 5/8	11	190	10	1200	6,30	40

## AB 410 ASPICEM

### **S&D CEMENT HOSE**

Application: mandrel built, suction and delivery hose for highly abrasive media such as cement, stones, sand, gravel, granulated and powder materials, sludge, etc. Feature: long service life due to abrasion resistant tube.

Average wear of the tube 50 mm<sup>3</sup> (according to DIN ISO 4649:2017). Vacuum resistant up to -0,9 Bar. Good flexibility and therefore easy to handle.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -40°C / +70°C.

Safety factor: 3:1

Tube: synthetic rubber, black, abrasion resistant. electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement, steel wire helix embedded. On request additional copper wires. Cover: synthetic rubber, black, resistant to ozone and

weather, antistatic, cloth impression.

Electrical properties: conductive tube and cover. R<106

Marking: continuous transfer tape, "ROITER® AB 410 ASPICEM - WP 10 BAR - MADE IN ITALY"



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	10	300	1,95	40
63	2 1/2	8	79	10	380	2,45	40
76	3	8	92	10	400	3,30	40
90	3 1/2	8	106	10	150	3,80	40
102	4	8	118	10	600	4,75	40
127	5	10	147	10	700	8,50	40
152	6	11	174	10	800	11,00	40
203	8	13	229	10	1100	16,20	40
254	10	14	282	10	1220	19,90	40

## **AB 410 S** S&D CEMENT HOSE THICK WALL

Application: mandrel built, thick wall, suction and delivery hose for extremely abrasive media such as cement, stones, sand, gravel, granulated and powder materials, sludge, etc.

Feature: mandrel built, thick wall, suction and delivery hose for extremely abrasive media such as cement, stones, sand, gravel, granulated and powder materials, sludge, etc.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -40°C / +70°C. Safety factor: 3:1

Tube: high wall thickness synthetic rubber, black, abrasion resistant, electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement, steel wire helix embedded. On request additional copper wires. Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

Electrical properties: conductive tube and cover, R<106

Marking: continuous transfer tape, "ROITER® AB 410 S -WP 10 BAR - MADE IN ITALY".



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
50	2	11	72	10	300	2,15	40
63	2 1/2	11	85	10	380	2,70	40
76	3	11	98	10	400	3,63	40
90	3 1/2	11	112	10	450	4,18	40
102	4	11	124	10	600	5,22	40
127	5	12	151	10	700	9,35	40
152	6	12	176	10	800	12,10	40
203	8	15	233	10	1100	17,82	16
254	10	16	286	10	1220	21,80	16

## AB 422 ASPICEM BULK

# 7

### HOSE S&D CEMENT

Application: premium hose with excellent tube quality used for suction and delivery of abrasive products, highly abrasive media such as cement, stones, sand, gravel, granulated and powder materials, sludge, etc.

Feature: very long service life due to abrasion resistant tube. Average wear of the tube 50 mm³ (according to DIN ISO 4649:2014). Especially flexible, and therefore easy to handle. Antistatic hose construction and inter-woven copper wire to prevent the build-up of static electricity.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

**Tube:** synthetic rubber, black, highly abrasion resistant, electrically conductive, smooth.

**Reinforcement:** synthetic plies reinforcement, steel wire helix, double copper wires.

**Cover:** synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

**Electrical properties:** conductive tube and cover, R<10<sup>6</sup> Ohm/m.

Marking: continuous transfer tape, "ROITER® AB 422 ASPICEM BULK - WP 20 BAR - MADE IN ITALY".





Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6,5	38	20	155	1,20	40
32	1 1/4	6	44	20	190	1,35	40
38	1 1/2	7	52	20	230	1,50	40
51	2	7	65	20	305	2,00	40
63	2 1/2	8	79	20	380	2,60	40
76	3	8	92	20	400	3,30	40
90	3 1/2	9	108	20	540	4,20	40
102	4	10	122	20	750	6,60	40
127	5	10	147	20	850	9,20	40
152	6	11	174	20	1100	11,25	40

## **AB 120**

### PLASTER HOSE- Betonging 20 Bar



Application: for conveying grout, screed, plaster and gypsum in compact flow process. Used on Spritz-Beton machines for tunnel construction and public works. Feature: very long service life due to the abrasion resistant quality of the rubber tube and cover. Average wear of the tube 70 mm<sup>3</sup> (according to DIN ISO 4649:2014). The compact reinforcement package provides a very stable cross section, making the hose highly kink resistant and also offering high pressure resistance. Antistatic construction prevents the build-up of static electricity.

On request: with harder rubber quality and higher pressure resistance - with steel wire braid - with fire resistant cover - with several cover colours.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, abrasion resistant. antistatic smooth

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression. Marking: continuous transfer tape: "ROITER® AB 120 PLASTER/GROUT HOSE - WP 20 BAR - MADE IN



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
40	1 3/4	10	60,0	20	400	1,80	40
50	2	10	70,0	20	500	2,25	40
65	2 1/2	10	85,0	20	650	2,65	40

## AB 140

### PLASTER HOSE - Betoncino 40 Bar

Application: for conveying grout, screed, plaster and gypsum in compact flow process.

Feature: very long service life due to the abrasion resistant quality of the rubber tube and cover. Average wear of the tube 70 mm<sup>3</sup> (according to DIN ISO 4649:2014).

The compact reinforcement package provides a very stable cross section, making the hose highly kink resistant, and also offering high pressure resistance. Antistatic construction prevents the build-up of static electricity.

On request: - with harder rubber quality and higher pressure resistance - with steel wire braid - with fire resistant cover - with several cover colours.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, abrasion resistant. antistatic smooth

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, wrapped fabric finish.

Marking: continuous transfer tape: "ROITER® AB 140 PLASTER HOSE - WP 40 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	40	190	0,75	40
25	1	6	37	40	250	0,85	40
32	11/4	6	44	40	320	1,10	40
35	13/8	7	49	40	350	1,40	40
38	11/2	8	54	40	380	1,50	40
51	2	8,5	68	40	500	2,20	40
65	2 1/2	10	85	40	650	3,60	40
76	3	11	98	40	720	4,00	40
102	4	12	126	40	850	5,30	40

## AB 110/70 SANDBLAST HOSE



**Application:** shot blast hose with unique tube quality, for conveying highly abrasive media such as quartz sand, steel shot, corundum, glass, etc.

Feature: extremely long service life due to the high abrasion resistant quality of the tube. Average wear of the tube 70 mm<sup>3</sup> (according to DIN ISO 4649:2014). Antistatic construction prevents the build-up of static electricity. Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3,5:1

**Tube:** synthetic rubber, black, highly abrasion resistant, electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement.

**Cover:** synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

Marking: continuous transfer tape, "ROITER® AB 110/70 SANDBLAST - WP 10 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	7	27	10	130	0,47	40
19	3/4	7	33	10	190	0,62	40
19	3/4	8	35	10	200	0,62	40
25	1	7	39	10	250	0,85	40
32	1 1/4	8	48	10	320	1,08	40
38	1 1/2	8	54	10	380	1,24	40
40	1 5/8	10	60	10	450	1,83	40
51	2	10	71	10	500	2,20	40

## **AB 112/50** SANDBLAST HOSE



Application: high quality shot blast hose with unique tube quality, for conveying highly abrasive media such as quartz sand, steel shot, corundum, glass, etc.

Feature: extremely long service life due to the high abrasion resistant quality of the tube. Average wear of the tube 50 mm<sup>3</sup> (according to DIN ISO 4649:2014). Antistatic construction prevents the build-up of static electricity. Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3.5:1

Tube: synthetic rubber, black, highly abrasion resistant, electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement.

Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

Marking: continuous transfer tape, "ROITER® AB 112/50

SANDBLAST WP 12 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	7	27	12	130	0,47	40
16	5/8	7	30	12	160	0,55	40
19	3/4	7	33	12	190	0,62	40
25	1	7	39	12	250	0,80	40
32	1 1/4	8	48	12	320	1,08	40
38	1 1/2	8	54	12	380	1,35	40
51	2	10	71	12	500	2,20	40
60	2 3/8	10	80	12	560	2,53	40
80	3 1/4	11,5	103	12	610	4,18	40
90	3 1/2	11,5	113	12	720	4,50	40
102	4	12	126	12	860	5,17	40

## **AB 112 ABRAREX**

### SANDBLAST HOSE

Application: premium shot blast hose with unique tube quality, for conveying highly abrasive media such as quartz sand, steel shot, corundum, glass, etc.

Feature: extremely long service life due to the high abrasion resistant quality of the tube. Average wear of the tube 36 mm<sup>3</sup> (according to DIN ISO 4649:2014). Antistatic construction prevents the build-up of static electricity. Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3.5:1

Tube: synthetic rubber, black, highly abrasion resistant, electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement.

Cover: synthetic rubber, black, resistant to ozone and

weather, antistatic, cloth impression.

Marking: continuous transfer tape, "ROITER® AB 112 ABRAREX SANDBLAST - WP 12 BAR - MADE IN ITALY".



Intern	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	7	27	12	150	0,55	40
19	3/4	7	33	12	200	0,65	40
25	1	7	39	12	250	0,80	40
32	1 1/4	8	48	12	320	1,08	40
32	1 1/4	9	50	12	340	1,25	40
38	1 1/2	9	56	12	380	1,45	40

## **AB 119 HD** SANDBLAST HOSE



Application: Heavy duty sand blast hose with superior tube quality, for conveying highly abrasive media such as quartz sand, steel shot, corundum, glass, etc.

Feature: extremely long service life due to the high abrasion resistant quality of the tube. Average wear of the tube 60mm3 (according to DIN ISO 4649:2014). Antistatic Construction prevents the build-up static electricity,

Standard/approval: exceeds EN ISO 3861:2008 - ISO 1307-BS 4649.

Temperature range: -40°C / +80°C.

Safety factor: 3:1

Tube: rubber compound, black, highly abrasion resistant,

electrically conductive, smooth.

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

Marking: continuous transfer tape, "ROITER® AB 119 HD

SANDBLAST WP 20 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	7	27	20	130	0,47	40
16	5/8	7	30	20	160	0,58	40
19	3/4	7,5	34	20	190	0,70	40
25	1	7,5	40	20	250	0,85	40
32	11/4	8	48	20	320	1,18	40
35	13/8	8	51	20	360	1,55	40
38	11/2	9	56	20	400	1,85	40
40	15/8	9	58	20	420	1,92	40
51	2	10	71	20	520	2,40	40
65	2 3/8	11	82	20	620	2,90	40
76	3 1/4	12,5	105	20	800	4,40	40

## **AB 116 ICEBLAST**

### DRY ICE BLAST HOSE

Application: iceblast hose, is a low temperature resistant discharge hose, for use with dry ice application. This hose is developed especially to handle cold temperature materials and has a very abrasion resistant tube and cover. The high strength textile reinforcement will ensure a safe and long service life for harsh application.

**Feature:** extremely long service life due to the high abrasion resistant quality of the tube, according to DIN ISO 4649:2014.

Temperature range: -55°C / +60°C.

Safety factor: 3:1

**Tube:** Black, highly abrasion resistant NR lining, resistant to solid carbon dioxide.

Reinforcement: synthetic plies reinforcement.

Cover: Black, NR cover, resistant to ozone, weather,

and abrasion, fabric impression.

Marking: continuous transfer tape, "ROITER® AB 116

ICEBLAST - WP 16 BAR - MADE IN ITALY".



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	6	25	16	130	0,35	40
16	5/8	6	28	16	160	0,45	40
19	3/4	6	31	16	190	0,54	40
25	1	6	37	16	220	0,64	40

### **AB 385**

### CONCRETE PUMPING - 85 Bar



**Application:** high performance hose, developed for concrete placement by means of special pumps. Suitable for transferring highly abrasive materials such as concrete, cement and mortar.

**Feature:** long life and easy to handle due to the special structure and to the abrasion resistant tube. Flexible and easy to manage, with good kink resistance due to a special hose design. Suitable for reverse pumping, for easy cleaning.

Notice: the hose conforms to EN 12001:2010.

Assemblies on request, crimped "full flow"hardened couplings, compatible with VICTAULIC or major concrete pump manufacturers.

Temperature range: -35°C/ +80°C

Safety factor: 2:1

**Tube:** black synthetic rubber, abrasion resistant, electrically antistatic, smooth. Highly resistant to the abrasive action of the concrete.

Reinforcement: steel cord, wrapped

Cover: black synthetic rubber, resistant to ozone and weather, antistatic, cloth impression, wrapped finish. Marking: continuous transfer tape: "ROITER® AB 385 CONCRETE PUMPING - WP 85 BAR - MADE IN ITALY" and embossed tape



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	10	71	85	300	2,90	40
65	2 1/2	11	87	85	350	3,50	40
76	3	11	98	85	400	4,80	40
80	3 1/4	12	104	85	420	5,15	40
102	4	12	126	85	550	7,20	40
127	5	13	153	85	650	9,30	40
152	6	15	182	85	800	12,50	40

## **AB 399**

### CONCRETE PUMP & PLACEMENT - 100 Bar

Special premium hose designed and developed for extreme operating conditions for conveying products at high pressure.

Application: high pressure concrete pump hose for boom transfer, placement and for piling rigs. Pneumatic discharge of cement and minerals. Pumping of slurry and drilling mud (not oil-laden). Grouting of mortar, cement or concrete.

Feature: long service life due to highly abrasion resistant tube. Flexible and easy to handle, with good kink resistance due to a special hose design. Suitable for reverse pumping and for easy cleaning.

Notice: the hose conforms to EN 12001:2010. Assemblies on request, crimped "full flow" hardened couplings, compatible with VICTAULIC or major concrete pump manufacturers.

Temperature range: -35°C/+80°C

Safety factor: 2:1

Tube: black synthetic rubber, abrasion resistant, electrically antistatic, smooth. Highly resistant of the abrasive action of the concrete.

Reinforcement: high performance steel wrapped cord. Cover: black synthetic rubber, resistant to ozone and weather, antistatic, cloth impression, wrapped finish. Marking: continuous transfer tape: "ROITER® AB 399 CONCRETE PUMPING - WP 100 BAR - MADE IN ITALY" and embossed tape.



Intern	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	10	71	100	400	3,20	40
65	2 1/2	11	87	100	425	4,20	40
76	3	12	100	100	450	5,00	40
102	4	13	128	100	700	8,00	40
127	5	14	155	100	850	11,50	40
152	6	17	186	100	1000	13,50	40

## **AB 985 MULTITEX**

### CONCRETE PUMPING - 85 Bar



Unique new design, combines the mechanical resistance of steel cord with flexibility and lightness advantages of high tensile fabrics.

Application: high pressure concrete pump hose specifically designed for transfer and placement. Structurally designed to be lighter and more flexible than other steel reinforcement hoses. Suitable for pneumatic discharge of high abrasive media such as concrete, cement and minerals, pumping of slurry and drilling mud. Grouting of mortar, cement or concrete.

Feature: the hose is lighter and more flexible by design, has high strength and kink resistance. Cover has high adhesion and extra layer protection, preventing exposure of wire braid. Cover has impact and damage protection features for longer service life. Assemblies on request. Notice: the hose conforms to EN 12001 & ISO 1307

Standard.

Temperature range: -35°C/ +80°C

Safety factor: 2:1

Tube: abrasion resistant synthetic rubber, black, smooth. Reinforcement: multiple layers of high tensile fabrics and steel cord.

Cover: synthetic rubber, black, resistant to ozone and weather, fabric impression.

Marking: continuous transfer tape: "ROITER® AB 985 MULTITEX - CONCRETE PUMPING WP 85 BAR - MADE IN ITALY" and embossed tape: "1250 PSI/85 BAR- SAFETY FACTOR 2:1-EN 12001"



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	11/2	10	58	85	300	2,50	40
51	2	10	71	85	400	3,15	40
65	2 1/2	11	87	85	420	3,80	40
76	3	12	100	85	480	4,50	40
90	3 1/2	13	118	85	560	4,75	40
102	4	14	130	85	750	5,50	40
127	5	14	155	85	900	6,35	40

## **AB 296**

# 7

## CONCRETE PUMPING - 85 Bar TEXTILE REINFORCEMENT - SEPARATED PLIES

**Application:** High pressure concrete pump hose for boom transfer and placement. Pneumatic discharge of cement and minerals. Pumping of slurry and drilling mud (not oilladen). Grouting of mortar, cement, or concrete.

Feature: lighter in weight than steel reinforced hoses. Abrasion resistant hose to give extended service life. Flexible, easy to handle. Robust construction to withstand heavy compressive loads and guarantee maximum safety. Construction eliminates kinking and allows easy cleaning by reverse pumping.

**Notice:** Assemblies on request, crimped "full flow"hardened couplings, compatible with VICTAULIC or major concrete pump manufacturers.

Temperature range: -35°C/ +80°C

Safety factor: 2:1

**Tube:** black rubber compound, abrasion resistant, smooth. Highly resistant to the abrasive action of the concrete.

Reinforcement: multiple layers or synthetic textile, Cover: black synthetic rubber, resistant to ozone and weather, antistatic, cloth impression, wrapped finish. Marking: continuous transfer tape: "ROITER® AB 285 CONCRETE PUMPING -WP 85 BAR - MADE IN ITALY" and embossed tape.



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	12,5	76	85	300	3,20	40
65	2 1/2	13	91	85	400	3,90	40
76	3	14	104	85	480	4,50	40
90	3 1/2	14	118	85	580	5,10	40
102	4	14	130	85	650	5,70	40
127	5	15	157	85	800	7,90	40
152	6	16	184	85	1000	9,50	40

## AB 500 ABRAVAC

# 3

### ABRASION RESISTANT SUCTION HOSE

**Application:** flexible suction hose on vacuum cleaning trucks, for use on site. Excellent for abrasive materials such as waste and sand.

**Feature:** medium duty hose, thanks to its low weight, high flexibility and good wear resistance, it is particularly suitable fo use as the front part of a suction pipe that must be maneuvered by hand.

On request is supplied with soft ends.

Temperature range: -35°C/+80°C

Safety factor: 3,15:1

**Tube:** synthetic rubber black smooth, anti-static abrasion resistant.

**Reinforcement:** wrapped textile reinforcements, steel spiral.

Cover: synthetic rubber, black, corrugated, anti-static, cloth impression. Wear and weather resistant.

Marking: continuous transfer tape: "ROITER® AB 500

ABRAVAC - MADE IN ITALY ".



Internal dia		Wall thickness	External dia	Vacuum	Bending radius	Weight approx	<b>Coil</b> length
mm	inch	mm	mm	%	(min) mm	Kg/m	(max) m
51	2	6	63	90	270	2,15	40
76	3	7	90	90	450	2,30	40
102	4	7	116	90	550	3,75	40
127	5	7	141	90	800	4,50	40
152	6	7	166	90	900	5,50	40
203	8	8	219	90	1000	8,75	40

## **AB 505 ABRAREX**

# 7

### ABRASION RESISTANT SUCTION HOSE

**Application:** heavy duty material handling hose, especially designed for severe pressure or suction service.

**Features:** strong hose, thanks to its high flexibility and premium wear resistance, is particularly suitable fo use with heavy materials and where wear resistance is imperative.

Average wear of the tube 36 mm<sup>3</sup> (according to DIN ISO 4649:2014).

Temperature range: -35°C/ +90°C

Safety factor: 3:1

**Tube:** synthetic rubber black smooth, anti-static abrasion resistant

**Reinforcement:** wrapped textile reinforcements, steel spiral.

**Cover:** synthetic rubber, black, corrugated, anti-static, cloth impression. Wear and weather resistant.

Marking: continuous transfer tape: "ROITER® AB 505 ABRAREX - WP 5 BAR - MADE IN ITALY".



Interr	Internal dia		External dia	Working Pressure	Vacuum	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	%	(min) mm	Kg/m	(max) m
51	2	6	63	5	90	300	2,25	40
76	3	7	90	5	90	450	2,80	40
102	4	8	118	5	90	550	3,95	40
127	5	8	143	5	90	800	4,80	40
152	6	8	168	5	90	900	5,90	40
203	8	9	221	5	90	1000	7,90	20

## **ADG 600**

# 7

### ABRASION RESISTANT SUCTION HOSE

Application: heavy duty material handling hose, especially designed for flexible truck suction hose for vacuum abrasive media e.g. stones, rubbish, mud. Feature: strong hose, thanks to its high flexiblity and premium wear resistance, is particularly suitable for use with heavy materials and where wear resistance is imperative. Upon request both sides can be supplied with cuffed ends.

Temperature range: -25°C/+70°C Safety factor: 3:1

Tube: synthetic rubber black smooth compound antistatic abrasion resistant. Brown para on request. Reinforcement: wrapped textile reinforcements, double steel spiral, conductive copper wires Cover: synthetic rubber, black semi-corrugated, cloth impression. Wear and weather resistant. Marking: continuous transfer tape: "ROITER® ADG 600 - WP5 BAR - "MADE IN ITALY"



Internal dia		Wall thickness	External DIA	Vacuum Resistance	Bending radius	Weight approx	Coil Ienght
mm	inch	mm	mm	(max) %	(min) mm	Kg/m	(max) m
203	8	14	231	90	400	14,50	12
203	8	16,5	236	90	410	18,62	12
254	10	18,5	291	90	510	23,90	12
305	12	19,5	344	90	610	30,97	12

## ABR 500 BULK

#### ABRASIVE VACUUM

Application: flexible and light yet strong hose used for the extraction of abrasive bulk materials. Expecially useful for applications requiring flexibility and light weight. Suitable for vacuum cleaning systems in stone quarries, and steel industries. ABR 500 Bulk hose is usually manufactured with soft cuff ends.

Feature: Due to the low weight and high flexibility, this hose is suitable for use at the front end of exhaust lines that needs to be handled manually.

Vacuum resistance: up to -0,9 bar.

Temperature range: -40°C / +80°C Tube: brown smooth para rubber

Reinforcement: textile wrapped.synthetic fabric with wire helix reinforcements and copper wires. Cover: black corrugated, synthetic rubber, ozone, abrasion and weather resistant, wrapped finish

Marking: continuous tape:

"ROITER® ABR 500 BULK - MADE IN ITALY"



Dia In & Out	Vacuum	Length of soft ends	Bending radius	Working Pressure	Weight approx	Coil Iength
mm	%	mm	mm	(max) bar	Kg/m	(max) m
40x49	90	50	125	2	0,60	40
51x60	90	70	150	2	0,75	40
63x74	90	80	200	2	0,90	40
76x85	90	100	260	2	1,10	40
102x116	90	120	300	2	1,98	40
114×125	70	140	400	1	2,30	40

## AB 406 VACUTRUCK



#### "CASSETTE" HOSE

Premium hose with excellent tube quality used for vacuum on cleaning trucks and for filling and discharging silos and vehicles.

Application: extraction and transport of highly abrasive media such as stones, sand, gravel, granulated and powder materials, sludge, etc. Used on hose reels and "cassette" applications.

Feature: very long service life due to abrasion resistant tube. Average wear of the tube 36 mm<sup>3</sup> (according to DIN

Especially flexible and therefore easy to handle. Antistatic hose construction and inter-woven copper wire to prevent the build-up of static electricity.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -35°C / +80°C.

Safety factor: 3.15:1

Tube: synthetic rubber, black, highly abrasion resistant. electrically conductive, smooth,

**Reinforcement:** synthetic plies reinforcement, steel spiral, conductive copper wires.

Cover: synthetic rubber, black, resistant to ozone and weather, antistatic, cloth impression.

Electrical properties: conductive tube and cover, R<106 0hm/m

Marking: continuous transfer tape, "ROITER® AB 406 VACUTRUCK - WP 6 BAR - MADE IN ITALY".





Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	6	200	2,04	40
63	2 1/2	7	77	6	300	2,72	40
76	3	7	90	6	350	2,90	40
90	3 1/2	7	104	6	400	3,36	40
102	4	8	118	6	500	4,03	40
110	4 5/16	8	126	6	530	4,20	40
114	4 1/2	8	130	6	540	4,42	40
127	5	8	143	6	600	6,10	40
152	6	10	172	6	800	7,80	40
203	8	13	229	6	1100	13,10	40

## AB 603 SAND RECOVERY



Application: A lightweight and very flexible hose, specially designed for sand suction in shipyards and sandblasting operations. It can also handle gravel, dry cement, granulated materials, plastic pellets.

Standards: mandrel built acc. to EN ISO 1307. Other colours, pressures and sizes available on request. Also available with tan gum tube or with Polyurethane Tube Temperature range: -40°C / +70°C.

Safety factor: 3:1

**Tube:** synthetic rubber, black, highly abrasion resistant, electrically conductive, smooth.

**Reinforcement:** synthetic plies reinforcement, double steel wire helix embedded, antistatic copper wires.

**Cover:** synthetic rubber, black, resistant to ozone and weather, antistatic, fabric impression, semicorrugated. **Electrical properties:** conductive tube and cover, R<10<sup>6</sup> Ohm/m.

**Marking:** continuous transfer tape, "ROITER® AB 603 SAND RECOVERY - WP 3 BAR - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	1 1/2	6	50	3	200	1,90	40
51	2	6	63	3	280	2,00	40
63,5	2 1/2	6,5	76,5	3	380	2,20	40
76	3	7	90	3	450	2,50	40
90	3 1/2	7	104	3	500	3,25	40
102	4	7	116	3	550	3,75	40
127	5	8	143	3	800	4,80	40
152	6	8	168	3	900	5,90	40

## AB 235 HEVEA®

#### THICK WALL HOSE

Application: hose for extremely abrasive media such as stones, sand, gravel, granulated and powder materials, mineral recovering in sampling operations. Feature: mandrel built, thick wall, suction and delivery hose.

HEVEA® PREMIUM RED: Our specialty HEVEA® Premium Red hose range incorporates slurry and mining hose, dredge hose, vacuum hoses for dust, sand hoses, are manufactured using state of the art automated mandrel hose production lines, ensuring the hose construction that is both robust and reliable using only the best superior and unique HEVEA® red rubber materials.

Standard/approval: exceeds EN ISO 3861:2008.

Temperature range: -30°C / +80°C.

Safety factor: 3:1

Tube: thick wall thickness HEVEA® rubber, red color, with extremely high abrasion resistant, smooth.

Reinforcement: synthetic plies reinforcement, on request with steel wire helix embedded. On request additional copper wires.

**Cover:** synthetic rubber compound, black, resistant to ozone and weather, conductive, cloth impression.

**Electrical properties:** conductive d cover, R<10° Ohm/m. **Marking:** continuous transfer tape, "ROITER® AB 435 HEVEA - WP 35 BAR - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
50	2	13	76	35	210	3,00	40
63	2 1/2	14	91	35	290	4,20	40
76	3	15	106	35	310	5,00	40
102	4	16	134	35	420	7,10	40

## SPECIAL INTERNAL LININGS



#### FOR ABRASIVE MATERIALS

Due to our extensive great experience, we have developed specific materials with superior abrasion resistance. These types of materials, can be used as an inner lining of virtually any ROITER AB hose.

**HEVEA® PREMIUM RED:** Our specialty HEVEA® Premium Red hose range incorporates slurry and chemical mining hose, dredge hose, vacuum hoses for dust, sand and stones. HEVEA® hoses are manufactured using state of the art automated mandrel hose production lines, ensuring the hose construction that is both robust and reliable using only the best superior red or yellow para rubber material.

Raw Materials: We believe that quality raw materials are the key to manufacturing premium specialty hose. When we design and custom build all our hoses, you can rely on receiving a superior wear resistant hose created with the highest quality rubber compounds, reinforcement cords and end connections. Wear liner composition is critical to the performance of your hose. With more than 40 years of rubber manufacturing experience, we have the expertise to select the best composition for your specified application.



Our extensive knowledge of wear performance compounds ensures that our products are the best available on the market. Our hoses are created using traditional reinforcement materials such as nylon or polyester. High tensile aramid fibre reinforcement is also used in our highly customised large bore hose designs. Reinforcement cord materials are selected to complement our designs during the engineering process.

**CERAMID** Severe applications tend to consume traditional material handling hoses. Traditional Rubber hose needs regular in-service inspection and maintenance, is subject to abrupt failure, creates unscheduled downtime and requires frequent replacement. For these harsh applications, CERAMID hose provides virtually maintenance-free service life, often longer than traditional rubber material handling hose.

CERAMID is a Custom Made Hose with a breakthrough construction that incorporates a unique inner liner of flexible, highly abrasion resistant hexagonal ceramic tiles embedded in abrasion resistant rubber. It is suitable for compressed air and vacuum systems conveying highly abrasive materials such



as ceramic powders, coal powders, dry cement, fiberglass, fly ash and raw minerals in harsh applications such as carbon injection, ceramic/glass works, manufacturing or processing of insulating materials, mines, quarries, power generation facilities and steel works. CERAMID hose assemblies, for a superior investment in value and productivity, CERAMID hose is the perfect choice for severe applications.

**POLYURETHANE** Polyurethane liners are particularly abrasion-resistant and durable. Compared to conventional hose liners, they are characterized by increased resistance (abrasion resistance, pressure resistance), better temperature resistance and other improved characteristics. Due to these properties, PU lined hoses are versatile in

the extended medium temperature range. ROITER uses in its polyurethane hoses as special ester and a special ether-polyurethane mixture, which is unique. Polyurethane liners can bring new life to your operation. These abrasion resistant hose linings, protect internal diameter from prolonged wear and polyurethane, in particular, offers one of the best abrasion resistance available today in the industry. Polyurethane is also chemical resistant and with excellent resistance to



oils and fuels. It is great for the transport or movement of sticky materials. With polyurethane, the dirt or sludge, moves easily with minimum resistance. Polyurethane liners are preferred in many transfer situations.

## Flexible chemical hoses

Suitable to be used in chemical and pharmaceutical industries, for solvents and acids, paints, varnishes, inks. Also suitable to be used in ATEX environments.



CE 116 EPR

Chemicals discharge hose, EPR 16 Bar



#### **CE 416 EPR**

Suction and discharge of chemicals, EPR

16 Bar



#### CM 116 CHIMIFLEX

Discharge of aggressive chemicals, EPDM

16 Bar



#### CM 120 CHEMIBLUE

Discharge of AD Blue & Urea Full EPDM

20 Bar



#### CM 416 SPIRACHIM

Suction and discharge of aggressive chemicals, EPDM

16 Bar



#### CY 410 HYPALON

Acid S&D chemical hose, HYPALON

10 Bar



#### **CV 116 FKM**

Discharge of very aggressive chemicals, FKM tube

16 Bar



#### **CV 416 FKM**

Suction and discharge of very aggressive chemicals, FKM tube

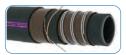
16 Bar



#### **CX 116 PEX**

Chemicals discharge hose, Cross-linked PE tube

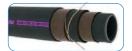
16 Bar



#### **CX 416 PEX**

Chemicals suction and discharge hose, Cross-linked PE tube

16 Bar



#### CW 110 UHMW PE

Chemicals discharge hose UHMWPE smooth tube

10 Bar



#### CW 410 UHMW PE

Chemicals suction and discharge hose UHMWPE smooth tube

10 Bar



#### **CW 416 POLYATEX**

Suction and delivery of chemicals and solvents, UHMWPE conductive tube

16 Bar



#### CW 425 UHMW PE

Chemicals suction and discharge hose UHMWPE smooth tube

25 Bar

## Flexible chemical hoses

Suitable to be used in chemical and pharmaceutical industries, for solvents and acids, paints, varnishes inks. Also suitable to be used in ATEX environments.



CW 116 UHMW PE Chemicals discharge hose, UHMWPE smooth tube

16 Bar



CW 416 UHMW PE

Chemicals suction and discharge hose UHMWPE smooth tube

16 Bar



CW 516 UHMW PE

Chemicals suction and discharge hose UHMWPE corrugated

16 Bar



#### CW 616 UHMW PE POLYCHEM

Multipurpose suction and delivery semicorrugated chemicals hose UHMWPE smooth tube

16 Bar



FL 416 ROIFLON

#### FL 416 BK-ROIFLON AS

Aggressive chemicals S&D hose, PTFE Aggressive chemicals S&D hose, PTFE Black Antistatic

16 Bar 16 Bar



#### DYNAFLUOR® DF1

Smooth bore S&D PTFE liner. metal braid

25 to 60 Bar



#### DYNAFLUOR® DF6

Smooth bore PTFE liner, metal braid + Wire spiral

25 to 60 Bar



#### DYNAFLON® DF5-RC

Convoluted PTFE liner, SS braid + Wire spiral. Rubber cover

10 to 60 Bar



#### DYNAFLON® DF5-SI

Convoluted PTFE liner SS braid + wire spiral. Silicone cover

25 to 60 Bar



#### SMOOTHLINE®

Smooth inner, Convoluted outer PTFE hose. SS braid + spiral wire

15 to 80 Bar



#### SMOOTHLINE® TEX

Smooth inner. Convoluted outer PTFE hose, textile reinforcements

15 to 80 Bar

## **CE 116 EPR**

#### **ACID DELIVERY**

**Application:** delivery hose that handles a wide range of acids and chemicals also in concentrated form, as well as industrial water, sea water and chemical fertilizers.

Standard/approval: EN ISO 1307

**ATTENTION:** the temperature of the medium must be lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C/+120°C depending on medium. Steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 4:1

Tube: black, smooth EPR rubber.

Reinforcement: high tensile synthetic textile and

antistatic copper wires.

**Cover:** black, smooth, fabric finish synthetic rubber, abrasion, acids, ozone and weather resistant.

Marking: continuous transfer tape: "ROITER® CE116 EPR - ACID DELIVERY - WP 16 BAR - MADE IN ITALY"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	6	23	16	90	0,39	40
19	3/4	6	31	16	125	0,58	40
25	1	6	37	16	150	0,71	40
32	1 1/4	6	44	16	175	1,00	40
38	1 1/2	6,5	51	16	225	1,37	40
51	2	8	67	16	275	1,83	40

## **CE 416 EPR**

#### ACID S&D

**Application:** suction & delivery hose that handles a wide range of acids and chemicals also in concentrated form, as well as industrial water, sea water and chemical fertilizers.

Standard/approval: EN ISO 1307

**ATTENTION:** the temperature of the medium must be lower than its boiling point.

Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept.

Continuous use at the peak values reduces service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C / +120°C depending on medium. Steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 4:1

Tube: black, smooth EPR rubber.

Reinforcement: synthetic high tensile textile, steel

wire helix. Antistatic copper wires.

Cover: black, smooth, fabric finish, synthetic rubber cover, abrasion, ozone and weather resistant.

Marking: continuous transfer tape "Roiter® CE 416 EPR - ACID S&D - WP 16 BAR - MADE IN ITALY"



Intern	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	16	150	0,98	40
32	1 1/4	6	44	16	175	1,33	40
38	1 1/2	6,5	51	16	225	1,72	40
51	2	8	67	16	380	2,66	40
63	2 1/2	8	79	16	450	3,50	40
76	3	8	92	16	600	4,11	40
102	4	9	120	16	800	5,60	40

## CM 116 CHIMIFLEX



#### CHEMICALS EPDM - 16 BAR

Application: discharging of a wide range of chemicals (see chemical resistance chart), sea and industrial water.

Standard/approval: EN 12115:2011, TRBF 13112:1192

ATTENTION: the temperature of the medium must be lower than its boiling point. Please refer to the Roiter resistance list or, in case of doubt, contact our technical

Continuous use at the peak values reduces the service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

**Temperature range:** -40°C / + 120°C depending on medium. Steam cleaning without pressure up to 130°C max. 30 min.

Safety factor: 4:1

**Tube:** chemical resistant black smooth EPDM rubber **Reinforcement**: high tensile synthetic textile and antistatic copper wires

**Cover:** black, smooth fabric finish synthetic rubber cover, abrasion, ozone and weather resistant

**Marking:** continuous transfer tape: "ROITER® CM116 CHIMIFLEX - EPDM - WP 16 BAR - EN 12115-  $\Omega/T$  -MADE IN ITALY"



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	16	90	0,38	40
19	3/4	6	31	16	125	0,56	40
25	1	6	37	16	150	0,75	40
32	1 1/4	6	44	16	175	0,96	40
38	1 1/2	6,5	51	16	225	1,32	40
51	2	8	67	16	275	1,76	40
63	2 1/2	8	79	16	300	2,40	40
76	3	8	92	16	350	2,80	40
102	4	8	118	16	450	3,80	40

## CM 120 CHEMIBLUE

#### FULL EPDM UREA & ADBLUE® HOSE



**Application:** discharging hose specifically engineered for loading and unloading of ADBlue additive for Fuel engines and Urea.

**ATTENTION:** the temperature of the medium must be lower than its boiling point. Please refer to the Roiter resistance list or, in case of doubt, contact our technical departement.

Continuous use at the peak values reduces the service life. To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

**Temperature range:** -40°C / + 120°C depending on medium. Steam cleaning without pressure up to 130° C / max. 30 min.

Safety factor: 4:1

**Tube:** chemical resistant black smooth EPDM rubber **Reinforcement:** high tensile synthetic textile and antistatic copper wires

Cover: black, smooth fabric finish EPDM rubber compound, resistant to abrasion, ozone and weather Marking: continuous transfer tape: "ROITER® CM 120 CHEMIBLUE - EPDM - WP 20 BAR - MADE IN



ITALY"

Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	20	90	0,40	40
19	3/4	6,5	32	20	125	0,56	40
25	1	6,5	38	20	150	0,87	40
32	1 1/4	6	45	20	175	0,96	40
38	1 1/2	6,5	51	20	225	1,32	40
51	2	7	65	20	275	1,76	40
63	2 1/2	7	77	20	300	2,40	40
76	3	8	92	20	350	2,80	40
102	4	8	118	20	450	3,80	40

## CM 416 SPIRACHIM

#### CHEMICALS EPDM - 16 BAR

Application: suitable for suction & delivery a wide range of chemicals, acids, alkalis, salts, organic compounds (alcohols, esters, ketones, etc.) incl. aromatic substances, according to our chemical resistance list.

Standard/approval: EN 12115:2011, TRbF 131/2:1992. ATTENTION: Please refer to the Roiter® resistance list in case of doubt, contact our technical dept. Continuous use Cover: Synthetic rubber, black, abrasion, at the peak values reduces the service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C / + 120°C depending on medium. Steam cleaning without pressure up to 130°C / 30min.

Safety factor: 4:1

Tube: black smooth EPDM, rubber.

Reinforcement: high tensile synthetic textiles, steel

wire helix, antistatic copper wires.

weather, ozone, fabric finish.

Marking: continuous transfer tape: "ROITER® CM 416 "ROITER CM 416 SPIRACHIM- CHEMICAL S&D EPDM -WP 16 BAR-EN 12115 Ω/T - MADE IN ITALY" and continuous

embossed tape according to EN 12115:2011



Inte	ernal Dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	125	0,72	40
25	1	6	37	16	150	0,95	40
32	11/4	6	44	16	175	1,28	40
38	11/2	6,5	51	16	225	1,66	40
51	2	8	67	16	275	2,5	40
63	2 1/2	8	79	16	300	3,36	40
76	3	8	92	16	350	3,92	40
102	4	8	118	16	450	5,29	40

## **CY 410**

# 3

### CHEMICAL HYPALON S&D

Application: specially designed for suction and discharge of many industrial chemicals and particularly suited for products containing high aromatics. Designed for all applications where chemical transfes are involved.

Standard/approval: EN ISO 1307/ EN 12115:2011 To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011. Temperature range: -35°C / +95°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: black, smooth, HYPALON tube.

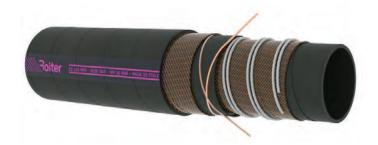
Reinforcement: high tensile synthetic textile, steel wire

helix. Antistatic copper wires.

Cover: black, smooth fabric finish, Hypalon rubber cover,

abrasion, ozone and weather resistant

Marking: Continuous transfer tape, lilac letters: "ROITER® CY 410 -ACID S&D - WP 10 BAR -EN 12115 -  $\Omega/T$  MADE IN ITALY



Inte	ernal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	10	95	0,74	40
25	1	6	37	10	125	1,02	40
32	1.1/4	6	44	10	160	1,28	40
38	1.1/2	6,5	51	10	190	1,50	40
51	2	8	67	10	250	2,15	40
63	2.1/2	8	79	10	300	2,76	40
76	3	8	92	10	350	3,30	40
102	4	9	120	10	450	4,60	40

## **CV 116 FKM**

# 3

#### **ACID DELIVERY**

**Application:** specifically designed for handling many industrial chemicals and particularly suited for products containing high aromatics, up to 100%. Designed for all application where high temperatures are involved.

Standard/approval: EN ISO 1307 - EN 12115:2011 ATTENTION: the temperature of the medium must be lower than its boiling point.

Please refer to the Roiter® resistance list or, in case of doubt, contact our technical department

Continuous use at peak values reduces the service life.
To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

**Temperature range:** -25°C / +120°C depending on medium. Steam cleaning without pressure up to 130°C/max. 30min.

Safety factor: 4:1

Tube: black, smooth, FKM tube.

**Reinforcement:** High tensile synthetic textile. Antistatic copper wires.

**Cover:** black, smooth (fabric finish), synthetic rubber cover, abrasion, ozone and weather resistant.

Marking: continuous transfer tape:

"ROITER® CV 116 FKM- ACID DELIVERY- WP 16 BAR -

EN 12115  $\Omega/T$  - MADE IN ITALY".



Inte	ernal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	125	0,74	40
25	1	6	37	16	150	1,02	40
32	1.1/4	6	44	16	175	1,28	40
38	1.1/2	6,5	51	16	225	1,50	40
51	2	8	67	16	275	2,15	40
63	2.1/2	8	79	16	300	2,76	40
76	3	8	92	16	350	3,30	40
102	4	9	120	16	450	4,60	40

## **CV 416 FKM**

### ACID - S&D

Application: specially designed for suction and discharge Temperature range: -25°C / +120°C depending on medium. Steam cleaning without pressure up to 130°C /

Tube: black, smooth, FKM tube.

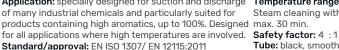
Reinforcement: high tensile synthetic textile, steel wire helix. Antistatic copper wires.

Cover: black, smooth fabric finish, synthetic rubber cover,

abrasion, ozone and weather resistant.

Marking: continuous transfer tape:

"ROITER® CV 416 FKM- ACID S&D - WP 16 BAR- EN 12115  $\Omega/T$  - MADE IN ITALY".



ATTENTION: the temperature of the medium must be lower than its boiling point.

Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept.

Continuous use at peak values reduces the service life. To ensure the assembly is leakproof, hoses must be

tested according to EN 12115:2011.



Inte	rnal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	125	0,74	40
25	1	6	37	16	150	1,02	40
32	1.1/4	6	44	16	175	1,28	40
38	1.1/2	6,5	51	16	225	1,50	40
51	2	8	67	16	275	2,15	40
63	2.1/2	8	79	16	300	2,76	40
76	3	8	92	16	350	3,30	40
102	4	9	120	16	450	4,60	40

## **CX 116 PEX**

## CHEMICALS DELIVERY XLPE CROSS LINKED PE LINER

Application: suitable for delivery of acids, alkalis, salts, organic compounds (alcohols, esters, ketones, etc.) incl. aromatic substances, chlorinated hydrocarbons and oxidising acids, according to our chemical resistance list. Feature: extremely low friction coefficient and good abrasion resistance.

Standard/approval: EN 12115:2011, TRbF 131/2:1992. ATTENTION: the temperature of the medium must be

lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service life. To ensure the assembly is leakproof, the hose must be tested according to EN 12115:2011.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C / +100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: transparent, smooth, PE-X tube.

**Reinforcement:** high tensile synthetic textile. Antistatic copper wires.

**Cover:** black, smooth, cloth finish, synthetic rubber, abrasion, acids, ozone and weather resistant.

Marking: continuous transfer tape: "ROITER® CX 116 PEX-CHEMICALS DELIVERY- XLPE - WP 16 BAR - MADE IN ITAL Y"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,52	40
25	1	6	37	16	225	0,76	40
32	1 1/4	6	44	16	275	0,88	40
38	1 1/2	6,5	51	16	350	1,22	40
51	2	8	67	16	420	1,45	40
63	2 1/2	8	79	16	450	1,88	40
76	3	8	92	16	525	2,61	40

## **CX 416 PEX**

#### CHEMICALS S&D XLPE CROSS LINKED PE LINER

Application: suitable for suction & delivery of acids, alkalis, salts, organic compounds (alcohols, esters, ketones, etc.) incl. aromatic substances, chlorinated hydrocarbons and oxidising acids according to our chemical resistance list.

Feature: extremely low friction coefficient and good

abrasion resistance

ATTENTION: the temperature of the medium must be lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service life

Temperature range: -35°C / +100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: PE-X, transparent, smooth.

Reinforcement: synthetic plies reinforcement. Double

steel wire helix. Antistatic copper wires.

Cover: black. smooth fabric finish, synthetic rubber cover,

abrasion, acids, ozone and weather resistant.

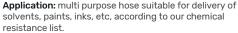
Marking: continuous transfer tape: "ROITER® CX 416 PEX-CHEMICALS S&D- XLPE - WP 16 BAR - MADE IN ITALY".



Intern	al dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,88	40
25	1	6	37	16	225	1,15	40
32	1 1/4	6	44	16	275	1,33	40
38	1 1/2	6,5	51	16	350	1,65	40
51	2	8	67	16	420	2,30	40
63	2 1/2	8	79	16	450	3,00	40
76	3	8	92	16	525	3,90	40
102	4	8	118	16	675	4,85	40

## CW 110 UHMW PE

### CHEMICAL D HOSE



Feature: extremely low friction coefficient and good abrasion resistance.

Standard/approval: EN 12115:2011, TRbF 131/2:1992. ATTENTION: the temperature of the medium must be lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -35°C / + 100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: transparent, smooth, UHMW PE tube.

Reinforcement: high tensile synthetic textile. Antistatic copper wires.

Cover: black, smooth, cloth finish, synthetic rubber, abrasion, acids, ozone and weather resistant.

Marking: continuous transfer tape: "ROITER® CW 110 UHMWPE - CHEMICALS DELIVERY- WP 10 BAR - MADE IN ΙΤΔΙ Υ".



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	10	190	0,52	40
25	1	6	37	10	225	0,76	40
32	1 1/4	6	44	10	275	0,88	40
38	1 1/2	6,5	51	10	350	1,22	40
51	2	8	67	10	420	1,45	40
63	2 1/2	8	79	10	450	1,88	40
76	3	8	92	10	525	2,61	40

## CW 410 UHMW PE

### CHEMICAL S&D HOSE

Application: multipurpose hose suitable for suction and delivery of solvents, paints, inks, etc, according to our chemical resistance list

Standard/Approval: EN 12115:2011, TRbF 131/2:1992. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept.

Feature: extremely low friction coefficient and good

abrasion resistance.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C / + 100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: UHWMPE, transparent, smooth.

Reinforcement: high tensile synthetic textile, steel helix,

crossed copper wires.

**Cover:** weather and chemical resistant synthetic black rubber, fabric impression. Outer cover can be smooth or

corrugated (CW 616).

Marking: continuous transfer tape "ROITER® CW 410 UHMWPF S&D - WP 10 BAR- MADE IN ITALY"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	10	120	0,80	40
25	1	6	37	10	170	1,00	40
32	1 1/4	6	44	10	250	1,20	40
38	1 1/2	6,5	51	10	300	1,45	40
51	2	7,5	66	10	365	2,20	40
63	2 1/2	8	79	10	450	2,85	40
76	3	8	92	10	525	3,53	40
102	4	9	120	10	650	4,80	40

## **CW 416 POLYATEX**

#### CHEMICAL S&D HOSE UPF

Application: multipurpose hose suitable for delivery of solvents, paints, inks, etc.) according to our chemical resistance list, in all potentially explosive environments Feature: extremely low friction coefficient and good abrasion resistance.

Standard/Approval: EN 12115:2011, ATEX Certificate. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept.

Other pressure ratings available on request (10bar/25bar).

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40°C / + 100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: UHMW PE, black Antistatic smooth

Reinforcement: high tensile synthetic textile. wire steel

helix, two crossed copper wires.

Cover: smooth, black synthetic rubber fabric impression, weather and chemical resistant. On request, it is possible to provide in the version "Semi-corrugated" outer cover, for a better flexibility.

Electrical propeties: electrical conductive tube and cover,

R<10<sup>6</sup> Ohm/length; can be used in ATEX areas.

Marking:

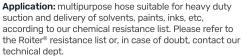
POLYATEX - SOLVENT S&D - WP 16 BAR - Ω/T -MADE IN ITALY



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,88	40
25	1	6	37	16	225	1,14	40
32	1 1/4	6	44	16	275	1,33	40
38	1 1/2	6,5	51	16	350	1,64	40
51	2	8	67	16	420	2,30	40
76	3	8	92	16	525	3,90	40
102	4	9	120	16	675	4,85	40

## CW 425 UHMW PE

### CHEMICAL S&D HOSE



**Feature:** extremely low friction coefficient and good abrasion resistance.

Standard/Approval: Exceed EN 12115:2011, TRbF 131/2:1992.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

**Temperature range:** -40°C / +100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: UHWMPE, transparent, smooth.

**Reinforcement:** high tensile synthetic textile with embedded steel helix, two crossed conductive copper

wires.

**Cover:** weather and chemical resistant synthetic black rubber, fabric impression. Outer cover can be smooth or corrugated.

Marking: continuous transfer tape "ROITER® CW 425 UHMWPE S&D - WP 25 BAR- MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	8	35	25	200	1,06	40
25	1	8	41	25	225	1,46	40
32	1 1/4	8	48	25	275	1,73	40
38	1 1/2	8,5	55	25	350	2,02	40
51	2	10	71	25	450	2,86	40
76	3	10	96	25	550	4,74	40
102	4	11	124	25	800	5,80	40

## CW 116 UHMW PE

#### CHEMICALS DELIVERY ULTRA HIGH MOLECULAR WEIGHT PE LINER

Application: suitable for delivery of acids, alkalis, salts, organic compounds (alcohols, esters, ketones, etc.) incl. aromatic substances, chlorinated hydrocarbons and oxidising acids according to our chemical resistance list.

Feature: extremely low friction coefficient and good abrasion resistance.

Standard/approval: EN 12115:2011, TRbF 131/2:1992. ATTENTION: the temperature of the medium must be lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40 / +100°C depending on medium. Steam cleaning without pressure up to 130°C / max 30 min

Safety factor: 4:1

Tube: UHWMPE, transparent/white, smooth.

Reinforcement: high tensile synthetic textile. Antistatic copper wires.

Cover: Blue synthetic rubber, smooth, ozone weather and abrasion resistant, wrapped fabric finish.

Black cover or green on request.

Marking: continuous transfer tape:

"ROITER® CW 116 - CHEMICALS UHMWPE - WP 16 BAR -MADE IN ITALY"



Inter	nal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,52	40
25	1	6	37	16	225	0,76	40
32	11/4	6	44	16	275	0,88	40
38	11/2	6,5	51	16	350	1,22	40
51	2	8	67	16	420	1,48	40
63	2 1/2	8	79	16	450	1,88	40
76	3	8	92	16	525	2,24	40
102	4	9	120	16	675	4,40	40

## CW 416 UHMW PE

#### CHEMICALS S&D ULTRA HIGH MOLECULAR WEIGHT PELINER

Application: suitable for suction & delivery of acids, alkalis, salts, organic compounds (alcohols, esters, ketones, etc.) incl. aromatic substances, chlorinated hydrocarbons and oxidising acids according to our chemical resistance list.

Feature: abrasion resistance.

Standard/approval: EN 12115:2011, TRbF 131/2:1992. ATTENTION: the temperature of the medium must be lower than its boiling point. Please refer to the Roiter® resistance list or, in case of doubt, contact our technical dept. Continuous use at peak values reduces the service life.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40 / +100°C depending on medium. Steam cleaning without pressure up to 130°C/ max. 30 min.

Safety factor: 4:1

Tube: UHWMPE, transparent/white, smooth. Reinforcement: high tensile synthetic textile, steel

wire helix, antistatic copper wires.

Cover: Blue synthetic rubber, smooth, ozone weather and abrasion resistant, wrapped fabric finish.

Black cover or green on request.

Marking: continuous transfer tape:

"ROITER® CW 416 - CHEMICALS UHMWPE - WP 16 BAR -S&D - MADE IN ITALY'



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,90	40
25	1	6	37	16	225	1,20	40
32	1 1/4	6	44	16	275	1,50	40
38	1 1/2	6,5	51	16	350	1,75	40
51	2	8	67	16	420	2,50	40
63	2 1/2	8	79	16	450	3,10	40
76	3	8	92	16	525	3,90	40
102	4	9	120	16	675	4,90	40

## CW 516 UHMW PE

#### CORRUGATED S&D UHMW PE ULTRA HIGH MOLECULAR WEIGHT PELINER

Application: excellent chemical resistant hose, corrugated cover, suitable for suction and delivery of nearly every type of acid, chemical, oil and solvent, including alcohols, esters, ketones, etc. and including as well aromatic substances, chlorinated hydrocarbons and oxidising acids, according to our chemical resistance list.

Feature: the special design provides greater flexibility and fully with standards EN 12115:2011, tested to EN 13463-1 / EN 60079-0.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

Temperature range: -40 / + 100°C depending on medium. Steam cleaning without pressure up to 130\*C / max 30 min

Safety factor: 4:1

Tube: UHWMPE, transparent/white, smooth. Reinforcement: high tensile synthetic textile.steel

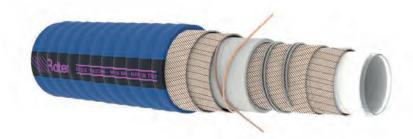
wire helix, antistatic copper wires.

Cover: synthetic rubber, corrugated, ozone weather and abrasion resistant, wrapped fabric finish.

Blue cover or green, on request.

Marking: continuous transfer tape:

"ROITER® CW 516 UHMWPE - WP 16 BAR - S&D -MADE IN ITALY"



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	1,10	40
25	1	6	37	16	225	1,50	40
32	11/4	6	44	16	275	1,80	40
38	11/2	6,5	51	16	350	2,05	40
51	2	8	67	16	420	2,50	40
65	2 1/2	8	79	16	450	3,10	40
76	3	8	92	16	525	4,30	40
102	4	9	120	16	675	5,15	40
152	6	13	178	16	900	8,70	40

## CW 616 UHMW PE POLYCHEM



## SEMI-CORRUGATED S&D UHMW PE

Application: one of the most versatile chemical hoses available, suitable fo suction and delivery of nearly every type of acid, chemical, oil and solvent, including alcohols, esters, ketones, etc. and including as well aromatic substances, chlorinated hydrocarbons and oxidising acids, according to our chemical resistance list. POLYCHEM hose has been used successfully for many years in pharmaceutical and cosmetic industries.

**Feature:** the special design provides greater flexibility and is fully compliant with standards.EN 12115:2011, tested to EN 13463-1 / EN 60079-0.

To ensure the assembly is leakproof, hoses must be tested according to EN 12115:2011.

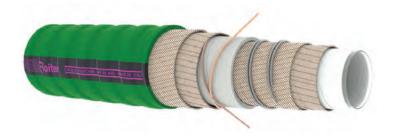
**Temperature range:** -40°C / +100 °C depending on medium. Steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 4:1

Tube: transparent/white, smooth, UHMWPE tube.
Reinforcement: high tensile synthetic textile
reinforcement. Two antistatic copper wires, double steel
wire helix.

**Cover:** green, wrapped fabric finish, synthetic rubber cover, abrasion, acids, ozone and weather resistant. Outer finish is semi-corrugated for better flexibility, and on request can be supplied in black color.

Marking: continuous transfer tape: "ROITER® CW 616 POLYCHEM ACID S&D UHMWPE- WP 16 BAR- MADE IN ITALY".



Inter	rnal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	1,10	40
25	1	6	37	16	225	1,50	40
32	11/4	6	44	16	275	1,80	40
38	11/2	6,5	51	16	350	2,05	40
51	2	8	67	16	420	2,50	40
63	2 1/2	8	79	16	450	3,10	40
76	3	8	92	16	525	4,30	40
102	4	9	120	16	675	5,15	40
152	6	13	178	16	900	8,70	40

## FL 416 ROIFLON

#### CHEMICALS FLUOROPOLYMER S&D

Application: Universal hose for the safe transfer of a variety of chemical products. Tank truck or storage tank transfer, mixing or blending, ideal for foodstuff, drinking water etc. ROIFLON FL 416, includes a wire helix for full suction and crush resistance capability. The fluoropolymer tube has excellent chemical resistance. ROIFLON FL 416, is designed for easy cleaning and sterilizing with lose steam. Clean In Place (CIP) methods, may be used. Applications include virtually all chemicals used in a variety of industries. ROIFLON FL 416, is a universal hose for all chemical and petrochemical applications, thanks to the total resistance of its liner. Suitable for the transport of acids, alkalis, salts, organic compounds, (alcohols, esters, ketones, etc.) including aromatic substances, chlorinated hydrocarbons and oxidizing acids, as well as foodstuffs and drinking water. ROIFLON FL 416 is commonly used in cosmetic and in pharmaceutical industries.

Standard/Approval: EN 12115: 2011 - DIN 2823. Phthalate free - FDA title 21 item 177.1550 Food. Notice: Please refer to the Roiter® chemical resistance list or, in case of doubts, contact our technical office.

Temperature range:  $-40^{\circ}$ C to  $+150^{\circ}$ C ( $-40^{\circ}$ F to  $+300^{\circ}$ F) normal service, however the rating is dependent on the specific chemical conveyed.

Safety factor: 4:1

Tube: ROIFLON SEAMLESS White fluoropolymer. Backed with Nanotec® to improve the resistance to flex fatigue, close to the couplings.

Reinforcement: Textile reinforcements, Stainless steel wire helix, crossed copper wires.

Cover: Blue EPDM; resistant to ozone and

weather, abrasion resistant, fabric impression. Outer finish can be smooth (type FL 416) or alternatively semi

corrugated (type FL 616). Electrical resistance: <106 Ohm

Marking: Continuous tape: ROITER® FL 416-ROIFLON - SD 150°C - PN 16 - R <106 OHM - EN 12115 -MADE IN ITALY



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,89	30
25	1	6	37	16	225	1,08	30
32	1 1/4	6	44	16	275	1,25	30
38	1 1/2	6	50	16	350	1,70	30
51	2	8	67	16	420	2,15	30
63	2 1/2	8	79	16	450	2,30	30
76	3	8	92	16	525	3,40	30

## FL 416 BK - ROIFLON AS



#### CHEMICALS FLUOROPOLYMER S&D

**Application:** Antistatic universal hose for the safe transfer of a variety of chemical products. Tank truck or storage tank transfer, mixing or blending. ROIFLON AS, includes a wire helix for full suction and crush resistance capability. The Black fluoropolymer tube has excellent chemical resistance.

ROIFLON AS, is designed for easy cleaning and sterilizing with lose steam. Clean In Place (CIP) methods, may be used. Applications include virtually all chemicals used in a variety of industries. ROIFLON AS, is a universal hose for all chemical and petrochemical applications, thanks to the total resistance of its liner. Suitable for the transport of acids, alkalis, salts, organic compounds, (alcohols, esters, ketones, etc.) including aromatic substances, chlorinated hydrocarbons and oxidizing acids, can also be used for foodstuffs, ROIFLON FL 416 is commonly used in cosmetic and in pharmaceutical industries.

Standard/Approval: EN 12115: 2011 - DIN 2823.

Phthalate free

Notice: Please refer to the Roiter® chemical resistance list. or, in case of doubts, contact our technical office.

Temperature range:  $-40^{\circ}$ C to  $+ 150^{\circ}$ C ( $-40^{\circ}$ F to  $+300^{\circ}$ F) normal service, hovewer the rating is dependent on the specific chemical conveyed.

Safety factor: 4:1

Tube: ROIFLON SEAMLESS Black Antistatic fluoropolymer. Backed with Nanotec® to improve the resistance to flex fatique, close to the couplings.

Reinforcement: Textile reinforcements. Stainless steel wire helix, crossed copper wires.

Cover: Black Epdm, Pin pricked, resistant to ozone and weather, abrasion resistant fabric impression. Outer cover can be smooth (Type FL 416 BK) or alternatively Semi corrugated (Type FL 616 BK)

Electrical resistance: <106 Ohm

Marking: Continuous tape: ROITER® FL 416BK-ROIFLON AS -SD-150°C -PN 16- R <106 OHM-EN 12115 Ω/T MADE IN ITALY





Intern	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	190	0,89	30
25	1	6	37	16	225	1,08	30
32	1 1/4	6	44	16	275	1,25	30
38	1 1/2	6	50	16	350	1,70	30
51	2	8	67	16	420	2,15	30
63	2 1/2	8	79	16	450	2,30	30
76	3	8	92	16	525	3,40	30

## **DYNAFLUOR® DF 1**

#### PTFE SMOOTH HOSE COATED

**Description:** DYNAFLUOR® DF 1 hose, is a PTFE smooth bore hose, with a Stainless steel braiding reinforcement. Its tube is available in white virgin or black (electrically conductive) PTFE. Phthalate-free, tested according to 1907/2006/EC (REACH). It complies with FDA 21 CFR 177.1550, USP XXXVI class VI, regulation (EU) no. 1935/2004 and (EU) no 10/2011, 3A Sanitary Standard

**Properties:** Its smooth hose tube ensures a particularly low level of flow resistance and makes cleaning very easy. The smooth surface allows a perfect cleaning of outer surface as well.

Temperature range:

**DF1 RC:** -40° C (-40° F) to +150° C (+302° F) **DF1 SI:** -73° C (-100° F) to +204° C (+400° F)

Safety factor: 3:1

**Tube:** PTFE (polytetrafluorethylene) white (also available in black antistatic), smooth, phthalate-free. Reinforcement: Stainless steel braiding

Cover: Smooth outer cover for a better cleaning.

DYNAFLUOR® DF 1 RC - Black or Blue Epdm

DYNAFLUOR® DF 1 SI - White Silicone

**Applications:** Suitable for use in the chemical industry as well as the Food and Pharma industries. Ideal for transfer of edible oil filtering or waste disposal.

Marking: continuous transfer tape "DYNAFLUOR® DF1 XX PTFE - FDA-USP-EU 10/2011 - MADE IN ITALY".



Interna	Internal Diameter		Working Pressure	Bending radius
mm	inch	mm	(max) bar	(min) mm
5	3/16	10,3	265	40
6,5	1/4	12,4	240	60
8	5/6	14,5	200	70
9,5	3/8	16,2	190	80
10,5	13/32	18,5	170	95
12,7	1/2	20,5	150	110
16	5/8	24	110	150
19	3/4	28	80	200
25	1	35	55	300

## DYNAFLUOR® DF 6

### PTFE SMOOTH HOSE + S.S BRAID & HELIX WIRE, COATED



Properties: Its smooth PTFE liner ensures a particularly low level of flow resistance and makes cleaning very easy. Thanks to the helix wire reinforcement the hose is resistant to vacuum up to 675 mbar at 20°C.

Construction: PTFE extruded Liner, White or Black antistatic version reinforced with a SS Helix wire and one SS braid

#### Temperature range:

**DF6 CHEM and FOOD**: -40° C (-40° F) to +150° C (+302° F) DF 6 PHARMA: -73° C (-100° F) to +204° C (+400° F)

Safety factor: 5:1

Tube: PTFE extruded Liner, White or Black antistatic version Reinforcement: Stainless steel braiding, stainless steel helix

Cover: wrapped directly on the braid

DF 6 CHEM -Black antistatic Epdm, helical wire encapsulated in rubber cover

DF 6 FOOD - Blue Epdm, helical wire encapsulated in rubbercover

DF 6 PHARMA - White Silicone

**Applications:** Suitable for use in the chemical industry as well as the Food and Pharma industries. Assemblies can be supplied lined (tafted) PTFE liner extended through the end fitting, then flared.

Marking: continuous transfer tape "DYNAFLUOR® DF 6 XXX PTFE -FDA-USP-EU 10/2011- EN 16643 MADE IN ITALY" +

\* helical wire encapsulated in rubber cover



Interna	Internal Diameter		Bending radius	Vacuum resistance	Coil length
mm	inch	(max) bar	(min) mm	mbar	(max) m
12	1/2	50	60	675	20
19	3/4	60	80	675	20
25	1	40	120	675	20
32	1.1/4	45	155	675	20
38	1.1/2	40	200	675	20
50	2	25	250	675	20

## **DYNAFLON® DF5 RC**

# 3

# PTFE CONVOLUTED HOSE + SS BRAID & HELIX WIRE. RUBBER COATED

Description: DYNAFLON® -RC hose is a PTFE convoluted liner reinforced with a SS Helix wire and one SS Braid. Avaible with virgin or Black antistatic PTFE liner. EPDM Cover directly wrapped on SS braid. It complies FDA 21 CFR 177.1550 (21 CFR 178 3297 AS version), USP Classe VI, EN 16643, Reg 1935/2004, EN 10/2011.

**Properties:** Its convoluted low profile PTFE liner ensure a particularly low level of flow resistance and make cleaning very easy. High flexibility and resistance to kinking, compared to traditional products. Thanks to the helix wire reinforcement the hose is resistant to vacuum up to 910 mbar at 20°C from ½" to 2" id, and guarantee an optimum pressure resistance.

Temperature range: -40°C(-40°F) to +150°C (+302°F) Safety factor: 5:1

one SS Braid. Avaible with virgin or Black antistatic

PTFE liner. EPDM Cover directly wrapped on SS braid. It

Black antistatic version reinforced with a SS Helix wire and one SS braid.

**Cover**: Black antistatic EPDM wrapped directly on the braid. Avaible on request in Blue or Grey color.

**Applications:** Suitable for use in the chemical industry as well as the Food and Pharma industries. Assemblies can be supplied "lined" (tafted). Ptfe liner extended through the end fitting, then flared out.

Marking: continuous transfer tape "DYNAFLUOR® DF 5-RC PTFE -FDA-USP- EU 10/2011-EN 16643"



Interna	Internal Diameter		Bending radius	Vacuum resistance	Coil length
mm	inch	(max) bar	(min) mm	mbar	(max) m
12	1/2	60	55	910	20
19	3/4	60	75	910	20
25	1	40	100	910	20
32	1.1/4	40	120	910	20
38	1.1/2	35	150	910	20
50	2	25	210	910	20
63	2.1/2	16	260	675	20
76	3	14	340	675	20

## **DYNAFLON® DF5 SI**

# 3

## PTFE CONVOLUTED HOSE + SS BRAID & HELIX WIRE, SILICONE COATED

Description: DYNAFLON®-SI hose is a PTFE convoluted liner reinforced with a SS Helix wire and one SS Braid. Avaible with White virgin or Black antistatic PTFE liner. Silicone cover directly wrapped on SS braid. It complies FDA 21 CFR 177.1550 ( 21 CFR 178 3297 AS version), USP Class VI, EN 16643, Reg 1935/2004, EN 10/2011.

Properties: Its convoluted low profile PTFE liner ensure a particularly low level of flow resistance and make cleaning very easy. High flexibility and resistance to kinking compare to traditional products. Thanks to the helix wire reinforcement the hose is resistant to vacuum up to 910 mbar at 20°C from ½" to 2" id and guarantee an optimum pressure resistance.

Temperature range: -73°C(-100°F) to +204°C +400°F) Safety factor: 5:1

**Construction:** convoluted PTFE extruded Liner, White or Black antistatic reinforced with a SS Helix wire and one SS braid

**Cover:** White or Natural Silicone wrapped directly on the braid.

**Applications:** Suitable for use in the Food and Pharma industries. Assemblies can be supplied "lined" (tafted). Ptfe liner extended through the end fitting, then flared out.

Marking: continuous transfer tape "DYNAFLON® -SI PTFE - FDA-USP- EU 10/2011-EN 16643 - MADE IN ITALY"



Interna	Internal Diameter		Bending radius	Vacuum resistance	Coil length
mm	inch	(max) bar	(min) mm	mbar	(max) m
12	1/2	60	55	910	20
19	3/4	60	75	910	20
25	1	40	100	910	20
32	1.1/4	40	120	910	20
38	1.1/2	35	150	910	20
50	2	25	210	910	20

## **SMOOTHLINE®**

# 7

## PTFE LINER, SMOOTH INSIDE CORRUGATED OUTSIDE, SS BRAID. COATED

**Description:** SM00THLINE® RC hose is a PTFE smooth bore liner inside /corrugated outside with a SS Braid. Avaible with virgin or Black antistatic PTFE liner. Cover directly wrapped or extruded on SS braid. It complies FDA 21 CFR 177.1550 (21 CFR 178 3297 AS version), USP Classe VI, EN 16643, Reg 1935/2004, EN 10/2011. 3A Sanitary Standards.

**Properties:** Its smooth PTFE liner ensure a particularly low level of flow resistance and makes cleaning very easy. The hose is resistant to vacuum up to 910 mbar at 20°C

**Application:** Suitable for use in the chemical industry as well as the Food and Pharma industries. Assemblies can be supplied "lined" (tafted). Ptfe liner

extended through the end fitting, then flared out.

#### Temperature range:

SMOOTHLINE CHEM and FOOD -40°C(-40°F) to + 150°C ( + 302°F) SMOOTHLINE PHARMA - 73°C(-100°F) to + 204°C( +400°F)

Safety factor: 4:1

Construction: PTFE extruded Liner, White or Black antistatic reinforced with a SS braid

Cover: extruded or wrapped directly on the braid

**SMOOTHLINE® CHEM** -Black antitstatic Epdm, helical wire encapsulated in rubber cover.

**SMOOTHLINE® FOOD** - Blue Epdm, helical wire encapsulated in rubber cover.

SMOOTHLINE® PHARMA - White Silicone

Marking: continuous transfer tape:

"SMOOTHLINE® XXX- PTFE -FDA USP- EU 10/2011 - EN 16643 MADE IN ITALY" + embossed



Interna	Internal Diameter		Bending radius	Vacuum resistance	Burst Pressure
mm	inch	(max) bar	(min) mm	mbar	(max) bar
6,5	1/4	80	30	910	320
9,5	3/8	70	60	910	280
13	1/2	60	60	910	240
15,5	5/8	50	65	910	200
19,5	3/4	55	80	910	220
25,4	1	50	100	910	200
32	11/4	45	160	910	180
38	11/2	40	200	910	160
50	2	30	300	910	120

## **SMOOTHLINE® - TEX**

## PTFE LINER, SMOOTH INSIDE CORRUGATED OUTSIDE, COATED



Description: SMOOTHLINE® hose is a PTFE smooth bore liner inside /corrugated outside reinforced with multiple texile fabrics. Avaible with virgin or Black antistatic PTFE liner. It complies FDA 21 CFR 177.1550 (21 CFR 178 3297 AS version), USP Class VI, EN 16643, Reg 1935/2004. EN 10/2011.

**Properties:** Its smooth PTFE liner ensure a particularly low level of flow resistance and makes cleaning very easy.

Application: Suitable for use in the chemical industry as well as the Food and Pharma industries. Assemblies can be supplied "lined" (tafted). Ptfe liner extended through the end fitting, then flared out.

#### Temperature range:

**SMOOTHLINE CHEM** and **FOOD**  $-40^{\circ}$ C( $-40^{\circ}$ F) to  $+150^{\circ}$ C ( $+302^{\circ}$ F)

**SMOOTHLINE PHARMA** - 73°C(-100°F) to + 204°C (+400°F)

Safety factor: 4:1

Construction: PTFE extruded Liner, White or Black antistatic version reinforced with textile fabrics.

Cover: extruded or wrapped directly on the braid protection of the hose against heat, friction and abrasion:

SMOOTHLINE® TEX CHEM -Black antistatic Epdm SMOOTHLINE® TEX FOOD - Blue Epdm SMOOTHLINE® TEX PHARMA - White Silicone

Marking: continuous transfer tape

"SMOOTHLINE® TEX XXX- PTFE-FDA USP- EU 10/2011 - EN 16643 MADE IN ITALY" + embossed



Interna	Internal Diameter		Working Bending Pressure radius		Burst Pressure
mm	inch	(max) bar	(min) mm	mbar	(max) bar
6,5	1/4	16	30	675	64
9,5	3/8	16	60	675	64
13	1/2	16	60	675	64
15,5	5/8	16	65	675	64
19,5	3/4	16	80	675	64
25,4	1	16	100	675	64
32	11/4	16	160	675	64
38	11/2	16	200	675	64
50	2	16	300	675	64

## Flexible compressed air hoses

Suitable to deliver compressed air, for medium/heavy duty applications in road construction sites, quarries and mines. Available with different working pressures.



AR 210
Air hose mandrel built
10 Bar



AR 220 Air hose mandrel built 20 Bar



AF 220 FRAS
Air hose Fire resistant anti static
ATEX mandrel built
20 Bar



AF 410 FRAS
Air/Water Fire resistant anti static
S&D hose - ATEX mandrel built
20 Bar



AR 340 Air hose steel reinforced mandrel built 40 Bar



AR 345 HIGRADE
Air hose steel reinforced
mandrel built high temp/oil resistant
45 Bar



AR 370 STEELFLEX
Air hose steel reinforced mandrel built
70 Bar



ARC 325
Hot air compressor hose mandrel built
25 Bar



ARC 610
Hot blower air hose
Spiral wire reinforced, mandrel
built
10 Bar



AR 500
Industrial air vacuum/air ducting hose mandrel built
10 Bar



MPH 111 - FARIVO®

Multipurpose hose

10 Bar



MPH 121 - FARIVO®

Multipurpose hose

20 Bar



ARC 700 Exhaust Gas suction hose Crush resistant

## **AR 210**

### COMPRESSED AIR HOSE - 10 Bar

Application: mandrel built, flexible lightweight medium pressure hose, designed to handle air, water or inert gases. The rugged cover is resistant to abrasion and weathering. AR 210 provides service for low to medium pressure applications in general industrial, steel mills, shipyards, foundries, automotive and construction. Larger dimensions available on request.

Other colours available on request (yellow, green, red, blue, orange)

Temperature range: -35°C / +80.°C Safety factor: Air 3:1/Water 2.5:1

Tube: synthetic rubber, black, suitable for oil-laden air. smooth

Reinforcement: high tensile synthetic textile

Cover: synthetic rubber, black, resistant to ozone and weather, wrapped finish

Marking: continuous transfer tape: "ROITER® AR 210 -

WP 10 BAR- MADE IN ITALY"



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	3,5	20	10	150	0,20	40
16	5/8	3,5	23	10	200	0,24	40
19	3/4	4	27	10	225	0,36	40
25	1	5	35	10	250	0,51	40
32	1 1/4	5	42	10	300	0,69	40
38	1 1/2	6	50	10	350	0,97	40
51	2	7	65	10	400	1,33	40
63	2 1/2	7	77	10	425	1,89	40
76	3	7	90	10	500	2,07	40
102	4	8	118	10	700	2,96	40

## **AR 220**

#### COMPRESSED AIR - 20 BAR

Application: robust mandrel built hose for arduous applications, designed to handle air, water or inert gases. The rugged cover is resistant to abrasion and weathering. AR 220 provides service for medium to high pressure applications, heavy duty air tools, compressors, in general industrial, steel mills, shipyards, foundries, mines, guarries and construction. Larger dimensions available on request. Other colours available on request (yellow, green, red, blue, orange).

Temperature range: -35°C / +80°C. Safety factor: 3:1/water 2.5:1

Tube: synthetic rubber, black, suitable for oil-laden air. smooth.

Reinforcement: high tensile synthetic textile.

Cover: synthetic rubber, black, resistant to ozone and weather, wrapped finish.

Marking: continuous transfer tape: "ROITER® AR 220 WP 20 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5,5	30	20	200	0,55	40
25	1	6	37	20	225	0,71	40
32	1 1/4	7	46	20	300	1,04	40
38	1 1/2	8	54	20	400	1,25	40
51	2	8	67	20	500	1,88	40
63	2 1/2	8	79	20	600	2,49	40
76	3	9	94	20	800	3,20	40

## AF 220 FRAS

#### AIR DELIVERY HOSE - 20 BAR Fire Resistant Antistatic

Application: specially designed for the conveyance of air and water in mining applications. Suitable for lubricant-laden compressed air and for water. Cover and tube Fire Resistant Anti-Static (FRAS)

Temperature range: -35°C to +80°C

Safety factor: 4:1

Standards: Mandrel built to EN ISO 2398:1997 Type A -DIN 20018-1:2003 - AS/NZS 2660:1991 Class B - ATEX Tube: black antistatic synthetic rubber compound, oil resistant.

Reinforcement: high strength synthetic textile wrapped. Double copper antistatic wire insert

Cover: black smooth (wrapped finish), chloroprene rubber compound, oil and weather resistant, electrically conductive, resistant to abrasion, flame retardant, fabric impression.

Marking: continuous transfer tape, "ROITER® AF 220 FRAS - FIRE RESISTANT ANTISTATIC - WP 20 BAR MADE IN ITALY".





Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5,5	30	20	150	0,60	40
25	1	6	37	20	200	0,72	40
32	1 1/4	7	46	20	250	1,10	40
38	1 1/2	8	54	20	300	1,30	40
51	2	8	67	20	400	1,90	40
63	2 1/2	8	79	20	500	2,50	40
76	3	9	94	20	800	3,30	40
102	4	10	122	20	900	4,60	40
150	6	12,5	175	20	1000	6,10	40

## AF 410 FRAS

# AIR & WATER S&D-10 BAR Fire Resistant Antistatic

Application: Designed specifically for suction and delivery of air & water in mining applications. Standards: Mandrel built hose, built on EN ISO 2398:1997 Type A- DIN 20018-1:2003 - and to AS/NZ 2660:1991 Class C covering Fire Resistant Anti-Static (FRAS) hose.

Safety factor: 4:1

Temperature range: -30 + 80°C

Tube: Black Antistatic NBR synthetic rubber

compound, oil resistant.

**Reinforcement:** wrapped textile reinforcements, steel

wire, double antistatic copper wire.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, resistant to oil, cloth

impression.

Marking: continuous transfer tape "ROITER® AF 410 FRAS S&D- WP 10BAR - MADE IN ITALY".





Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	1 1/2	5	48	10	165	1,60	40
51	2	5	61	10	230	2,10	40
63	2 1/2	6	75	10	300	2,80	40
76	3	6	88	10	365	3,80	40
102	4	7	116	10	520	5,20	40
127	5	8	143	10	600	5,50	40
152	6	8	168	10	950	9,90	40

### **AR 340**

#### AIR STEEL HOSE - 40 BAR

**Application:** mandrel built, strong industrial hose, designed to handle air and water. The hose construction is reinforced with high tensile steel cord reinforcements, providing high pressure capability and excellent coupling retention. Provides service for heavy duty air tools, compressors, drill hose, high pressure air, dust suppression and water, in general industrial, construction, mining and quarry applications.

Larger dimensions available on request.

Norms: ISO 1307

Temperature range: -30°C / +80°C.

Safety factor: 4:1

**Tube:** synthetic rubber, black, suitable for compressed air, smooth.

Reinforcement: steel wire cords.

**Cover:** synthetic rubber, yellow, resistant to ozone and

weather, wrapped finish, pin pricked.

Marking: continuous transfer tape: "ROITER® AR 340

STEEL AIR WP 40 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	5,5	36	40	150	0,88	40
32	1 1/4	5,5	43	40	200	1,10	40
38	1 1/2	6	50	40	300	1,54	40
51	2	7,5	66	40	400	2,50	40
63	2 1/2	8	79	40	500	3,30	40
76	3	9	94	40	600	5,00	40
102	4	10	122	40	750	6,20	40

## AR 345 - HIGRADE



#### AIR STEEL- 45 BAR - HITEMP/OIL RESISTANT

Application: high nitrile mandrel built, strong industrial hose, designed to handle air with high temperatures or with high oil content. Indicated to be used for compressed air where old compressors or oil presence are involved. Construction is reinforced with steel cords providing high pressure capability. Provides service for heavy duty air tools, compressors, drill hose, high pressure air, in general industrial, mining, construction, and quarry applications. Other diameters available.

Norms: ISO 1307

Temperature range: -30°C/+135°C (-22°F/+275°F) Safety factor: 3.5:1

Tube: high quality NBR, black, suitable for high oil-laden air, and high temperatures, smooth.

Reinforcement: steel wire cord.

Cover: synthetic rubber, yellow, resistant to ozone and weather, abrasion and oil, wrapped finish, pin pricked. Marking: continuous transfer tape, "ROITER® AR 345 HIGRADE- AIR WP 45 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	<b>Coil</b> length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	45	150	0,90	40
32	1 1/4	6	44	45	200	1,10	40
38	1 1/2	8	54	45	300	1,90	40
51	2	8,5	68	45	400	2,90	40
63	2 1/2	8,5	80	45	500	3,30	40
76	3	9	94	45	600	5,00	40
102	4	11	124	45	750	6,20	40

## **AR 370 STEELFLEX**

### AIR STEEL- 70 BAR



Norms: ISO 1307

Temperature range: -30°C/+135°C (-22°F/+275°F) Safety factor: 3.5:1

Tube: high quality NBR, black, suitable for high oil-laden air, and high temperatures, smooth.

Reinforcement: extra strong steel wire cords.

Cover: synthetic rubber, yellow, resistant to ozone and weather, wrapped finish, abrasion and oil, pin pricked. Marking: continuous transfer tape, "ROITER® AR 370 STEELFLEX- AIR WP PK BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	5,5	36	70	200	0,88	40
32	1 1/4	5,5	43	70	250	1,10	40
38	1 1/2	6	50	70	350	1,54	40
51	2	7,5	66	70	400	2,50	40
63	2 1/2	8	79	70	500	3,30	40
76	3	9	94	70	700	5,00	40
102	4	10	122	70	800	6,20	40

## **ARC 325**

# 3

#### HOT AIR COMPRESSOR - 25 BAR

**Application:** heavy duty compressed hot air hose, used as blower hose, for bulk loading/unloading of dry materials in silos or trucks. The hose is used to transfer hot air from compressor to the storage silo or cargo, to propell bulk products.

**Feature:** long service life due to heat resistant rubber compounds with peaks up to 190°C.

Temperature range: 40°C / +160°C (short time +190°C)
Safety factor: 6:1

**Tube:** EPDM, black, resistant to hot air, smooth. **Reinforcement:** multiple steel wire cords.

**Cover:** EPDM, black, resistant to ozone and weather, abrasion resistant, wrapped finish.

Marking: continuous tape: "ROITER® ARC 325 HOT AIR BLOWER 160°C- WP 25 BAR - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	8	67	25	250	2,30	40
60	2 3/8	8	76	25	320	3,10	40
65	2 1/2	8	81	25	350	3,40	40
75	3	8	91	25	450	4,00	40

### **ARC 610**

#### HOT AIR COMPRESSOR - 10 BAR

Application: hot air blower hose, engineered for bulk loading/unloading of dry materials in silos or trucks. The hose is used to transfer hot air from compressor to the storage silo or cargo, to propell bulk product.

Feature: the hose tube features a temperature rating to peaks up to 240°C and the double steel wire helix provides full suction capability, kink resistance and flexibility, the double crossed copper wire, guarantee a path to conduct static electrical charges to the ground. Notice: upon request also available with a white rubber tube for granules.

Temperature range: 40°C / +180°C short time up to + 240°C

Safety factor: 3:1

Tube: EPR, black, smooth, high temperature resistant. Reinforcement: textile wrapped, double steel wire helix. Cover: EPR, black, slightly corrugated, resistant to heat, abrasion, ozone and weather, wrapped finish.

Marking: continuous embossed tape, "ROITER® ARC 610 HOT AIR COMPRESSORS -180°C - WP 10 bar - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	5	61	10	150	1,50	40
63	2 1/2	6	75	10	200	1,80	40
76	3	6	88	10	300	2,14	40
90	3 1/2	6	102	10	360	2,70	40
102	4	6	114	10	450	3,00	40

## **AR 500**

#### INDUSTRIAL AIR VACUUM

Application: flexible and light yet strong hose used for the extraction of dust, exhaust fumes, wood chips, and various types of gases. Expecially useful for applications requiring flexibility and light weight. On request it can be supplied with Natural Rubber, NBR, CR or EPDM tube. This hose is usually manufactured with soft cuff ends.

Feature: Due to the low weight and high flexibility, this hose is suitable for use at the front end of exhaust lines that needs to be handled manually.

Vacuum resistance: up to -0,9 bar.

Temperature range: -35°C / +80°C

(+ 95°C full EPDM version)

Tube: black synthetic rubber (static dissipating/static

conductive)

Reinforcement: textile wrapped, synthetic fabric with wire helix reinforcements.

Cover: black corrugated, synthetic rubber, ozone, abrasion and weather resistant, wrapped finish continuous embossed tape :

Marking: "ROITER® AR 500 VACUUM - MADE IN



Internal dia	Vacuum	Length of soft ends	Bending radius	Working Pressure	Weight approx	Coil length
mm	%	mm	mm	(max) bar	Kg/m	(max) m
51	90	50	125	2	1,02	40
63,5	90	70	150	2	1,22	40
76	90	80	200	2	1,38	40
90	90	100	260	2	1,64	40
102	90	120	300	2	1,98	40
127	70	140	400	1	2,48	40
152	40	150	530	1	3,00	40
203	15	200	850	1	4,75	16
254	15	250	1200	1	5,40	16
305	15	300	1600	1	6,50	16

## MPH 111 FARIVO®



#### MULTIPURPOSE - D 10 BAR

Application: flexible multipurpose hose, wrapped construction, for use in all industrial applications, refineries, in general for Air/Water/Nitrogen conveying. On request: other working pressures and diameters available on request. depending on diameters.

Available colors: Black, Yellow, Red, Green and Blue.

Temperature range: -40°C / +80°C

Safety factor: 3:1

**Tube:** Synthetic elastomeric compound, black, smooth, suitable for oil laden air.

Reinforcement: Polyester textile reinforcement.

**Cover:** Synthetic elastomeric compound, weather and abrasion resistant, fabric impression.

Marking: "ROITER® MPH 111 FARIVO®-

MULTIPURPOSE HOSE D-10 BAR-MADE IN ITALY"



Inte	rnal Dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
6	1/4	3	12	10	50	0,13	40/60/100
8	5/16	3,5	15	10	65	0,18	40/60/100
10	3/8	3,5	17	10	80	0,20	40/60/100
13	1/2	3	19	10	105	0,22	40/60/100
16	5/8	3,5	23	10	130	0,30	40/60/100
19	3/4	4	27	10	150	0,40	40/60/100
25	1	4,5	34	10	200	0,62	40/60/100
32	11/4	5	42	10	250	0,80	40/60
38	11/2	5	48	10	310	1,03	40/60

## MPH 121 FARIVO®

## MULTIPURPOSE - D 20 BAR

**Application:** Robust flexible multipurpose hose, wrapped construction, for use in all industrial heavy duty applications, refineries, in general for Air/Water/Nitrogen conveying.

**On request:** Available in the version **MP121 OIL** for domestic heat oil supply and fuel conveying, with excellent resistance to hydrocarbons, for fuel truckdelivery. Other working pressures and diameters available on request.

**Available colors:** Black, Yellow, Red, Green and Blue. Acc to UNI EN ISO 1307:2008

Temperature range: -30°C / +80°C

Safety factor: 3:1

Tube: Synthetic elastomeric compound, black,

smooth, suitable for oil laden air.

Reinforcement: Polyester textile reinforcement.

Cover: Synthetic elastomeric compound, weather and

abrasion resistant, fabric impression.

Marking: "ROITER® MPH 121 FARIVO® -

MULTIPURPOSE HOSE D-20 BAR-MADE IN ITALY"



Inte	ernal Dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
6	1/4	4	14	20	50	0,17	40/60/100
8	5/16	4,5	17	20	65	0,24	40/60/100
10	0,375	4,5	19	20	80	0,28	40/60/100
13	0,5	5	23	20	100	0,38	40/60/100
16	0,625	5	26	20	125	0,45	40/60/100
19	0,75	6	31	20	140	0,65	40/60/100
25	1	6	37	20	180	0,8	40/60/100
32	1.1/4	6	44	20	230	1	40/60
38	1.1/2	6,5	51	20	265	1,25	40/60

## **ARC 700**

## EXHAUST GAS SUCTION HOSE CRUSH RESISTANT

3

**Application:** Suction hose for vehicles exhaust gases and other warm gasses. Heavy and crush resistant structure, used on the floors of the garages, coach works, test centers, etc

**Feature:** long service life due to heat resistant rubber compounds with peaks up to 190°C.

Temperature range: 40°C / +170°C (short time +190°C)
Tube: EPDM, black, resistant to hot air, smooth.
Reinforcement: high tensile synhtetic plies
Cover: EPDM, black, square corrugation, resistant to
ozone and weather, abrasion resistant, fabric finish.



Intern	al Diameter	Working Pressure	Bending Radius	Weight approx	Coil length
mm	inch	mm	mm	Kg/m	(max) m
51	2	5	300	1,00	40
76	3	5	450	1,55	40
102	4	5	600	2,2	40
127	5	5	750	2,7	16
152	6	5	900	3,1	16

## Flexible food and drink hoses

Suitable to convey food and drink, wine, alcohol, beer, olive oil, seeds oil, fruit juice and potable water. Manufactured according to international specifications. Phthalates free.



AL 110 WINEY®-D

Wine delivery hose

10 Bar



AP 110 BIERY®-D Beer delivery hose

10 Bar



AL410 WINEY®-S&D

Wine suction and delivery hose

10 Bar



AL 610 DIVINE®

Premium wine suction and delivery hose

10 Bar



AL 810 DIVINE® SLIDE

Premium wine suction and delivery hasa

10 Bar



AP 410 BIERY®-S&D

Beer S & D hose

10 Bar



AP 610 BIERY® -S&D

Premium beer suction and delivery hose

10 Bar



AG 110 FATTY®-D

Fatty food delivery hose

10 Bar



#### AG 410 FATTY®-S&D Suction and delivery hose for

fatty foods and edible oils

10 Bar



#### AG 810 EXTRAFLEX AG 806 MILKY®SLIDE

foods and edible oils

10 Bar



Suction and delivery hose for fatty External reinforced suction and delivery hose for milk trucks

6 Bar



#### AG 420 FLOWMASTER Foodstuff HD suction and delivery Delivery hose for milk and dairy

hose for filling and discharging

20 Bar



AM 106 MILKY®-D products

6 Bar



AM 406 MILKY®-S&D Suction and delivery hose for milk

and dairy products 6 Bar



AL 406 ROILAT®

Suction and delivery hose for milk collection.

6 Bar



#### **AM 112**

Multipurpose delivery hose for all food products

12 Bar



#### **AM 412**

Multipurpose suction and delivery hose for all food products

12 Bar



Multipurpose semi-corrugated suction and delivery hose for all food products

12 Bar

## Flexible food and drink hoses

Suitable to convey food and drink, wine, alcohol, beer, olive oil, seeds oil, fruit juice and potable water. Manufactured according to international specifications. Phthalates free.



AS 010 SILO SOFT WALL Dry food silos delivery hose



AS 410 SILO

Dry food silos suction and delivery hose

10 Bar



10 Bar

**ASG 110 SILO** 

Granulate food silos delivery hose for ATEX environment 10 Bar



**AW 112** 

UHMW PE delivery hose 12 Bar



AW 616

FOOD UPE - S&D **16 Bar** 



#### **ASG 410 SILO**

Granulate food silos suction and delivery hose for ATEX environment 10 Bar



#### AW 412

UHMW PE suction and delivery hose 12 Bar



### AC 107

WASHDOWN
Hot water/steam food quality

6 Bar



#### ASG 606 SILO

Semi-corrugated dry food silos suction and delivery hose for ATEX enironment

6 Bar



#### **AW 415 AOUA**

UHMW PE potable water delivery hose 15 Bar

## **AL 110 WINEY®** WINE & ALCOHOL - D

Application: flexible discharge hose for the transfer of wine, alcoholic drinks up to 36%, and soft drinks in beverage industries.

Feature: white food quality tube with high temperature resistance. Tasteless, odourless, kink resistant, sturdy, very light.

Standard/approval: BfR (former BgVV) XXI:2020 (kat. 2), Weihenstephan, FDA (CFR 21 §177.2600), DM 21/03/1973 Notice: resistant to many aggressive cleaning agents. See our separate information sheet.

ATTENTION: other diameters and WP available on request.

Temperature range: -35°C / +95°C, steam cleaning without pressure up to 130°C/max. 30 min.

Safety factor: 3:1

Tube: NR white, food quality FDA, smooth,

Reinforcement: textile wrapped.

Cover: red colour synthetic rubber, resistant to ozone and weather, abrasion resistant, cloth impression.

Other colours available on request.

Marking: continuous transfer tape: "ROITER® AL 110 WINEY® - WP 10 BAR - FDA - MADE IN ITALY".

















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Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	120	0,56	40
25	1	6	37	10	200	0,75	40
32	1 1/4	8	48	10	300	1,26	40
38	1 1/2	8	54	10	375	1,62	40
40	1 5/8	9	58	10	400	1,80	40
51	2	10	71	10	500	2,19	40
60	2 3/8	11	82	10	550	3,55	40
63,5	2 1/2	12	87,5	10	600	3,90	40
76	3	12	100	10	650	4,34	40
80	3 1/4	13	106	10	700	4,80	40
102	4	13	128	10	800	6,34	40

## AL 410 WINEY®

#### WINE & ALCOHOL S&D

Application: high quality food hose designed for suction and delivery of wine, soft drinks, fruit juices (also concentrated) and alcoholic drinks, up to 36%.

Feature: extremely flexible due to the special rubber materials and the design of reinforcements.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat. 2), FDA(CFR21§177.2600), DM 21/03/1973

Notice: smooth tube allows for easy cleaning. For the application of cleaning agents please see our separate information sheet.

ATTENTION: other diameters and WP available on request.

Temperature range: -35°C / +95°C, steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 3:1

Tube: white, smooth natural rubber tube, food quality, according to FDA specifications.

Reinforcement: synthetic plies reinforcement, steel wire helix. On request SS wire helix.

Cover: Red smooth synthetic rubber, resistant to ozone and weather, abrasion resistant, fabric finish.

Marking: continuous transfer tape:

"ROITER® AL 410 WINEY® - WP 10 BAR - FDA - MADE IN ΙΤΔΙ Υ".

















Inte	ernal Dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	150	0,73	40
32	11/4	6	44	10	225	1,00	40
38	11/2	7	52	10	300	1,36	40
51	2	7	65	10	350	1,85	40
63,5	2 1/2	8	79,5	10	400	2,88	40
76	3	8,5	93	10	450	3,39	40
80	3 1/4	8,5	97	10	500	3,50	40
102	4	9	120	10	650	4,91	40

## AL 610 DIVINE® - PREMIUM



#### WINE HOSE - S&D WITH SEMI - CORRUGATED COVER

Application: flexible suction and discharge hose for use in food and beverage industries. Specially designed for wine industries. Thanks to special smooth and low friction cover compound, guarantees an excellent abrasion resistance.

#### Manufactured in two different versions:

- 1. STD with a white smooth odorless food quality NR rubber tube, additional outer layer on cover to improve abrasion resistance and reduce porosity. The hose is semi-corrugated for a better flexibility. S.S Reinforcement wire
- 2. SQZ same white smooth odorless food quality NR rubber tube, with a special reinforcement spiral helix in UHMWPE, allowing the hose to remain light and flexible, and even in case of crushing, to return to the original diameter.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat. 2), FDA(CFR21§177.2600), DM 21/03/1973.

Temperature range: -35°C / +90°C, steam cleaning up to max 130°C/max. 30 min, without pressure.

Safety factor: 3:1

Tube: white, smooth, odourless and taste free, foodgrade white FDA rubber (DIVINE®).

Reinforcement: high tensile textile reinforcement.

STD: steel embedded wire helix. On request SS wire helix. SQZ: UHMW PE embedded wire helix.

Cover: Low friction, Red, semi-corrugated, extra-smooth finish, resistant to oils and fats, wheater, ozone and abrasion. On request Blue color.

Marking: continuous transfer tape: "ROITER®

- AL 610 DIVINE - FDA FOOD QUALITY -S&D WP 10 bar -PHTHALATE FREE".

Notice: smooth tube allows for easy cleaning. For the application of cleaning agents please see our separate information sheet.

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	120	0,75	40
32	1 1/4	6,5	45	10	175	1,00	40
38	1 1/2	7	52	10	200	1,40	40
51	2	7	65	10	250	1,85	40
63,5	2 1/2	7	77,5	10	300	2,20	40
76	3	8	92	10	350	3,40	40
80	3 1/2	8	96	10	375	3,80	40
102	4	8	118	10	425	4,20	40

## AL 810 - DIVINE® SLIDE



## WINE HOSE - S&D

WITH OUTER THERMOPLASTIC PROTECTION SPIRAL

**Application:** Flexible suction and delivery hose for use in food and beverage industries. Specially designed for wine industries. Suitable for wine, beer, potable water, liquids with low alcoholic content (up to 36%).

Feature: ideal for handling beer, high quality alcoholic drinks and wines, soft drinks, fruit juices and for use in food processing plants.

Standard/approval: ISO 1307 - FDA (CFR 21 §177,2600). Notice: Other diameters and colours available on request.

Temperature range: -40°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

Tube: white, smooth NR rubber compound, food quality odourless and taste free. Reinforcement: Highly resistant synthetic plies.

Cover: Red, smooth, glossy, NVC with a

thermoplastic outer reinforcement helix, resistant to abrasion, ozone and weathering.

















Interna	al DIA in	Wall thickness	Spiral dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	4,5	6	10	120	1,50	40
63,5	2 1/2	6,5	6	10	140	1,90	40
76	3	7	6	10	170	2,20	40
80	3 1/2	7	6	10	180	2,50	40
102	4	8	6	10	240	3,00	40

## AP 110 BIERY®

#### BREWERIES - D

Application: premium quality breweries delivery hose, odourless and taste-free. Suitable for wine, beer, potable water, liquids with high alcoholic content (up to 96%).

Feature: ideal for handling beer, high quality alcoholic drinks and wines, soft drinks, fruit juices and for use in food processing plants.

Standard/approval: ISO 1307 - FDA (CFR 21 §177.2600). Other colours, pressures and sizes available on request. Notice: Other diameters and WP available on request.

Temperature range: -40°C / +120°C. Can be sterilized with steam up to +140°C without pressure / max 30min. Safety factor: 3:1

Tube: white, smooth, IIR Butyl rubber tube, food quality to FDA specifications, odourless and taste-free.

Reinforcement: synthetic plies reinforcement. Lavers of synthetic rubber encapsulating the textile reinforcement. Cover: red, smooth, synthetic rubber cover, abrasion, ozone and weather resistant, fabric finish.

Marking: continuous transfer tape: "ROITER® AP 110 BIERY® - D - WP 10 BAR - FDA FOOD QUALITY - MADE IN ITALY".

















Inte	rnal Dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	120	0,60	40
25	1	6,5	38	10	200	0,80	40
32	1-1/4	8	48	10	250	1,35	40
38	1-1/2	8	54	10	300	1,80	40
51	2	10	71	10	500	2,30	40
63,5	2-1/2	12	87,5	10	600	4,00	40
76	3	12	100	10	650	4,50	40
102	4	13	128	10	800	6,50	40

## AP 410 BIERY®

#### **BREWERIES - S&D**

Application: premium quality brewers suction and delivery hose, odourless and taste-free.

Suitable for wine, beer, potable water, liquids with high alcoholic content (up to 96%).

Feature: ideal for handling high quality alcoholic drinks and wines, soft drinks, fruit juices and for use in food processing plants.

**Standard/approval:** ISO 1307 - FDA (CFR 21 §177.2600) Other colours, pressures and sizes available on request. Notice: Other diameters and WP available on request.

Temperature range: -40°C / +120°C. Can be sterilized with steam up to +140°C without pressure / max 30min. Safety factor: 3:1

Tube: white, smooth, IIR butyl rubber tube, food quality to FDA specifications, odourless and taste-free.

Reinforcement: synthetic plies reinforcement. Stainless steel wire helix. Layers of synthetic rubber encapsulating the textile reinforcement. On request SS wire helix.

Cover: red, smooth, synthetic rubber cover, abrasion. ozone and weather resistant, fabric finish.

Marking: continuous transfer tape: "ROITER® AP 410 BIERY® S&D - WP 10 BAR - MADE IN ITALY".

















Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	150	0,80	40
32	1 1/4	6	44	10	225	1,20	40
38	1 1/2	7	52	10	300	1,50	40
51	2	7	65	10	350	1,95	40
63,5	2 1/2	8	79,5	10	400	3,00	40
76	3	8,5	93	10	450	3,50	40
102	4	9	120	10	650	5,00	40

## AP 610 BIERY®

#### PREMIUM BREWERIES - S&D WITH SEMI-CORRUGATED COVER

Application: premium quality brewers suction and delivery hose, odourless and taste-free.

Suitable for wine, beer, potable water, liquids with high alcoholic content (up to 96%).

Feature: ideal for handling beer, high quality alcoholic drinks and wines, soft drinks, fruit juices and for use in food processing plants. The semi-corrugated surface makes the hose flexible and light, . or easy handling.

Standard/approval: ISO 1307 - FDA (CFR 21 §177.2600). Other colours, pressures and sizes available on request.

Notice: other diameters and WP available on request.

Temperature range: -40°C / +120°C. Can be sterilized with steam up to +140°C without pressure / max 30min.

Safety factor: 3:1

**Tube:** white, smooth, IIR butyl rubber tube, food quality to FDA specificatios, odourless and taste-free.

Reinforcement: synthetic plies reinforcement, double steel wire helix. Layers of synthetic rubber encapsulating the textile reinforcement. On request SS wire helix.

Cover: red, synthetic rubber cover, semi corrugated abrasion, ozone and weather resistant, fabric finish. Marking: continuous transfer tape: "ROITER® AP 610 BIERY® S&D - WP 10 BAR - MADE IN ITALY ".

















Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	120	0,80	40
32	1 1/4	6,5	45	10	175	1,00	40
38	1 1/2	7	52	10	200	1,50	40
51	2	7	65	10	250	1,85	40
63,5	2 1/2	7	77,5	10	300	2,30	40
76	3	8	92	10	350	2,90	40
102	4	8	118	10	425	4,35	40

## AG 110 FATTY®

#### OILS & FATTY FOODS - D

Application: discharge hose with thick wall construction, Temperature range: -35°C / +80°C. also suitable for light suction of oily and fatty foodstuffs. Commonly used for conveying any type of edible oils, including seeds oil and palm oil.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat.2), FDA (CFR 21 § 177.2600).

Notice: Other diameters and WP available on request.

Steam cleaning, without pressure up to 130°C / max 30min.

Safety factor: 3:1

Tube: white smooth NBR rubber tube, food quality, according to FDA specifications. Odourless and taste free.

Reinforcement: synthetic plies reinforcement.

Cover: synthetic rubber, blue, resistant to grease and oil,

abrasion and weather, cloth impression.

Marking: continuous transfer tape, "ROITER® AG 110 FATTY® - FOOD DELIVERY - WP 10 BAR- FDA - MADE IN ITALY ".













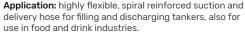




Inter	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	120	0,56	40
25	1	6	37	10	200	0,80	40
32	1 1/4	8	48	10	250	1,35	40
38	1 1/2	8	54	10	300	1,83	40
40	1 5/8	9	58	10	400	1,92	40
51	2	10	71	10	500	2,40	40
63,5	2 1/2	12	87,5	10	600	4,35	40
76	3	12	100	10	650	4,93	40

## AG 410 FATTY®

#### OILS & FATTY FOODS - S&D



**Feature:** extremely flexible due to the special rubber materials and the design of reinforcements. Widely used for transfer of any type of edible oils, including seeds oil and palm oil.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat. 2), FDA (CFR 21 §177.2600)

**Notice:** smooth tube allows for easy cleaning. Other diameters and WP available on request.

**Temperature range:** -35°C / +80°C, steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 3:1

**Tube:** white smooth NBR rubber tube, food quality according to FDA specifications, odourless and tast-free.

**Reinforcement:** steel wire helix, on request SS wire helix, synthetic plies reinforcement.

**Cover:** synthetic rubber, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AG 410 FATTY® - FOOD S&D FDA - WP 10 BAR - MADE IN ITALY"

















Inter	nal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	150	0,92	40
32	1 1/4	6	44	10	225	1,14	40
38	1 1/2	7	52	10	300	1,58	40
51	2	7	65	10	350	2,42	40
63,5	2 1/2	8	79,5	10	400	3,29	40
76	3	8,5	93	10	450	3,85	40
80	3 1/4	8,5	97	10	500	4,04	40
102	4	9	120	10	650	5,27	40

## **AG 810 EXTRAFLEX**

# 7

## EXTRAFLEXIBLE FOOD HOSE - S&D WITH SEMI-CORRUGATED COVER

**Application:** highly flexible spiral reinforced suction and delivery hose for filling and discharging any type of edible oils, including seeds oil and palm oil. For use on milk tankers, but also in the food and drinks industry.

**Feature:** extremely flexible due to the special wire spiral reinforcement, the unique rubber materials and the outer semi-corrugated finish.

**Standard/approval:** BfR (former BgVV) XXI:2002 (Kat. 2), FDA (CFR 21 §177.2600)

**Notice:** smooth tube allows for easy cleaning. Other diameters and WP available on request.

**Temperature range:** -35°C / +80°C, steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 3:1

**Tube:** white smooth NBR rubber tube, food quality according to FDA specifications, odourless and tast-free. **Reinforcement:** steel wire helix, on request SS wire helix, synthetic plies reinforcement.

**Cover:** synthetic rubber, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AG 810 EXTRAFLEX- FOOD S&D QUALITY FDA - WP 10 BAR - MADE IN ITALY".

















Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	10	120	0,85	40
32	1 1/4	6,5	45	10	175	1,10	40
38	1 1/2	7	52	10	200	1,55	40
51	2	7	65	10	250	1,85	40
63,5	2 1/2	7	77,5	10	300	1,90	40
76	3	8	92	10	350	3,10	40
102	4	8	118	10	425	4,50	40

## AG 806 - MILKYSLIDE®



#### MILK - S&D

#### WITH OUTER THERMOPLASTIC REINFORCEMENT SPIRAL

**Application:** suction and delivery hose for conveying milk and fatty foods, highly flexible and resistant to abrasion. Is the ideal product for tank trucks, for the daily milk collection.

Feature: extremely flexible due to the special rubber materials and design of reinforcements. The outer plastic wire helix is giving excellent low friction properties to the hose, and allows the water to freely flow under it, during the floor washing procedures.

Standard/approval: FDA title 21 art. 177.2600 (f) for fatty

foods, BfR, ADI free, PHTHALATE free

Notice: smooth tube allows for easy cleaning. Vacuum

resistant up to - 0,7 Bar

**Temperature range:** -40°C / +80°C. Steam cleaning without pressure up to 120°C / max 30 min.

Safety factor: 3:1

**Tube:** white, smooth NBR rubber compound food quality, odourless and taste free.

Reinforcement: Highly resistant synthetic plies.

Cover: blue, smooth glossy NVC with a

thermoplastic outer reinforcement helix, resistant to abrasion, ozone and weathering.

















Intern	al dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	5	61	6	110	1,70	40
63,5	2 1/2	6	75,5	6	140	2,00	40
76	3	6	88	6	170	2,20	40
102	4	7	116	6	230	2,90	40

## AG 420 - FLOWMASTER®



#### FOOD GRADE HOSE - WHITE NBR - S&D HOSE

Application: foodstuff Heavy Duty suction and delivery hose for filling and discharging operations.

Suitable for use with animal and vegetable oils, CPO (crude palm oil) and fatty goods.

Suitable for use in the food and drinks industry for conveying milk and dairy products.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat. 2), FDA (CFR 21 § 177.2600)

Notice: Smooth tube allows for easy cleaning. For the applications of cleaning agents, please refer to our information sheet

ATTENTION: Not suitable for dry conveyance.

On request with plastic helix (only small bore) or SS helix.

Temperature range: -35°C / +95°C, steam cleaning without pressure up to 130°C/max. 30min.

Safety factor: 3:1

Vacuum resistance: up to ~ 0.9 bar

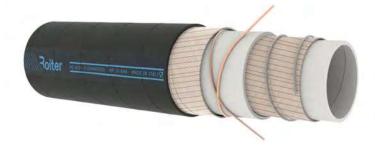
Tube: NBR, white smooth, food quality, grease and oil

resistant.

Reinforcement: High tensile textile wrapped, steel wire

helix, 2 crossed copper wires. On request SS wire helix.

Cover: CR, black, abrasion resistant, conductive, oil seawater and weather resistant, cloth impression. Marking: continuous transfer tape "ROITER TYPE AG 420 FLOWMASTER -FDA HOSE MADE IN ITALY".

















Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	11	73	20	200	2,02	40
63,5	2.1/2	11	85	20	300	3,18	40
76	3	11	98	20	350	3,85	40
102	4	13	128	20	500	5,52	40
127	5	13	153	20	600	6,3	40
152	6	14	180	20	800	7,1	40
203	8	17	237	20	1100	18,5	40

## AM 106 MILKY®

#### MII K HOSF - D

Application: delivery hose for milk and fatty foods. Also suitable for potable water, fruit juices etc.

Standard/approval: FDA title 21 art. 177.2600 (f) for fatty

foods. BfR. ADI free. PHTHALATE free

Notice: other diameters and WP available on request.

Temperature range: -40°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

Tube: white smooth EPDM rubber tube, food quality Odourless and taste free.

Reinforcement: High strength synthetic textile fabrics. Cover: blue, smooth, cloth impression synthetic rubber, resistant to abrasion, ozone and weathering.

Marking: continuous transfer tape: "ROITER® AM 106 MILKY® - FOOD DELIVERY - WP 6 BAR- FDA - MADE IN ITALY ".

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	6	115	0,54	40
25	1	5	35	6	150	0,75	40
32	1 1/4	6	44	6	230	1,05	40
38	1 1/2	7	52	6	240	1,25	40
51	2	7	65	6	310	1,65	40
63,5	2 1/2	7	77,5	6	380	2,20	40
76	3	7	90	6	460	2,65	40
102	4	8	118	6	650	3,60	40

## AM 406 MILKY®

#### MILK HOSE - S&D

Application: suction and delivery hose for milk and fatty foods, highly flexible spiral reinforced, for filling and discharging tankers, but also for use in the food and drink industries

Feature: extremely flexible due to the special rubber materials and design of reinforcements.

Standard/approval: FDA title 21 art, 177,2600 (f) for fatty

foods, BfR, ADI free, PHTHALATE free.

Notice: smooth tube allows for easy cleaning.

ATTENTION: other diameters and WP available on request.

Temperature range: -40°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

Tube: white smooth EPDM rubber tube, food quality to FDA specifications, odourless and taste free.

Reinforcement: steel wire helix, synthetic plies

reinforcement. On request SS wire helix. Cover: blue color synthetic rubber, resistant to ozone and

weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AM 406 MILKY®- FOOD S&D - WP 6 BAR - FDA - MADE IN

ΙΤΔΙ Υ ".

















Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	6	150	0,80	40
32	1 1/4	6	44	6	225	1,10	40
38	1 1/2	7	52	6	300	1,40	40
51	2	7,5	66	6	350	2,30	40
63,5	2 1/2	8	79,5	6	400	3,10	40
76	3	8	92	6	450	3,50	40
102	4	9	120	6	500	5,00	40

## AL 406 ROILAT®

### MII K HOSE - S&D

Application: suction and delivery hose for milk collection. Ideal to be used as equipment on milk collecting tankers. Feature: extremely flexible, due to the special rubber materials and design of reinforcements. Light weight for easy handling. Thanks to the PE spiral reinforcement, will recover the original shape even in case the hose is squeezed. Special outer antibacterial smooth finish.

Standard/approval: FDA title 21 art. 177.2600 (f) for fatty foods, BfR, ADI free, PHTHALATE free.

Notice: smooth tube allows for easy cleaning either with detergent or loose steam.

Temperature range: -35°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

Tube: white smooth NR, food quality according to FDA specifications, odourless and taste free.

Reinforcement: PET spiral wire helix, embedded, and synthetic plies reinforcement.

Cover: blue color rubber, resistant to ozone and weather, abrasion resistant, antibacterial smooth outer finish.

Marking: continuous transfer tape: "ROITER® AL 406 ROILAT® - WP 6 BAR - FDA - MADE IN ITALY "

















Intern	al dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	6	150	1,30	40
63,5	2 1/2	7	77,5	6	200	1,70	40
76	3	8	92	6	250	2,20	40
102	4	10	122	6	400	3,50	40

## **AM 112**

#### MULTI PURPOSE FOOD EPDM - D

**Application:** flexible multi purpose delivery hose for delivery of fatty foods, wine, beer, potable water, etc. Suitable for use with alcohol (up to 40%) and soft drinks, fatty (up to 36%) and non-fatty foods.

**Feature:** white rubber food quality tube with high temperature resistance. Tasteless, odourless, kink resistant, sturdy, very light.

Standard/approval: FDA title 21 art. 177.2600 (f) for fatty

foods, BfR, ADI free, PHTHALATE free

**Notice:** high resistance to aggressive cleaning agents. **ATTENTION:** other diameters and WP available on request.

**Temperature range:** -35°C / +130°C, steam cleaning without pressure max, 30 min.

Safety factor: 3:1

**Tube:** white, smooth EPDM rubber compound, food

quality odourless and taste free **Reinforcement:** textile wrapped.

**Cover:** Blue, smooth, cloth impression EPDM rubber, resistant to abrasion, ozone and weathering **Marking:** continuous transfer tape: "ROITER®

AM 112 FOOD S&D WP 12 BAR - FDA - MADE IN ITALY.















Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	12	150	0,60	40
19	3/4	6	31	12	190	0,70	40
25	1	6	37	12	250	1,00	40
32	11/4	7	46	12	320	1,35	40
38	11/2	7	52	12	380	1,60	40
51	2	8	67	12	500	2,60	40
65	2 1/2	8	79,5	12	650	3,80	40
76	3	9	94	12	720	4,30	40
102	4	9	120	12	850	6,29	40

## **AM 412**

#### MULTI PURPOSE FOOD FPDM - S&D

Application: flexible multi purpose suction & delivery hose Temperature range: -35°C / +130°C, steam cleaning for fatty foods, wine, beer, potable water, etc. Suitable for use with alcohol (up to 40%) and soft drinks, fatty

(up to 36%) and non-fatty foods.

Feature: white rubber food quality tube with high temperature resistance. Tasteless, odourless, kink resistant, sturdy, very light.

Standard/approval: FDA title 21 art. 177.2600 (f) for fatty

foods, BfR, ADI free, PHTHALATE free

Notice: high resistance to aggressive cleaning agents.

ATTENTION: other diameters and WP available on request.

without pressure max, 30 min.

Safety factor: 3:1

Tube: white, smooth EPDM rubber compound, food

quality odourless and taste free

Reinforcement: textile wrapped reinforcement,

Steel spiral wire reinforcement. On request SS wire helix. Cover: blue, smooth EPDM rubber, resistant to abrasion,

ozone and weathering, cloth impression.

Marking: Continuous transfer tape "ROITER® - AM 412 -

WP 12 BAR - FDA - MADE IN ITALY".

















Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	12	100	0,77	40
32	1 1/4	6	44	12	120	1,20	40
38	1 1/2	6	50	12	160	1,50	40
51	2	6,5	64	12	200	2,00	40
63,5	2 1/2	7	77,5	12	300	2,60	40
76	3	8	90	12	350	3,10	40
102	4	8	118	12	500	4,60	40

## **AM 612**

#### MULTI PURPOSE FOOD EPDM - S&D WITH SEMI - CORRUGATED COVER

Application: highly flexible semi-corrugated multiporpose suction & delivery hose for fatty foods, wine, beer, potable water, etc. Suitable for use with alcohol (up to 40%) and soft drinks, fatty (up to. 36%) and non-fatty food.

Feature: Extremely flexible due to the special rubber materials and outer semi-corrugated finish.

Standard/approval: BfR (former BgVV) XXI:2002 (Kat. 2),

FDA (CFR 21 §177.2600)

Notice: smooth tube allows for easy cleaning. Other diameters and WP available on request. Temperature range: -35°C / +130°C, steam cleaning without pressure max, 30 min.

Safety factor: 3:1

Tube: white, smooth EPDM rubber compound, food

quality odourless and taste free

Reinforcement: textile wrapped reinforcement, double steel spiral wire reinforcement. On request SS wire helix. Cover: blue, semi-corrugated, EPDM rubber, resistant to abrasion, ozone and weathering, cloth impression.

Marking: Continuous transfer tape "ROITER® - AM 612 -WP 12 BAR - FDA - MADE IN ITALY".

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	12	120	0,75	40
32	1 1/4	6	44	12	175	1,00	40
38	1 1/2	7	52	12	200	1,40	40
51	2	7	65	12	250	1,85	40
63,5	2 1/2	7	77,5	12	300	2,20	40
76	3	8	92	12	350	3,40	40
102	4	8	118	12	425	4,20	40

## **AS 010 SILO SOFTWALL**



#### DRY FOOD NR - D

**Application:** silo hose soft wall, for filling silos and silo vehicles, or for discharge dry and dusty foodstuffs such as flour, sugar, animal feed, rice and grain.

**ATTENTION:** risk of explosion. As the tube material is non- conductive, the conveyed medium and/or the hose may become electrically charged. For such applications, we recommend **ASG 110**.

**Standard/approval:** FDA title 21 art.177.2600 (a,b,c,d) for dry foods, BfR, ADI free, PHTHALATE free, DM 21/03/1973. **ATTENTION:** for light-coloured plastic granules and milk powder, we recommend the **ASG 110** antistatic hose. **Temperature range:** -35°C / +80°C, steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 3:1

**Tube:** white natural rubber, food grade, FDA quality, smooth

Reinforcement: synthetic plies reinforcement.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression.

**Marking:** continuous transfer tape: "ROITER® AS 010 DRY FOOD SILO D - WP 10 BAR - MADE IN ITALY".

















Inter	Internal dia		Internal dia		nal dia Wall External thickness dia		Working Pressure	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	Kg/m	(max) m			
63,5	2 1/2	7	77,5	10	1,98	40			
76	3	7	90	10	2,20	40			
90	3 1/2	7	104	10	2,70	40			
102	4	8	118	10	2,95	40			

## **AS 410 SILO**

#### DRY FOOD NR - S&D

**Application:** silos hose for filling and discharging silos and silo vehicles, or for conveying dry and dusty foodstuffs, animal feed, flour, rice and grain.

**ATTENTION:** risk of explosion. As the tube material is non- conductive, the conveyed medium and/or the hose may become electrically charged. For such applications, we recommend **ASG410**.

Standard/approval: FDA title 21 art.177.2600 (a,b,c,d) for dry foods, BfR, ADI free, PHTHALATE free, D.M.21/03/73.

#### On request:

- Honey color tube - Vulcanised flange - Special hose ends.

**ATTENTION**: for light-coloured plastic granules and milk powder, we recommend the **ASG410** antistatic hose.

**Temperature range:** -35°C / +80°C, steam cleaning without pressure up to 130°C / max. 30 min.

Safety factor: 3:1

**Tube:** white natural rubber, food quality, according to FDA specifications, smooth.

**Reinforcement:** synthetic plies reinforcement, steel wire helix. On request SS wire helix.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape, blue letters: "ROITER® AS 410 DRY FOOD SILOS S&D - WP 10 BAR - FDA - MADE IN ITALY".

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	10	350	2,02	40
63,5	2 1/2	8	79,5	10	400	3,18	40
76	3	8	92	10	450	3,85	40
102	4	8	118	10	600	5,52	40
127	5	9	145	10	700	6,30	40
152	6	10	172	10	800	7,10	40

## **ASG 110 SILO**



Application: delivery hose for dry and abrasive foodstuffs such as grains, rice, sugar, flour and animal foods. Used for discharging silos and silo vehicles, or for conveying dry and dusty foodstuffs.

Feature: high-quality compound for tube and cover. Antistatic tube and conductive cover (according to EN ISO 8031:2009) prevent sudden discharge when the conveyed medium and/or hose becomes electrically charged.

Can be used in explosive atmospheres as defined in Directive 94/9/EC (ATEX 95).

Standard/approval: FDA title 21 art.177.2600 (a,b,c,d) for dry foods, BfR, ADI free, PHTHALATE free, D.M. 21/03/73. Temperature range: -35°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

**Tube:** white, smooth rubber compound, food quality odourless and taste-free

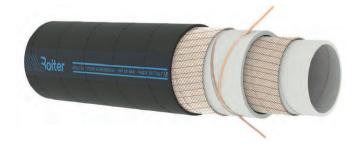
Reinforcement: high strength synthetic plies, with two crossing copper wires.

Cover: black, smooth, fire proof and antistatic (R<10° Ohm/m), CR rubber compound, resistant to chemical products, ozone and weather, fabric finish.

Marking: continuous transfer tape:

"ROITER® ASG 110 DRY/GRANULATE FOOD/SILOS D -WP 10 BAR - FDA - MADE IN ITALY".



















Inte	rnal Dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7,5	66	10	400	2,40	40
76	3	7	90	10	500	2,30	40
90	3 1/2	7	104	10	600	2,90	40
102	4	8	118	10	800	3,15	40
127	5	9	145	10	875	6,50	40
152	6	12	176	10	910	8,20	40

## **ASG 410 SILO**

#### DRY FOOD - S&D - ATEX

Application: foodstuffs suction & delivery hose for filling and discharging silos and silo vehicles.

Used to convey dry and dusty foodstuffs, grains, rice, sugar, flour and animal feed.

Feature: high-quality compound for tube and cover. Antistatic tube and conductive cover (according to EN ISO 8031:2009) prevents sudden discharge when the conveyed medium and/or hose become electrically charged. Can be used in explosive atmospheres as defined in Directive 94/9/EC (ATEX 95).

Standard/approval: FDA title 21 art.177.2600 (a,b,c,d) for dry foods, BfR, ADI free, PHTHALATE free, D.M. 21/03/73. Temperature range: -35°C / +80°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3:1

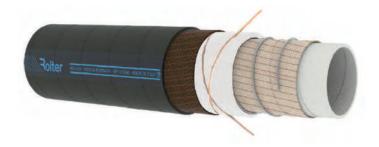
**Tube:** white, smooth NBR rubber compound, food quality according to FDA rules, odourless and taste free.

Reinforcement: high strength synthetic plies, with steel spiral and two crossing copper wires

Cover: black, smooth, fire proof and antistatic (R<10°0hm/m) cloth impression CR rubber compound, resistant to chemical products, ozone and weather.

Marking: continuous transfer tape: "ROITER® ASG 410 DRY/GRANULATE FOOD/SILOS S&D - WP 10 BAR - FDA - MADE IN ITALY".



















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	10	300	2,80	40
76	3	8	92	10	400	4,20	40
102	4	8	118	10	600	5,75	40
127	5	9	155	10	700	6,50	40
152	6	10	172	10	900	7,50	40

## **ASG 606 SILO**

## DRY FOOD - S&D - ATEX WITH SEMI - CORRUGATED COVER

Application: semi-corrugated foodstuff suction & delivery hose for filling and discharging silos and silo vehicles. Feature: light and flexible, used for dry food products such as flour, sugar, grain, animal feed. Antistatic tube and conductive cover (according to EN ISO 8031:2009) prevent sudden discharge when the conveyed medium and/or hose becomes electrically charged. Can be used in explosive atmospheres as defined in Directive 94/9/EC (ATEX 95). Suitable for vacuum uo to 90% Attention: for heavy duty applications, where high abrasion resistance of the inner tube is required, the

is suggested **(ASG 606 PU) Standard/approval:** FDA title 21 art.177.2600 (a,b,c,d) for dry foods, BfR, ADI free, PHTHALATE free, D.M. 21/03/73.

polyurethane liner - food quality, odourless and tasteless

Temperature range: -40°C / +80°C (606 PU +100°C) Safety factor: 3 : 1

**Tube:** White, smooth, natural rubber compound, food quality according to FDA, odourless and taste-free **Reinforcement:** high strength synthetic plies, with steel spirals and two crossing copper wires. On request SS wire helix.

Cover: black, semi-corrugated, synthetic rubber compound, antistatic (R>10<sup>6</sup> Ohm/m) resistant to chemical products, ozone and weather, fabric finish.

Marking: continuous transfer tape, blue letters:

"ROITER® ASG 606 DRY/GRANULATE FOOD/SILOS S&D -WP 6 BAR - FDA - MADE IN ITALY".



















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	7	65	6	200	1,70	40
63,5	2 1/2	8	79,5	6	300	2,40	40
75	3	8	91	6	400	2,90	40
102	4	9	120	6	500	4,30	40

## **AW 112**

#### FOOD UPF - D

food and beverage industries for wine, beer, potable water etc. Also suitable for use for alcohol with concentration levels of up to 96%.

Feature: kink resistant, sturdy, though extremely light. Tasteless, odourless. High temperature resistance.

Standard/approval: FDA title 21 art.177.2600 (e) for liquid foods, BfR, KTW, PHTHALATE free.

Notice: very high resistance to many aggressive cleaning agents.

Application: flexible hose for delivery applications, used in Temperature range: -35°C / +95°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3.15 : 1

Tube: UHWMPE, transparent, food quality according to FDA specifications, resistant to grease and oil,

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, blue, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape "ROITER® AW 112 -D - WP 12 BAR - UHMWPE FDA - MADE IN ITALY".

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	12	200	1,30	40
25	1	6	37	12	250	1,68	40
32	1 1/4	8	48	12	350	2,14	40
38	1 1/2	9	56	12	400	2,54	40
51	2	11	73	12	500	3,30	40
63,5	2 1/2	12	87,5	12	700	4,30	40
76	3	12	90	12	800	5,28	40
102	4	12	126	12	1000	6,58	40

## AW 412

#### FOOD UPE - S&D

**Application:** flexible hose for suction & delivery applications, used in food and beverage industries for wine, beer, potable water, etc. Also suitable to be used for alcohol with concentration levels of up to 96%.

**Feature:** kink resistant, sturdy, though extremely light, tasteless, odourless. High temperature resistance.

**Standard/approval:** FDA title 21 art.177.2600 (e) for liquid foods, BfR, KTW, PHTHALATE free.

**Notice:** very high resistance to many aggressive cleaning agents.

**Temperature range:** -35°C / +95°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3.15:1

**Tube:** UHWMPE, transparent, food quality, resistant to grease and oil, smooth.

Reinforcement: synthetic plies reinforcement, steel embedded helix. On request SS wire helix.

**Cover:** synthetic rubber, blue, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer: "ROITER® AW 412 S&D - WP 12 BAR - UHMWPE FDA - MADE IN ITALY".

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	12	175	1,90	40
32	1 1/4	8	48	12	225	2,50	40
38	1 1/2	9	56	12	300	3,00	40
51	2	10	71	12	500	3,75	40
63,5	2 1/2	10	83,5	12	600	4,80	40
76	3	10	96	12	700	5,50	40
102	4	10	122	12	800	7,00	40

## **AW 415 AOUA**

#### POTABLE WATER - S&D

**Application**: flexible hose engineered and designed for suction & delivery specifically for supply of clean potable water, PHTHALATE free and LEAD free.

Feature: kink resistant, sturdy, though extremely light.

tasteless, odourless.

Standard/approval: FDA title 21 art.177.2600 (e) for liquid foods, BfR, KTW. Complying with BS 6920 WRAS (Water Regulations Advisory Scheme). WRAS Material Approval demonstrates that a product satisfies the requirements of Schedule 2 Paragraph 2 (1) of the Water Supply (Water Fittings) Regulations 1999, Scottish Water Byelaws 2004 & the Water Supply (Water Fittings) Regulations (Northern Ireland) 2009.

Temperature range: - 35°C / +95°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: 3 : 1

**Tube:** UHWMPE, transparent, food quality, suitable for drinking water, smooth.

Reinforcement: synthetic plies reinforcement, stainless steel wire helix

Cover: synthetic rubber blue, resistant to ozone - weather and abrasion resistant, cloth impression.

Marking: continuous transfer: ROITER® AW 415 AQUA -POTABLE WATER S&D - WP 15 BAR - FDA - MADE IN ITALY".

Note: Available also in lower pressure ratings.

















Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	15	175	1,90	40
32	1 1/4	8	48	15	225	2,50	40
38	1 1/2	9	56	15	300	3,00	40
51	2	10	71	15	500	3,75	40
63,5	2 1/2	10	83,5	15	600	4,80	40
76	3	10	96	15	700	5,50	40
102	4	10	122	15	800	7,00	40

## AW 616

#### FOOD UPE - S&D

**Application:** flexible hose for suction & delivery applications, used in food and beverage industries for wine, beer, potable water, etc. Also suitable to be used for alcohol with concentration levels of up to 96%.

**Feature:** kink resistant, sturdy, though extremely light, tasteless, odourless and flexible tanks to the outer semicorrugated finish.

**Standard/approval:** FDA title 21 art.177.2600 (e) for liquid foods. BfR. KTW. PHTHALATE free.

**Notice:** very high resistance to many aggressive cleaning agents.

**Temperature range:** -40°C / +100°C, steam cleaning without pressure up to 120°C / max. 30 min.

Safety factor: h : 1

**Tube:** UHWMPE, transparent, food quality, resistant to grease and oil, smooth.

**Reinforcement:** synthetic plies reinforcement, double steel embedded wire helix. On request SS wire helix.

**Cover:** synthetic rubber, blue, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continous transfer: "ROITER® AW 616 S&D WP 16 BAR - UHMWPE FDA - MADE IN ITALY"

















## **AC 107 WASHDOWN**



#### HOT WATER/STEAM HOSE FOOD QUALITY

Application: mandrel built delivery hose for steam cleaning and hot water washdown in dairies, creameries. used also as delivery hose for clean hot water mixed with steam and detergents. Used for washdown and sterilization in the food industry workshops.

Standard/approval: FDA title 21, art. 177.2600 for aqueous foods. Phthalate free. High resistance to many aggressive cleaning agents.

Temperature range: -40°C / +165°C (saturated steam), +95°C (hot water).

Safety factor: steam 10:1-hot water 3:1

Tube: white synthetic rubber food quality, resistant to cleaning agents, smooth.

Reinforcements: High strength synthetic plies Cover: synthetic rubber, blue colour, resistant to heat and abrasion, wrapped fabric impression.

Marking: continuous transfer tape: "ROITER® AC 107 WASHDOWN FOOD QUALITY - WP 7 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	S.7 / W.18	90	0,42	40
16	5/8	5	26	S.7 / W.18	100	0,50	40
19	3/4	5,5	30	S.7 / W.18	120	0,60	40
25	1	6	37	S.7 / W.18	160	0,80	40
32	11/4	7	46	S.7 / W.18	200	1,20	40
38	11/2	7	52	S.7 / W.18	240	1,63	40
51	2	8	67	S.7 / W.18	320	2,12	40

## Flexible water hoses



Suitable for all industrial applications, agriculture, artificial snow, fish transfer and constructions.



AQ 005 LAYFLAT Lay flat water discharge hose 5 Bar



**AQ 010 LAYFLAT** Lay flat water discharge hose 10 Bar



**AQ 120 WATER** Water discharge hose 20 Bar



**AQ 406 WATER** Water S & D hose 6 Bar



AQ 410 WATER Water S & D hose 10 Bar



AQ 416 WATER Water S & D hose 16 Bar



AQ 420 WATER Water S & D hose 20 Bar



AQ 505 WATER Water corrugated S&D hose 3 Bar



AQ 510 WATER Water corrugated S&D hose 10 Bar



FP 004 FISH PUMP Fish transfer hose 4 Rar



**AQ 324 FIRE DELUGE** Seawater delivery deluge hose 24 Bar



AQ 925 FIRE SKID Seawater delivery deluge hose 25 Bar



AO 160 SNOW GUN Artificial Snow hose 60 Bar



Artificial Snow hose 100 Bar



AQ 399 SNOW GUN AM 503 WATERSMOKE Water & exhaust gases S&D



**AM 412 SANIBOAT** 

Waste water S&D



**MDG 108** 

Dredging hose light weight 10 Bar



**MDG 208** 

Dredging hose heavy duty 10 Bar



Sewer jetting hoses 250 Bar

# AQ 005 LAYFLAT



### INDUSTRIAL WATER DELIVERY

**Application:** lightweight rubber hose for industrial water. Can be rolled flat.

**Feature:** especially suitable as a discharge hose for submersible pumps as well as a water hose in industry, agriculture and construction.

On request: temperature range -35°C / + 95°C (Full EPDM version)

Temperature range: -35°C / +80°C. Safety factor: 3 : 1

Tube: synthetic rubber, black, smooth.

Reinforcement: wrapped textile reinforcements.

**Cover:** synthetic rubber, black, weather resistant, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 005 INDUSTRIAL WATER D -WP 5 BAR - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
51	2	3	57	5	0,75	40
63,5	2 1/2	3	69,5	5	0,84	40
65	2 5/8	3	71	5	0,85	40
76	3	3	82	5	0,90	40
90	3 1/2	3	96	5	1,30	40
102	4	3	108	5	1,46	40
110	4 5/16	4	118	5	1,73	40
114	4 1/2	4	122	5	1,80	40
127	5	4	135	5	2,10	40
152	6	4	160	5	2,60	40
203	8	4	211	5	4,00	40
254	10	4	262	5	5,05	40
305	12	4,5	314	5	6,40	16
357	14	5	367	5	6,95	16
405	16	7	419	5	9,86	12
457	18	7	471	5	11,50	12
510	20	9	528	5	13,20	12

# AQ 010 LAYFLAT INDUSTRIAL WATER DELIVERY



**Application:** a medium weight rubber hose for industrial water. Can be rolled flat.

**Feature:** especially suitable as a discharge hose for submersible pumps as well as a water hose in industry, agriculture and construction sites.

On request: Temperature range -35°C / + 95°C. (Full EPDM version).

Temperature range: -35°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, smooth.

Reinforcement: wrapped textile reinforcements.

**Cover:** synthetic rubber, black, weather resistant, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 010 INDUSTRIAL WATER D - WP 10 BAR - MADE IN ITALY"



Inter	nal dia	Wall thickness	External dia			Coil length
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
25	1	3	31	10	0,31	40
32	1 1/4	3	38	10	0,44	40
38	1 1/2	3	44	10	0,55	40
51	2	3,5	58	10	0,77	40
63,5	2 1/2	3,5	70,5	10	0,93	40
76	3	3,5	83	10	1,18	40
90	3 1/2	4	98	10	1,39	40
102	4	4	110	10	1,56	40
127	5	4,5	136	10	2,10	40
152	6	4,5	161	10	2,65	40
203	8	5	213	10	4,90	40
254	10	6	266	10	5,15	40
305	12	7	319	10	6,70	16

## **AQ 120 WATER**

#### INDUSTRIAL WATER DELIVERY

Application: delivery hose for heavy duty use for media such as waste water, sewage and service water.

Feature: suitable as a water hose in industry, agriculture and construction.

On request: other colours and temperature ranges.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, smooth.

Reinforcement: high tensile reinforcement fabrics Cover: synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 120 INDUSTRIAL WATER D - WP 20 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	3,5	20	20	150	0,35	40
19	3/4	4	27	20	230	0,47	40
25	1	5	35	20	300	0,60	40
32	11/4	5	42	20	380	0,92	40
38	1 1/2	6	50	20	450	1,10	40
51	2	7	65	20	550	1,70	40
63	2 1/2	7	77	20	580	2,40	40
76	3	7,5	91	20	750	3,13	40
102	4	8	118	20	850	4,64	40
127	5	10	147	20	1000	5,85	40
152	6	10	172	20	1100	7,15	40
203	8	10	223	20	1200	7,75	40

## **AQ 406 WATER**

# CASSETTE HOSE INDUSTRIAL WATER - S&D

Application: medium duty suction and delivery hose, suitable for sewage, waste water, and water based slurry applications. Especially designed as a "cassette extension hose" on waste suction vehicles.

Feature: dimensionally stable and highly flexible. High vacuum resistance, high abrasion resistance inside and outside

Notice: spiral-free sleeves available on request.

Vacuum resistance: up to -0.9 Bar.

Other dimension on request.

Temperature range: -35°C / +80°C. Safety factor: 3 : 1

**Tube:** synthetic rubber, black, abrasion resistant, limited resistant to oil, antistatic, smooth.

Reinforcement: textile wrapped, steel wire helix.
Cover: synthetic rubber, black, resistant to ozone and wheater; abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 406 INDUSTRIAL WATER S&D - WP 6 BAR - MADE IN ITALY".



Interna	l Diamenter	Wall thickness	External Diameter	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
102	4	8	118	6	400	4,10	20
127	5	8	143	6	600	5,80	40
152	6	8	168	6	720	6,85	40
203	8	10	223	6	1110	11,6	40
254	10	10	274	6	1150	14	40
305	12	17	339	6	1800	31,1	16
357	14	17	391	6	2000	38,8	12
405	16	17	439	6	2400	44	12
457	18	17	491	6	2700	49,39	12
510	20	18	546	6	3000	54,2	12
609	24	20	649	6	3600	66,8	6

## **AQ 410 WATER** INDUSTRIAL WATER - S&D

**Application:** suction and delivery hose for medium duty use such as waste water, sewage and service water. Often used as general "Contractor water suction hose". On request: spiral-free or extended sleeves: other colours and working pressures also available with double metal spiral, for better bending radius.

Vacuum resistance: up to -0.9 Bar.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, smooth.

Reinforcement: textile wrapped, double steel wire

Cover: synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression. Marking: continuous transfer tape: "ROITER® AQ 410 INDUSTRIAL WATER S&D - WP 10 BAR - MADE IN ITALY".



Interna	I Diamenter	Wall thickness	External Diameter	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	95	0,45	40
25	1	5	35	10	115	0,65	40
32	11/4	5	42	10	140	0,82	40
38	11/2	5	48	10	160	1,00	40
51	2	5	61	10	235	1,25	40
63	2 1/2	5,5	74	10	310	1,70	40
76	3	6	88	10	370	2,30	40
102	4	7	116	10	600	3,40	40
127	5	8	143	10	650	5,00	40
152	6	8	168	10	820	6,70	40
203	8	10	223	10	1100	11,60	40
254	10	12	278	10	110	15,50	40

## **AO 416 WATER** INDUSTRIAL WATER - S&D



Application: suction and delivery hose for medium duty use such as waste water, sewage and service water. On request: spiral-free or extended sleeves; other colours and working pressures also available with double metal spiral, for better bending radius.

Vacuum resistance: up to -0.9 Bar.

Temperature range: -35°C / +80°C. Safety factor: 3:1

Tube: synthetic rubber, black, smooth.

Reinforcement: textile wrapped, steel wire helix Cover: synthetic rubber, black, resistant to ozone and

weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 416 INDUSTRIAL WATER S&D - WP 16 BAR - MADE IN ITALY".



Interna	l Diamenter	Wall thickness	External Diameter	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	16	100	0,61	40
25	1	5	35	16	200	0,81	40
32	11/4	5	42	16	275	0,88	40
38	11/2	5	48	16	300	1,13	40
51	2	5	61	16	375	1,58	40
63	2 1/2	5,5	74	16	400	2,1	40
76	3	6	88	16	450	2,50	40
90	3 1/2	6	102	16	500	2,70	40
102	4	7	116	16	600	3,68	40
127	5	8	143	16	700	5,70	40
152	6	8	168	16	900	7,52	40
203	8	10	223	16	1100	11,90	40
254	10	12	278	16	1250	16,80	16

## **AQ 420 WATER** INDUSTRIAL WATER - S&D



Application: suction and delivery hose for medium duty use such as waste water, sewage and service water. On request: spiral-free or extended sleeves; other colours Tube: synthetic rubber, black, smooth. and working pressures also available with double metal spiral, for better bending radius.

Temperature range: -35°C / +80°C. Safety factor: 2.5:1

Reinforcement: textile wrapped, double steel wire helix Cover: synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 420 INDUSTRIAL WATER S&D - WP 20 BAR - MADE IN ITALY".



Interna	I Diamenter	Wall thickness	External Diameter	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5,5	30	20	100	0,65	40
25	1	5,5	36	20	200	0,85	40
32	11/4	5,5	43	20	275	0,90	40
38	11/2	6	50	20	300	1,15	40
51	2	6,5	64	20	375	1,63	40
63	2 1/2	7	77	20	400	2,20	40
76	3	7	90	20	450	2,60	40
90	3 1/2	7	104	20	500	2,70	40
102	4	7	116	20	600	3,75	40
127	5	8,5	144	20	700	5,80	40
152	6	9	170	20	900	7,70	40
203	8	14	231	20	1200	12,30	40
254	10	14	282	20	1300	16,90	16
305	12	15	335	20	2000	20,10	16

## **AQ 505 WATER**

#### WATER - S&D

**Application:** extremely flexible hose with corrugated cover for suction and delivery use such as waste water, sewage and service water. Used for effluent, sewer cleaning, irrigation and tank empting. Excellent bend radius properties and kink resistance. Usually supplied with soft ends.

**Feature:** thanks to its low weight and high flexibility, this hose is easy to handle and use.

Vacuum resistance - 0,9 bar.

**On request:** flat corrugated or square corrugated cover, helix-free or enlarged cuffs.

Temperature range: -35°C / +80°C.

Safety factor: 3:1

**Tube:** synthetic rubber, black, abrasion resistant, smooth. **Reinforcement:** wrapped textile reinforcements, steel wire.

Cover: EPDM, black, resitant to ozone and weather, abrasion resistant, corrugated, with coth

impression.

Marking: continuous transfer tape "ROITER AQ 510

WATER S&D - WP 10 BAR - MADE IN ITALY"



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	5	35	5	80	0,81	40
32	1 1/4	5	42	5	100	0,88	40
38	1 1/2	5	48	5	150	1,13	40
51	2	5,5	62	5	200	1,55	40
63	2 1/2	6,5	76	5	250	2,10	40
76	3	6,5	89	5	350	2,50	40
102	4	7	116	5	475	3,68	40
127	5	8	143	5	600	5,70	40
152	6	8,5	169	5	750	7,52	40
203	8	10	223	5	950	11,60	40
254	10	10	274	5	1200	13,25	40

## **AQ 510 WATER**

#### WATER - S&D

and service water.

Application: suction and delivery hose with corrugated cover for medium duty use such as waste water, sewage Safety factor: 3:1

Feature: very flexible due to corrugated cover.

On request: flat corrugated or square corrugated cover, helix-free or enlarged cuffs.

Temperature range: -35°C / +95°C.

Tube: FPDM, black, smooth,

Reinforcement: textile wrapped, steel wire helix. Cover: EPDM, black, resistant to ozone and weather, abrasion resistant, corrugated with cloth impression. Marking: continuous transfer tape ROITER® AQ 510

WATER S&D - WP 10 BAR - MADE IN ITALY



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	5	35	10	100	0,90	40
32	1 1/4	5	42	10	120	0,95	40
38	1 1/2	5	48	10	160	1,30	40
51	2	5,5	62	10	220	1,75	40
63	2 1/2	6,5	76	10	250	2,50	40
76	3	6,5	89	10	350	2,75	40
102	4	7	116	10	500	3,95	40
127	5	8	143	10	650	5,90	40
152	6	8,5	169	10	800	7,85	40
203	8	10	223	10	1100	12,00	20
254	10	10	274	10	1200	14,25	20
305	12	13	331	10	2400	15,70	16

## FP 004 FISH PUMP

#### FISH PUMPS HOSE

**Application:** suitable for use with most types of pump in the fishing industry.

**Feature:** a lightweight hose which can be rolled flat for transport and storage.

**ATTENTION:** be aware that the working pressure depends on the chosen diameter.

Standards: ISO 1307

Other colours, pressures and sizes available on request.

Temperature range: -35°C / +80°C

Safety factor: 3:1

Tube: black, smooth synthetic rubber, resistant to

abrasion, grease and oil.

Reinforcement: textile wrapped.

**Cover:** black synthetic rubber, resistant to abrasion, fat, oil, ozone, weather and sea water, cloth impression.

Marking: continuous transfer tape:

"ROITER® FP 004 - FISH PUMP - MADE IN ITALY".



Inter	Internal dia		External dia	Working Pressure	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
203	8	4	211	5	4,00	40
254	10	4	262	5	5,20	40
305	12	4,5	314	5	6,20	16
355	14	5	365	4	7,30	16
409	16	4,5	418	4	8,30	6
457	18	5	467	3	9,30	6
510	20	5	520	3	10,50	6

## **AQ 324 FIRE DELUGE ABS**





SEAWATER DELIVERY DELUGE HOSE

**Application** used on fire fighting offshore equipments fire resistant sea water delivery hose. Installation on oil rigs. Special protection with multiple glass fibre layers and thick flame resistant cover. Thanks to the special compound, the hose can be used also for Sea water, or as a multipurpose (mud, oil, brine, etc).

**Specification** meet and exceed ISO 15540:2016. Ships and marine technology– Fire resistance of non-metallic hose assemblies and non-metallic compensators - Test methods: (800°C x 30') Fire Test resistance acc. to Directive MED 2014/90/EU & Reg. 2019/1397/FU.

Temperature range: -35°C / +100°C

Safety factor: 5:1

Tube: black, smooth NBR rubber

**Reinforcement:** steel cord; multiple glass fiber layers, 6" and 8" additional steel helix on request.

and 6 additional steel nells on request.

**Cover:** CR, red, flame resistant, abrasion, ozone and weather resistant, cloth impression, 6 " and 8"

corrugated on request.

Marking: continuous transfer tape: ROITER® AQ 324 FIRE

DELUGE HOSE - WP 24 BAR - MADE IN ITALY.

Type approval: ABS APPROVED - BV Cert. n° M63062/20/MN/mn



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	14	79	24	400	4,10	40
76	3	16	108	24	500	5,60	40
102	4	16	134	24	600	8,20	40
152	6	16,5	185	24	1100	15,10	40
203	8	19,5	242	24	1250	21,90	30

\*The 2 Diameters 6" & 8" can be supplied with additional Steel Helix reinforcement and outer slightly corrugated cover. This will improve the bending radius of the hose and will facilitate the shipments.

Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
152	6	19	190	24	900	16,02	40
203	8	20	243	24	1100	22,76	30

## **AQ 925 FIRE SKID**

### SEAWATER DELIVERY DELUGE HOSE



**Application:** used on fire fighting offshore equipments. Fire resistant, sea water delivery hose. Installation on oil rigs. Special protection with glass fibre layers and flame resistant cover. Thanks to the special tube compound, the hose can be used also for sea water, or as a multipurpose hose (mud, oil, brine, etc).

**Specification:** meet and exceeds ISO 15540:2016 Ships and marine technology– Fire resistance of non-metallic hose assemblies and non-metallic compensators – Test methods:  $(800^{\circ}\text{C} \times 30^{\circ})$  Fire Test resistance acc. to Directive MED 2019/90/EU & Reg. 2019/1397/EU.

Type approval: BV Cert. nº M63062/20/MN/mn

Temperature range: -35°C / +100°C Safety factor: 5 : 1

Tube: black, smooth NBR rubber

**Reinforcement:** glass fiber layer, textile fabrics and steel cord reiforcements; 6" and 8" additional steel helix on request.

**Cover:** CR, red, flame resistant, abrasion, ozone and weather reistant, cloth impression, 6 " and 8" corrugated on request.

Marking: continuous transfer tape: ROITER® AQ 925 FIRE SKID HOSE - WP 25 BAR - MADE IN ITALY.



Interi	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	12	75	25	400	3,37	40
76	3	12	100	25	500	4,71	40
102	4	13	128	25	600	6,87	40
127	5	13	153	25	1000	8,48	40
152	6	14,5	181	25	1100	10,96	40
203	8	16	235	25	1250	17,07	30
254	10	18	290	25	1500	21,25	12

The diameters 6", 8" and 10" can be supplied on request, with Helix reinforcement and outer slightly corrugated cover. This will improve the bending radius of the hose and will facilitate the shipements.

Inter	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
152	6	17	186	25	900	14,66	40
203	8	18,5	240	25	1150	21,00	30
254	10	20	294	25	1600	27,00	12

## **AO 160 SNOW GUN**



#### WATER DELIVERY HOSE FOR SNOW GUNS - 60 BAR

Application: water delivery hose for snow gun equipments.

Feature: extremely long service life due to abrasion and ozone resistant rubber quality of the cover. Suitable for delivery of pressurized water to the snow shooter cannon and in the circuits of the cannon itself.

On request: other diameters available.

Temperature range: -40°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber, black, smooth.

Reinforcement: wrapped textile reinforcements.

Cover: synthetic rubber, blue, weather resistant, abrasion

resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® AQ 160 SNOW GUN HOSE - WP 60 BAR - MADE IN ITALY"



Internal dia		Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	1 1/2	7	52	60	380	2,75	40
51	2	7,5	66	60	500	3,50	40
65	2 1/2	7	79	60	550	4,20	40

## **AQ 399 SNOW GUN**

# 3

#### WATER DELIVERY HOSE FOR SNOW GUNS - 100 BAR

**Application:** snow gun hose offering a flexible connection for delivery of pressurized water from the fixed water system to the snow shooter cannon.

**Feature:** with the special blue UHMWPE outer cover, it's particularly indicated to be used as underground connection between reservoir and artificial snow gun. Extremely long service life due to abrasion and aggressive attack resistance of the cover.

On request: other diameters available.

Temperature range: -45°C / +80°C.

Safety factor: 2,5:1

Tube: synthetic rubber, black, smooth.

Reinforcement: wrapped steel cord reinforcements. Cover: blue UHMWPE, chemical resistant, abrasion resistant, cloth impression.

Marking: continuous embossed tape: "ROITER® AQ 399 SNOWGUN HOSE - WP 100 BAR - MADE IN ITALY"



Intern	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	1 1/2	7	52	100	800	2,95	40
51	2	7,5	66	100	1000	3,20	40
65	2 1/2	8	81	100	1100	4,70	40

## AM 503 WATERSMOKE

# 7

#### WATER & EXHAUST GASES S&D

**Application:** suction and delivery hose with corrugated cover suitable for medium duty use, for cooling water and exhaust gases on marine engines.

**Feature:** Hose manufactured according to ISO specification 13363 type 2 Class B and RINA DIP 123816/CS

Temperature range: -35°C +120°C

**Tube:** Synthetic rubber compound, black, smooth **Reinforcement:** High strength synthetic fabrics, and

steel wire spiral. On request without spiral.

Cover: CR rubber compound, self estinguish and





Interna	al Diameter	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	(max) bar	(min) mm	Kg/m	(max) m
25	1	3	80	0,60	40
30	1 3/6	3	95	0,70	40
35	1 3/8	3	110	0,80	40
40	1 9/16	3	150	0,90	40
45	1 25/32	3	165	1,10	40
51	2	3	175	1,20	40
55	2 5/32	3	200	1,30	40
60	2 3/8	3	220	1,35	40
70	2 3/4	3	260	1,80	40
76	3	3	280	2,00	40
80	3 5/32	3	300	2,20	40
90	3 1/2	3	350	2,60	40
102	4	3	400	3,00	40
127	5	3	550	3,80	40
130	5 1/8	3	590	3,90	40
152	6	3	760	4,40	40
203	8	3	1000	7,00	40
254	10	3	1270	8,70	16
305	12	3	1850	11,20	16

## **AM 412 SANIBOAT**



#### WASTE WATER S&D

**Application:** Suction and delivery hose for sanitary equipments installed on board of boats. Full odour barrier.

Feature: Hose manufactured according to specification EN ISO 8099

Temperature range: -40°C +120°C

Tube: White, smooth BIIR (butyl) rubber compound,

food quality odourless and taste free

Reinforcement: High strength synthetic fabrics,

and steel wire spiral

**Cover:** White, smooth, cloth impression EPDM rubber, resistant to abrasion, ozone and weathering



Interna	l Diameter	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	29	10	80	0,7	40
25	1	35	10	120	0,9	40
38	1 1/2	48	10	180	1,8	40
40	1 9/16	50	10	180	2	40
45	1 25/32	55	10	200	2,35	40
51	2	61	10	300	2,79	40

## **MDG 108**

#### DREDGING HOSE - D

Application: Delivery lightweight hose for sand and gravel mixed with water, used as a flexible connection between sections of discharge pipe in dredging applications.

Feature: long service life due to the abrasion resistant quality of the rubber tube and cover. Average wear of the tube 70 mm<sup>3</sup> (according to DIN ISO 4649:2014).

On request: Available with: enlarged ends, built-in rubber coated flanges or beaded ends.

Temperature range: -30°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber NR/SBR/BR, black. abrasion resistant, smooth.

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, black, resistant to ozone and weather, wrapped fabric finish.

Marking: continuous: "ROITER® MDG 108 DELIVERY - WP 8 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Diameter	Working Pressure	Bending Radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
150	6	12	174	8	1200	5,50	40
200	8	14	228	8	1800	8,50	40
250	10	16	282	8	2000	12,50	16
300	12	20	340	8	2600	16,00	16
350	14	24	398	8	4000	19,50	16
400	16	28	456	8	5000	23,00	16

## **MDG 208**

#### DREDGING HOSE - D

Application: heavy duty delivery hose for sand and gravel mixed with water, used as a flexible connection between sections of discharge pipe in dredging applications.

Feature: very long service life due to the superior quality abrasion resistant of the rubber tube and cover. Average wear of the tube 36 mm3 (according to DIN ISO 4649:2014).

On request: Available with: enlarged ends, built-in rubber coated flanges or beaded ends.

Temperature range: -40°C / +80°C.

Safety factor: 3:1

Tube: synthetic rubber NR/SBR/BR, black, abrasion resistant, smooth.

Reinforcement: synthetic plies reinforcement. Cover: synthetic rubber, black, resistant to ozone and weather, wrapped fabric finish.

Marking: continuous: "ROITER® MDG 208 DELIVERY

WP 8 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Diameter	Working Pressure	Bending Radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
100	4	18	136	8	800	7,50	40
150	6	28	206	8	1100	11,50	40
200	8	28	256	8	1800	22,50	12
250	10	30	310	8	2600	28,00	12
300	12	30	360	8	3200	34,00	12
357	14	30	417	8	3600	38,60	12
405	16	32	469	8	4200	47,50	12
510	20	32	574	8	5600	59,75	12

## **IK 250 ABRAREX**

#### SEWER FLUSHING HOSE

**Application:** Pressure hose suited as sewer cleaning hose, for flushing drains and sewers in industry, commerce and infrastructure

**Feature:** very long service life due its highly abrasion and weather resistant cover. (Abrasion according to EN ISO 6945:2000, max 0.5q (100N)).

On request: Other connections on request. Other cover colors available

**Notice:** Hoses are always supplied ready assembled. Steel crimped fittings with BSP threaded connections (one end male, one end female) with 60° conical fittings are used as standard. Other connections on request. Every assembly has a unique serial number on the coupling referring to the test certificate. Each hose is pressure tested.

Temperature range: -25°C / +75°C.

Safety factor: 2,5:1

Tube: synthetic rubber, black, smooth.

Reinforcement: 2 layers braided high resistant

synthetic fibers.

**Cover:** ABRABREX, special synthetic compound, with 50% higher abrasion resistance compared to other rubber. Black, resistant to ozone and weather, Pin pricked, slightly fabric finish.

Marking: continuous permanently embossed: "ROITER® IK 250 HOSE - WP 250 BAR - MADE IN ITALY - MONTH/YEAR".



In	ternal Diameter	Wall thickness	External Diameter	Working Pressure	Bending Radius	Weight approx	Coil Length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	m
13	1/2	5,5	24	250	80	40	40/60/80/100/120/150
19	3/4	7	33	250	100	60	40/60/80/100/120/150
25	1	8,5	42	250	120	70	40/60/80/100/120/150
32	1 1/4	9	50	250	180	80	40/60/80/100/120/150

## Flexible oil and fuel hoses

Designed for suction and delivery of a wide range of petroleum products Specific types engineered for aircraft refuelling, LPG, bitumen and a range of hoses for marine offshore applications. Available for use in ATEX areas



CA 016 CARBUFLAT
Flat fuel & oil discharge hose
16 Bar



CA 110
Fuel and oil delivery hose
10 Bar



CA 116 EN Fuel and oil delivery hose 16 Bar



CA 118
Fuel delivery hose
18 Bar



CA 120
Fuel and oil delivery hose
20 Bar



CA 220
Hose reels fuel and oil delivery
20 Bar



CA 117 TCH Tank cleaning hose 17 Bar



CA 8103 FLOWMASTER
Oil Bunker S&D hose
20 Bar



CA 410
Fuel and oil suction & delivery hose
10 Bar



CA 416 EN
Fuel and oil suction & delivery hose
16 Bar



CA 420 Fuel and oil suction & delivery hose 20 Bar



CA 400 SAE 100/R4 Hydraulic oil suction & delivery hose



CA 610
Fuel & oil suction & delivery hose with corrugated cover
10 Bar



CA 610 CRYO
Low temperature fuel & oil suction & delivery hose with corrugated cover
10 Bar



CA 605 MASTERTANK
Tank truck fuel S&D hose with
semi-corrugated cover
5 Bar



CA 806
Tank Truck S&D hose with outer plastic wire
6 Bar

## Flexible oil and fuel hoses

Designed for suction and delivery of a wide range of petroleum products Specific types engineered for aircraft refuelling, LPG, bitumen and a range of hoses for marine offshore applications. Available for use in ATEX areas



CL 225 LPG / EN1762 LPG delivery hose

25 Bar



CL 425 LPG / EN1762

LPG suction & delivery hose

25 Bar



CB 407 TB EN13482

Tar & bitumen S&D hose **7** Bar



CB 316 TB EN13482

Tar & bitumen S&D hose 16 Bar



CJ AVIO C 120

Aircraft refuelling hose type C 20 Bar



CJ AVIO E 420

Fuel hose for aircrafts type E 20 Bar



**CJAVIOF420** 

Fuel hose for aircrafts type F 20 Bar



#### CA 115 FLAT MARINE EN1765/L15

Fuel oil discharge marine hose 15 Bar



#### CA 410 MARINE EN1765/S10

Fuel and oil S&D marine hose 10 Bar



#### CA 415 MARINE EN1765/S15

Fuel an oil S&D marine hose 15 Bar



#### **CV 416 FKM**

Roof drain hose

16 Bar



#### **BOP 5000**

Fire safe hose

345 Bar

## CA 016 CARBUFLAT



#### MINFRAL OIL DELIVERY HOSE

Application: flat collapsible discharge hose, for filling and discharging tanks, petrol tankers and ships with mineral oils and fuels, unleaded fuels (EN228:2017) with an aromatic content of components up to 60%. Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 - 5) and mineral-oil based hydraulic oils. Also suitable for biodiesel B10.

hydraulic oils. Also suitable for biodiesel B10. Feature: perfect to use as ship to shore bunker hose, CARBUFLAT has been tested according to the technical regulations for combustible liquids (TRbF) 131/2:1992. Standard/approval: conforming to EN 590 - ISO 1307 - ISO 8031 Type M. Temperature range: -40°C / +100°C. Safety factor: 4 : 1

**Tube:** synthetic rubber, black, electrically conductive, smooth.

**Reinforcement:** textile wrapped, two crossed copper wires.

Cover: synthetic rubber, black, ozone, weather and abrasion resistant, resistant to oil, fabric impression.

Marking: continuous transfer tape: "ROITER®

CARBUFLAT -OIL D - PETROL BUNKER HOSE-WP 16 BAR
- R < 10° 0hm - MADE IN ITALY".



Interi	Internal dia		External dia	Working Pressure	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
50	2	7	64	16	1,50	40
76	3	7	90	16	1,90	40
102	4	7,5	117	16	2,90	40
152	6	9	170	16	6,70	40
203	8	10	223	16	9,50	40

#### FUEL & OIL DELIVERY

Application: compact delivery hose for filling and discharging tanks, petrol tankers and ships with unleaded fuels (EN228:2017) with limited oxygen content according to EEC 85/536 and with an aromatic content of components up to 60%.

Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 - 5) and mineral-oil based hvdraulic oils.

Also suitable for biodiesel B10

Temperature range: -40°C / +100°C Safety factor: 4:1

Tube: synthetic rubber black, electrically conductive, smooth

Reinforcement: wrapped textile reinforcements, double copper wire.

Cover: synthetic rubber black or grey color, resistant to oil, cloth impression.

Marking: continuous transfer tape yellow letters: "ROITER® CA 110 OIL D- WP 10 BAR - MADE IN ITALY".



Intern	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	90	0,51	40
25	1	5	35	10	140	0,62	40
32	1 1/4	5	42	10	170	0,77	40
38	1 1/2	5	48	10	210	0,91	40
51	2	6	62	10	250	1,17	40
76	3	7	90	10	410	2,40	40

## **CA 116 EN**

#### FUEL & OIL DELIVERY EN 12115

Application: Delivery hose for fuels and petroleum derivates with aromatic contents up to 60%.

Also suitable for biodiesel B10

Specifications: EN 12115 / TRbF.

**Notice:** Cover compounds are tested and approved by I.M.Q. as per the ISO EN 60079-0:2012 (R≤10 0hm/m). Hose structure designed to assure and maintain the requirements for ATEX working conditions.

Temperature range:  $-35^{\circ}$ C /  $+100^{\circ}$ C.

Safety factor: 4:1

**Tube:** Black, smooth, antistatic NBR rubber compound **Reinforcement:** High strength synthetic plies and

2 crossing copper wires for hose grounding.

**Cover:** Black, smooth, fire proof and antistatic cloth impression, CR rubber compound, resistant to chemical products, ozone and weathering.

Marking: continuous transfer tape yellow letters: ROITER® CA 116 EN 12115 OIL DELIVERY- WP 16 BAR - MADE IN ITALY.





Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	16	125	0,60	40
25	1	6	37	16	150	0,89	40
32	1 1/4	6	44	16	175	1,00	40
38	1 1/2	6,5	51	16	225	1,35	40
51	2	8	67	16	275	2,00	40
63	2 1/2	8	79	16	300	2,50	40
76	3	8	92	16	350	3,00	40
102	4	9	120	16	450	4,15	40

#### FUEL DELIVERY HOSE

Application: Mandrel built delivery hose for petroleum products. Suitable for petroleum products up to 60% aromatic content and unleaded fuel with max. 5% MTBE and 15% oxygenated compounds.

**Feature:** suitable for fuel oils, diesel oils, and mineral-oil based hydraulic oils.

Also suitable for all applications according to EN 12115 in the petrochemicals industry.

Vacuum resistant up to 0,4 Bar.

Standard/approval: Complies with EN 12115:2011- Type M

Temperature range: -30°C / +100°C.

Safety factor: 4:1

Tube: Black smooth rubber.

Reinforcement: High tensile textile plies and antistatic wires

Cover: Black, smooth rubber, oil, abrasion, ozone and

weather resistant. Conductive.

Marking: continuous transfer tape: "ROITER® CA 118 FUEL

DELIVERY - WP 18 BAR - MADE IN ITALY".



Intern	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	18	100	0,62	40
25	1	6	37	18	150	0,89	40
32	1 1/4	6	44	18	190	1,10	40
38	1 1/2	6,5	51	18	230	1,40	40
51	2	8	67	18	300	2,10	40
63	2 1/2	8	79	18	380	2,70	40
76	3	8	92	18	450	3,20	40
102	4	9	120	18	600	4,30	40

#### **FUEL & OIL DELIVERY**

Application: medium duty delivery hose for filling and discharging tanks, petrol tankers and ships with unleaded fuels (EN228:2017) with limited oxygen content according to EEC 85/536 and with a maximum aromatic content of components up to 60%. Also suitable for biodiesel B10.

**Feature:** suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 - 5) and mineral-oil based hydraulic oils.

Also suitable for applications according to EN 12115 in the petrochemical industry.

This hose has been tested according to the technical regulations for combustible liquids (TRbF) 131/2:1992.

Standard/approval: EN 1761:1999, EN 12115:2011.

Temperature range: -40°C / +100°C.
Safety factor: 4 : 1

**Tube:** synthetic rubber, black, electrically conductive, smooth

Reinforcement: textile wrapped, two crossed copper wires.
Cover: synthetic rubber, black or grey, cloth impression.
Marking: continuous transfer tape: "ROITER® CA 120 FUEL
& OIL DELIVERY - WP 20 BAR - MADE IN ITALY".



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	7	39	20	250	0,90	40
32	1 1/4	7	46	20	300	0,10	40
38	1 1/2	7	52	20	400	1,40	40
51	2	8	67	20	500	2,75	40
63	2 1/2	8	79	20	600	2,90	40
76	3	8	92	20	700	3,25	40
102	4	9	120	20	800	4,80	40

### HOSE REELS FUEL & OIL

Application: medium duty, self supporting, delivery hose for filling and discharging tanks, petrol tankers with unleaded fuels and oils with a maximum aromatic content. of components up to 60%. Also suitable for biodiesel B10. Feature: suitable for industrial oils, diesel oils, fuel oils and mineral-oil based hydraulic oils. Thanks to the separated multiple plies construction, this hose is particularly indicated to be used on hose reels. The hose has been tested according to the technical regulations for combustible liquids (TRbF) 131/2:1992.

Standard/approval: EN 1761:1999, EN 12115:2011. ISO 2929:2002.

Temperature range: -40°C / +100°C. Safety factor: 4:1

Tube: synthetic rubber, black, electrically conductive, smooth

Reinforcement: multiple separated plies wrapped, two crossed copper wires.

Cover: synthetic rubber, black color, cloth impression. On request it can be manufactured with grey (non marking) colour outer cover.

Marking: continuous transfer tape: "ROITER® CA 220 FUEL & OIL DELIVERY-WP 20 BAR - MADE IN ITALY"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	7	39	20	150	0,90	40
32	1 1/4	7	46	20	200	1,10	40
38	1 1/2	7	52	20	250	1,40	40
51	2	8	67	20	300	2,75	40
63	2 1/2	8	79	20	400	2,90	40
76	3	8	92	20	450	3,25	40
102	4	9	120	20	600	4,80	40

# **CA 117 TCH**



#### TANK CLEANING HOSE

Application: designed and manufactured for use in marine and industrial cleaning applications where safety and strength are required. Especially designed hose for cleaning containers, ship tanks and tank wagons with water.

**Notice:** Each hose is fully tested at 1,5 times the WP, and for conductivity. A certificate with the serial number and test results is provided for each individual hose at the time of shipment. A full international warranty accompanies each ROITER® CA 117 TCH - Tank Cleaning Hose.

Temperature range: -35°C/+95°C

Safety factor: 4:1

Tube: synthetic rubber, black, smooth.

**Reinforcement:** multiple plies of high strength synthetic fabric wrapped construction, two protruding antistatic steel wires.

**Cover:** synthetic rubber, black, resistant to abrasion, ozone, weather and seawater, cloth impression. Free of pitting or other defects, with uniform thickness.

**Electrical Bond:** two stainless steel AISI 316L protruding wires of 1.5 mm diameter.

Marking: continuous transfer tape "ROITER® CA 117 TCH TANK CLEANING HOSE - MADE IN ITALY.

Plus radial yellow depth rings, distance of 5ft (1,5 mt).



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	bar/psi	(min) mm	Kg/m	(max) m
38	1 1/2	8	54	17 / 250	250	1,55	40
51	2	8	67	17 / 250	300	2,00	40

## CA 8103 FLOWMASTER®



#### OIL BUNKER S&D HOSE

Application: For suction and delivery of liquid mineral oil products (crude oil, diesel oil, etc. but not liquid gas!) with an aromatic content of max, 50%. Designed for both medium and heavy duty service for thetransfer of petroleum products from tankers or barges to onshore oil storage facilities.

Norm/Registration: Exceed EN 1765:1997 S Also suitable for applications acc. to EN 12115 in the petrochemicals industry.

Additional information: Steam cleaning at max. 120°C for max. 30 min., pressureless. Up to max. 152 mm inside diameter, it is also suitable for overhead use. Available with vulcanized hose nozzle with screw and flange ends (API, ASA, DIN or other) made of CS or SS

Temperature range: -35°C / +80°C.

Safety factor: 4:1

Tube: NBR, black, smooth, oil resistant, antistatic. Reinforcement: Textile, wrapped, zinc plated steel wire helix, copper wire.

Cover: CR, black, resistant to oil, abrasion, weather and sea

water, antistatic, cloth impression.

Marking: continuous layline, black/orange. ROITER® CA 8103

FLOWMASTER® 20 bar (300PSI)- MADE IN ITALY



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	11	73	20	200	2,02	40
6	2.1/2	11	85	20	300	3,18	40
76	3	11	98	20	350	3,85	40
102	4	13	128	20	500	5,52	40
125	5	13	153	20	600	6,3	40
152	6	14	180	20	800	7,1	40
203	8	17	237	20	1100	18,5	40
254	10	21	296	20	1350	36,5	16

#### FUEL AND OIL S&D

Application: suction and delivery hose for filling and discharging tanks, petrol tankers and ships with unleaded fuels (EN228:2017) with limited oxygen content according to EEC 85/536 and with an aromatic content of components up to 60%.

Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 - 5) and mineral-oil based hydraulic oils.

On request: double metal spiral for better bending radius.

Temperature range: -40°C / +100°C. Safety factor: 4 : 1

**Tube:** synthetic rubber black, electrically conductive, smooth.

**Reinforcement:** wrapped textile reinforcements, steel wire, double antistatic copper wire.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, resistant to oil, cloth impression.

Marking: continuous transfer tape "ROITER® CA 410 FUEL&OIL S&D - WP 10BAR - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	5	29	10	125	0,65	40
25	1	5,5	36	10	150	0,80	40
32	1 1/4	6	44	10	175	0,98	40
38	1 1/2	6	50	10	225	1,26	40
51	2	6,5	64	10	275	1,50	40
63	2 1/2	7	77	10	300	2,15	40
76	3	7	90	10	350	2,80	40
102	4	8	118	10	500	4,10	40
127	5	9	145	10	600	5,50	40
152	6	10	172	10	750	7,60	40
203	8	11	225	10	1200	12,50	40

## **CA 416 EN**

#### ANTISTATIC TANK TRUCK S&D - EN 12115

Application: designed for suction and delivery of gasoline, heating oil, diesel oil other petrochemical products, and for leaded and unleaded fuels (EN228:2017) according to EEC 85/536 and with an aromatic content of components uo to 50%.

Notice: conforms fully to EN 12115 / TRbF standards, ISO 1307. Cover compounds are tested an approved by I.M.Q. as per the ISO EN 60079-0:2012 (R <= 10^9 0hm/m). Hose structure designed to assure and maintain the requirements for ATEX working conditions.

Temperature range: -40°C / +100°C. Safety factor: 4:1

Tube: Black, smooth, antistatic NBR rubber compound Reinforcement: High strength synthetic plies, with double steel spirals and two crossing copper wires for hose arounding.

Cover: Black, smooth, fire proof and antistatic (R < 1 G Ohm/m) cloth impression CR rubber compound, resistant to chemical products, ozone and weathering. Marking: continuous transfer tape: "ROITER® CA 416 EN 12115-011 S&D WP 16 BAR - MADE IN ITAL Y'





Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
25	1	6	37	16	150	0,86	40
32	1 1/4	6	44	16	175	0,98	40
38	1 1/2	6,5	51	16	225	1,36	40
51	2	8	67	16	275	1,95	40
63	2 1/2	8	79	16	300	2,60	40
76	3	8	92	16	350	2,96	40
102	4	8,5	119	16	450	4,90	40

### **CA 420**

#### FUEL AND OIL S&D

Application: heavy duty suction and delivery hose for filling and discharging tanks, petrol tankers with unleaded fuels (EN228:2017) with limited oxygen content according to EEC 85/536 and with an aromatic content of components up to 60%. Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51603 parts 1 - 5), biodiesel (to B100 neat biodiesel), ethanol and gasoline. Also suitable for applications according to EN 12115 in the petrochemical industry.

Feature: this hose has been tested according to the technical regulations for combustible liquids (TRbF) 131/2:1992.

Standard/approval: EN 1761:1999.

Notice: on request, can be produced with outer cover in CR rubber "CA 420 CR".

Temperature range: -40°C / +100°C. Safety factor: 3:1.

Tube: black nitrile, electrically conductive, smooth. Reinforcement: synthetic textiles, wire spiral, double copper wires.

Cover: synthetic rubber black, resistant to ozone and weather, abrasion resistant, resistant to oil, electrically conductive, cloth impression.

Marking: continuous transfer tape: "ROITER® CA 420 OIL&FUEL S&D - 20 bar/300 psi - MADE IN ITALY"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	20	120	0,65	40
25	1	6	37	20	150	0,86	40
32	1 1/4	6	44	20	175	1,02	40
38	1 1/2	6,5	51	20	225	1,30	40
51	2	8	67	20	275	2,09	40
63	2 1/2	8	79	20	300	2,60	40
76	3	8	92	20	350	2,92	40
102	4	10	122	20	450	3,89	40
125	5	10	145	20	750	4,86	40
152	6	12	174	20	900	5,84	40
203	8	15	233	20	1150	7,78	20

# CA 400 - SAE 100/R4



#### HYDRAULIC OIL - S & D

**Application:** used in pressure and vacuum applications with petroleum and water based hydraulic fluids and lubricants. Suitable for suction and delivery of petroleum products up to 40% aromatic content.

Feature: hose suitable for oils in compliance with the standard SAE 100/R4.

Standard/approval: SAE J517 Type SAE 100/R4: 2017. Attention: please be aware of different working

On request: double steel wire helix for better bending radius.

Temperature range: -40°C / +100°C. Safety factor: 4:1

Tube: synthetic rubber, black, antistatic, smooth suitable for hydraulic oils.

Reinforcement: wrapped textile reinforcements, double steel wire helix.

Cover: synthetic rubber, black, resistant to ozone and weather, abrasion resistant, cloth impression.

Marking: continuous transfer tape: "ROITER® CA 400 SAE 100/R4 S&D- ID... - MAX WP... BAR MADE IN ITALY"



Inter	nal dia	Vacuumm	Working Pressure	Burst Pressure	Bending radius	Weight approx	Coil length
mm	inch	bar	(max) bar	(max) bar	(min) mm	Kg/m	(max) m
16	5/8	8,0	21	83	50	0,45	40
19	3/4	0,8	21	83	60	0,58	40
25	1	8,0	17	69	75	0,69	40
30	1 3/16	0,8	16	65	90	0,86	40
32	1 1/4	0,8	14	55	100	0,87	40
35	1 3/8	0,8	12	50	105	1,01	40
38	1 1/2	0,8	10	41	115	1,05	40
40	1 5/8	0,8	10	41	120	1,08	40
45	1 3/4	0,8	8	30	135	1,35	40
51	2	8,0	7	28	200	1,56	40
60	2 3/8	0,8	5	22	240	1,89	40
63	2 1/2	8,0	4	17	255	2,04	40
70	2 3/4	0,8	4	17	280	2,35	40
76	3	0,8	4	15	300	2,72	40
80	3 1/4	0,8	4	15	320	2,83	40
90	3 1/2	0,8	4	15	360	3,40	40
102	4	0,6	3	12	400	4,47	40

# CA 610

#### FUEL AND OIL S&D

Application: semi corrugated suction and delivery fuel hose, designed for tank trucks. Flexible and lightweight, particularly useful and used in any country for filling and discharging tanks, petrol tankers and ships with unleaded fuels (EN228:2012) with an aromatic content of components up to 60%. Suitable for industrial oils, diesel oils, fuel oils. Suitable as well for applications in petrochemical industries.

**Feature:** conforms to the Technical Regulations for Flammable Liquids TRBF 50:2002.

On request it can be manufactured with blue or light grey (non marking) colour outer cover.

Standard/approval: EN 1761:1999, EN 590.

Temperature range: -40°C / +100°C. Safety factor: 4 : 1.

**Tube:** synthetic rubber, black, electrically conductive, smooth

**Reinforcement:** wrapped textile reinforcements, double steel wire, double copper wire.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, conductive, resistant to oil, semi corrugated, cloth impression.

Marking: continuous transfer tape, yellow: ROITER® - CA 610 - OIL S&D - WP 10 BAR -R < 106 Ohm -MADE IN ITALY



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
32	1 1/4	6,5	45	10	200	1,10	40
38	11/2	6,5	51	10	300	1,40	40
51	2	7	65	10	500	1,80	40
63	2 1/2	7	77	10	600	2,13	40
76	3	8	92	10	700	2,70	40
102	4	8	118	10	800	3,75	40

# CA 610 CRYO



**Application:** suction and delivery fuel hose, designed for cold climates. Flexible and lightweight, particulary useful and used in cold countries for filling and discharging tanks, petrol tankers and ships with unleaded fuels (EN228:2012), with an aromatic content of components up to 50%. Suitable for industrial oils and diesel oils. Suitable as well for application in petrochemical industries.

**Features:** conforms to the technical requirements for manufactured with black colour outer cover.

**Temperature range:** -55°C / +90°C.

Safety factor: 4:1

**Tube:** synthetic rubber, black, electrically conductive, smooth.

**Reinforcement:** wrapped textile reinforcements, double steel wire, double copper wire.

**Cover:** synthetic rubber, blue, resistant to ozone and weather, abrasion resistant, conductive, resistant to oil, semi corrugated, cloth impression.

Marking: continuous Transfer tape:

"ROITER® CA 610 CRUYO - OIL S&D - WP 10 BAR -R < 106 Ohm MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
32	1 1/4	6,5	45	10	200	1,10	40
38	11/2	6,5	51	10	300	1,40	40
51	2	7	65	10	500	1,80	40
63	2 1/2	7	77	10	600	2,13	40
76	3	8	92	10	700	2,70	40
102	4	8	118	10	800	3,75	40

# CA 605 MASTERTANK



#### MULTIPURPOSE FUEL AND OIL S&D

**Application:** flexible and lightweight corrugated suction and delivery fuel hose, designed for tank trucks, to handle oil and refined fuels, diesel, and gasoline. Suitable for industrial oils, diesel oils, fuel oils with an aromatic content of components up to 60%. Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 – 5), biodiesel (to B10), ethanol and gasoline.

Also suitable for applications according to EN 12115 in the petrochemical industry

**Feature:** extremely flexible and lightweight, conforms to the Technical Regulations for Flammable Liquids TRbF 50:2002. Conductivity according to ISO 8031

**Approvals:** Type approved to ADR Annex IV -International carriage of dangerous Goods by Road (ADR)

Temperature range: -35°C / +100°C.

Safety factor: 3:1

**Tube:** synthetic rubber, black, electrically conductive, smooth, antistatic (R < 10<sup>6</sup> Ohm).

**Reinforcement:** multiple sinthetic plies, high tensile, helix steel wire, double copper wire.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, conductive, resistant to oil, semi corrugated, cloth finish.

Marking: continuous transfer yellow tape: ROITER® - CA 605 MASTERTANK - OIL S&D - WP 5 BAR -R < 10° Ohm - MADE IN ITALY.





Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
32	1 -1/4	5,5	43	5	110	0,75	40
38	1 -1/2	5,5	49	5	140	0,90	40
51	2	5,5	62	5	180	1,20	40
63,5	2 -1/2	6	75,5	5	240	1,70	40
76	3	6,5	89	5	260	2,30	40
80	3 1/4	6,5	93	5	270	2,40	40
102	4	7,5	117	5	320	3,50	40
120	4-3/4	8,5	137	5	480	4,80	40
152	6	9	170	5	600	7,10	40
203	8	10	223	5	800	9,50	40
254	10	11	276	5	1000	10,85	12
305	12	13	331	5	1200	16,00	12

### **CA806**

#### FUEL TRUCK S&D WITH OUTER THERMOPI ASTIC SPIRAL

Application: suction and delivery hose for mineral oils, diesel fuel and gasoline with aromatic contents up to 60%. Very light, very flexible and extraordinarily resistant to abrasion, thanks to the outer thermoplastic helix. Is the ideal product for the fuel distribution companies road tankers.

Vacuum resistance: -0.7 BAR

Temperature range: -40°C / +80°C.

Safety factor: 3 : 1.

Tube: black, smooth, antistatic NBR rubber compound Reinforcement: High strength synthetic plies, double

copper wire for hose grounding

Cover: Black, smooth, glossy, NVC rubber with an outer thermoplastic spiral, resistant to abrasion, ozone and weathering.



Intern	al dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	5	61	6	110	1,70	40
63	2 1/2	6	75,5	6	140	2,00	40
76	3	6	88	6	170	2,30	40
102	4	7	116	6	230	3,00	40

# **CL 225 LPG**

#### FN 1762-2019 - TYPF D

Application: liquified gas delivery hose for filling and draining vehicle tanks according to EN 1762:2019.

Feature: Extremely gas-tight tube, tested according to ISO 4080:2009. The molecules of natural gas are small, enhancing their ability to permeate through standard rubber hose constructions. The permeation process is more rapid as the working pressure increases, and natural gas accumulates with potentially dangerous consequences. The special compound of CL 225 LPG, is extremely gas-tight, tested according to ISO 4080:1995 method 1. In addition, the hose includes bleeder cords to allow trapped gas to be safely vented out, and the cover is pin-pricked to allow the permeation of gases.

Standard/approval: UNI EN 1762:2019 - Rubber hoses and hose assemblies for liquefied petroleum gas, LPG (liquid or gaseous phase), and natural gas up to 25 bar (2.5 MPa)





Temperature range: -40°C / +80°C (liquid gas), +90°C (fuel)

Safety factor: 4:1

Tube: synthetic rubber, black, electrically conductive smooth, LPG resistant.

Reinforcement: textile wrapped, two crossed copper wires

Cover: synthetic rubber, black, resistant to ozone and weather, abrasion resistant, resistant to oil, electrically conductive, cloth impression, pin pricked.

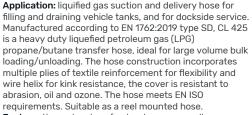
Marking: continuous transfer tape, "ROITER® CL 225 LPG-D-WP 25 BAR -EN 1762-MADE IN ITALY", and continuous embossed tape to EN 1762:2019.



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	25	160	0,61	40
25	1	6,5	38	25	200	0,84	40
32	1 1/4	6,5	45	25	250	1,02	40
38	1 1/2	7	52	25	320	1,29	40
51	2	8	67	25	400	1,93	40
76	3	9	94	25	650	3,14	40
102	4	10	122	25	800	4,59	40

# **CL 425 LPG**

#### EN 1762:2019 - TYPE S&D



Feature: the molecules of natural gas are small, enhancing their ability to permeate through standard rubber hose constructions. The permeation process is more rapid as the working pressure increases, and natural gas accumulates with potentially dangerous consequences. The special compound of CL 425 LPG, is extremely gas-tight, tested according to ISO 4080:1995 method 1. In addition, the hose includes bleeder cords to allow trapped gas to be safely vented out, and cover is Pin-pricked to allow the permeation of gases.





**Temperature range:** -40°C / +80°C (liquid gas), +90°C (fuel).

Safety factor: 4:1

**Tube:** synthetic rubber black, elctrically conductive, smooth.

**Reinforcement:** multiple textile plies wrapped, 2 crossed copper wires. Double steel helical embedded wire to resist collapse and crush.

**Cover:** synthetic rubber compound, black, resistant to ozone, weather and abrasion. Resistant to oil, electrically conductive, pin-pricked, fabric impression. **Marking:** continuous transfer tape:

"ROITER® CL 425 LPG - WP 25 BAR - EN 1762/19 Type SD - MADE IN ITALY", and continuous embossed tape according to EN 1762:2019 requirements.

Standard/approval: UNI EN 1762:2019 - Rubber hoses and hose assemblies for liquefied petroleum gas, LPG (liquid or gaseous phase), and natural gas up to 25 bar (2.5 MPa)



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
38	1 1/2	7	52	25	280	2,30	40
51	2	8	67	25	350	2,85	40
63	2 1/2	9	81	25	480	3,50	40
76	3	9	94	25	550	4,20	40
102	4	10	122	25	720	6,70	40
152	6	12	174	25	1000	12,50	40
203	8	12	228	25	1400	19,50	20
* 254	10	20	294	25	1750	27,50	12
* 305	12	22	349	25	2100	35,50	12

<sup>\*</sup> Only with built-in couplings

### **CB 407 TB**

#### TAR & BITUMEN S&D HOSE EN 13482 TYPE 1 CLASS A

Application: suitable for use as tar spraying hose up to 175°C. Based on norm EN 13482. The hose can be used for applications other than tar spraying, as for the transfer of bitumen from tank to trailer.

Also suitable for handling tar and asphalt.

Feature: the design with a steel cord and overlaid textile reinforcements, ensures good layer adhesion and heat insulation

Notice: mainly supplied in service lengths with fittings at the ends. Couplings can be swaged or "Built in". The hoses is delivered with a hydrostatic test certificate according to EN 1402. Test results are reported on the certificate. Serial number and manufacturing date (M/Y) are permanently printed on the fittings.

**ATTENTION:** the hose can only be used at temperatures up to 175°C in accordance with the instructions.

The application of solvents or the use of flame to remove tar is not permitted.

The hose must be replaced even in the case of minor damage.

Temperature range: -35°C/+ 175°C

Safety factor: 6:1.

Electrical conductivity: R < 106 Ohm.

Tube: black synthetic rubber, smooth heat and oil resistant.

Reinforcement: high tensile textile reinforcment plus steel helix wire, on request double copper wire.

Cover: syntetic rubber, electrically conductive, resistant to abrasion, weather and sea water, cloth impression. Marking: continuous tape; "ROITER® CB 407 TB - TAR &

BITUMEN S&D - EN 13482:2013 TYPE 1 CLASS A - SB -WP 7 BAR - MADE IN ITALY"



Inte	ernal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	7	120	0,65	40
25	1	6	37	7	150	0,86	40
32	1.1/4	6	44	7	175	1,02	40
38	1.1/2	6,5	51	7	225	1,30	40
51	2	8	67	7	275	2,09	40
63	2.1/2	8	79	7	345	2,60	40
76	3	8	92	7	450	2,92	40
100	4	10	120	7	600	3,89	40

# **CB 316 TB**



# TAR & BITUMEN S&D HOSE FN 13482 TYPE 2 CLASS B

**Application:** suitable for use as tar spraying hose up to 180°C, with peaks up to 200°C. Based on norm EN 13482. The hose can be used for applications other than tar spraying, as for the transfer of bitumen from tank to trailer. Also suitable for handling tar and asphalt. Designed far loading and unloading from ship to shore. ROITER 316 TB hose, is the perfect solutions for dock

services, even under heavy-duty working conditions.
Suction and delivery hose manufactured according to EN 13482.

**Feature:** the design with a steel cord and overlaid textile reinforcements, ensures good layer adhesion and heat insulation.

**Notice:** mainly supplied in service lengths with fittings at the ends. Couplings can be swaged or "Built in". The hoses is delivered with a hydrostatic test certificate according to EN 1402. Test results are reported on the certificate. Serial number and manufacturing date (M/Y are permanently printed on the fittings.

**ATTENTION:** the hose can only be used at temperatures up to 200°C in accordance with the instructions. The application of solvents or the use of flame to remove tar is not permitted.

The hose must be replaced even in the case of minor damage.

Temperature range: -35°C/+ 200°C

Safety factor: 6:1.

Electrical conductivity: R < 106 Ohm.

Tube: heat and oil resistant ACM® ULTRA HT elastomer,

black, smooth bore (SB).

Reinforcement: wrapped steel reinforcement, high tensile fabrics steel helix wire, on request double copper wire

Cover: ACM® Ultra HT, electrically conductive, resistant to abrasion, weather and sea water, cloth impression.

Marking: continuous tape; "ROITER® CB 316 TB - TAR & BITUMEN S&D - EN 13482:2013 TYPE 2 CLASS B - SB - WP 16 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	7	33	10	120	1,18	40
25	1	7	39	10	175	1,56	40
32	11/4	8	48	10	225	2,28	40
38	11/2	8	54	10	275	2,71	40
51	2	12	75	10	345	5,45	40
63	2 1/2	12	87	10	450	5,60	40
76	3	12	100	10	500	6,58	40
100	4	18	136	16	600	13,00	40
127	5	20	167	16	740	16,20	40
152	6	25,5	203	16	860	24,50	40
203	8	28,5	260	16	1100	30,60	40
250	10	32	314	16	1500	41,10	12

## CJ 120 "AVIO C"

#### AVIATION FUEL - D ISO 1825, TYPE C

Application: suitable for conveying aircraft fuels. Specially designed for ultra low temperature applications. The special version "LT" offers unmatched low temperature flexibility and an operating temperature range of  $-55^{\circ}$ C to  $+70^{\circ}$ C ( $-67^{\circ}$ F to  $+158^{\circ}$ F).

Standard/approval: Roiter® aviation fuel hoses meet all the leading industry and military standards. ISO 1825:2017 (formerly EN 1361:2004) Type C8 EI 1529/2014. 7th Edition (API 1529/2005).

Notice: electrical Conductivity: Type C: 10<sup>3</sup> to 10<sup>6</sup> Ω/m

Temperature range: -30°C to +85°C (-22°F to +185°F) Safety factor: 4:1

**Tube:** synthetic rubber black: the smooth, non porous inner liner is compatible with all known aviation fuel and gasoline grades.

Reinforcement: textile wrapped, double copper wire Cover: designed for long service life with an excellent outer cover, offering good abrasion and environmental protection. Black, resistant to ozone and weather. resistant to oil, electrically conductive, cloth impression. Marking: continuous embossed tape:

"ROITER® CJ 120 AVIO C - AIRCRAFT REFUELLING AIRPORT ISO 1825 TYPE C - WP 20 BAR - MADE IN ITAL Y"



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6,5	32	20	110	0,70	40
25	1	6,5	38	20	140	0,80	40
32	1 1/4	6,5	45	20	170	1,10	40
38	1 1/2	7	52	20	200	1,25	40
50	2	8	67	20	250	2,05	40
63	2 1/2	8,5	80	20	290	2,50	40
76	3	8	92	20	300	2,85	40
102	4	9	120	20	410	4,10	40

# CJ 420 "AVIO E"

# AVIATION FUEL - S&D ISO 1825, TYPE E

**Application:** suction and delivery hard wall hose, suitable for aircraft refuelling (with steel helix). Commonly used for tank trucks, and as connection hose from truck to trailer and for bottom loading operations.

Standard/approval: meets Standards ISO 1825:2017 Type E (formerly EN 1361:2004), EN 12115 SD-  $\Omega/T$  - EN 1761.

**Feature:** suitable for all petroleum based products with an aromatic content up to 50%, fuels, jet fuels, deicing fluids and motor oils. Antistatic, electrical resistance <10° Ohm.

Temperature range: -30°C / +85°C.

Safety factor: 4:1

**Tube:** high nitrile rubber, black, smooth, antistatic. **Reinforcement:** textile wrapped, steel wire helix, two crossed copper wires.

**Cover:** Chloroprene (CR) rubber, fire resistant, black, ozone and weather resistant, resistant to oil and abrasion, electrically conductive, fabric impression.

Marking: continuous embossed tape:

"ROITER® CJ 420 AVIO E - EN ISO 1825 E - WP 20 BAR - AIR CRAFT REFUELLING - MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
50	2	8	67,5	20	250	2,20	40
63,5	2 1/2	9,5	82,5	20	275	2,95	40
76	3	9,5	95	20	300	3,50	40
102	4	9	120	20	450	4,80	40

Vacuum resistance up to -0.9 bar

# CJ 420 "AVIO F"

# AVIATION FUEL - S&D ISO 1825 - TYPE F

**Application:** suction and delivery hose suitable for aircraft fuels (with plastic helix).

Feature: hose can be driven over (plastic helix recover form)

**Standard/approval:** ISO 1825:2017 Type F (formerly EN 1361:2004).

Temperature range: -30°C / +65°C.

Safety factor: 4:1

Tube: synthetic rubber, black, smooth.

Reinforcement: Textile wrapped, plastic helix.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, resistant to oil, electrically conductive, cloth impression.

Marking: continuous embossed tape:

"ROITER® CJ 420 AVIO F -AIRCRAFT REFUELING - ISO 1825 TYPE F - S&D - WP 20 BAR - MADE IN ITALY".



Inte	ernal dia	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
32	1.1/4	8,5	49	20	180	1,50	40
38	1.1/2	8,5	55	20	220	1,70	40
51	2	10	71	20	275	2,50	40
63,5	2.1/2	10	83,5	20	300	3,00	40
76	3	10,5	97	20	330	3,60	40
102	4	11	124	20	410	4,80	40

Vacuum resistance up to -0.65 bar

# **CA 115 FLAT MARINE**

# 7

#### MINERAL OIL D - EN 1765 L15

Application: flat collapsible discharge hose, for filling and discharging tanks, petrol tankers and ships with mineral oils and fuels, unleaded fuels (EN228:2017) with an aromatic content of components up to 60%. Suitable for industrial oils, diesel oils (EN 590:2017), fuel oils (DIN 51 603 parts 1 - 5) and mineral-oil based hydraulic oils. Also suitable for biodiesel B10.

**Feature:** perfect to use as ship to shore and bunker hose, this hose has been tested according to the technical regulations for combustible liquids (TRbF) 131/2:1992.

Fittings: "built in" steel nipples with flanges or couplings to suit customer requirement. Available ends (API, ASA, DIN or other) made of CS or SS. On request. "Swaged ends" nipples, crimped with steel ferrules.

**Standard/approval:** conforming to EN 1765/2016 - L 15 - EN 12115:2011.

Type approved from Lloyd's & Bureau Veritas

Temperature range: -40°C / +100°C. Safety factor: 4:1

**Tube:** synthetic rubber, black, electrically conductive, smooth

Reinforcement: textile wrapped, two crossed copper wires

**Cover:** synthetic rubber, black, ozone, weather and abrasion resistant, resistant to oil, cloth impression.

Marking: continuous transfer tape:

"ROITER® CA 115 FLAT MARINE - OIL D - EN 1765 L 15 - WP 15 BAR - R <  $10^{\circ}$  OHM" - MADE IN ITALY", and embossed tape according to EN 1765.





Interr	nal dia	Wall thickness	External dia	Working Pressure	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	Kg/m	(max) m
51	2	6	63	15	1,52	40
76	3	6	88	15	2,00	40
102	4	7	116	15	3,20	40
152	6	8	168	15	5,20	40
203	8	10,5	224	15	9,50	40

# **CA 410 MARINE**

#### MINERAL OIL S&D - EN 1765/S10



Application: for suction and discharge, for delivery of liquid mineral oil products (crude oil, diesel oil, etc. with aromatic content up to 60%. Ship to Shore transfer acc. to the Pressure Design. Suitable for bunkering services between dock and ship in any possible service condition. Low elongation, kinkproof. Standard/approval: exceeds the reference standards: EN 1765:2016 Type S10 - BS 1435:1987 Type S10.

Type approved from Lloyd's and Bureau Veritas. Note: loose steam cleaning up to 120°C for max. 30'. Fittings: Built in couplings, flanges to suit customer requirements. Available ends (API, ASA, DIN or other) made of CS or SS. On request, "Swaged ends" nipples, crimped with steel ferrules.

Temperature range: -40°C / +100°C.

Safety factor: 4:1

**Tube:** synthetic rubber black, electrically conductive, smooth

**Reinforcement:** wrapped textile reinforcements, steel wire, double antistatic copper wire.

**Cover:** synthetic rubber, black, resistant to ozone and weather, abrasion resistant, resistant to oil, cloth impression.

Marking: continuous transfer tape:

"ROITER CA 410 MARINE- OIL S&D WP 10 BAR- EN 1765/S10 MADE IN ITALY" and embossed tape according to EN 1765

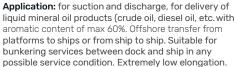




Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	8	66	10	400	3,75	40
63	2 1/2	8	79	10	450	4,00	40
76	3	10	96	10	475	4,50	40
102	4	12	126	10	600	5,55	40
127	5	14	155	10	700	7,10	40
152	6	16	184	10	900	9,35	40
203	8	18	239	10	1200	12,50	40

## CA 415 MARINE

# MINERAL OIL S&D- EN 1765 S 15



Standard/approval: exceeds the reference standards: EN 1765:2016 Type S15 - BS 1435:1987 Type S15.

Notice: loose steam cleaning up to 120°C for max. 30'. Up to max. 6"inside diameter, also suitable for aerial use. On request CA 415 hoses can be supplied in the "Self Floating version".

Fittings: Built in Steel nipples with flanges or couplings to suit customer requirements. Available ends (API, ASA, DIN or other) made of CS or SS. On request, "Swaged ends" nipples, crimped with steel ferrules.

Type approved from Lloyd's and Bureau Veritas



Temperature range: -40°C / +100°C

Safety factor: 4:1

Tube: synthetic rubber, black, smooth inner tube, oil resistant antistatic

Reinforcement: Textile wrapped, steel wire helix. Multiple plies of high tenacity synthetic cord.

Electrical properties: Built in copper conductive wire, electrical continuous.

Cover: Synthetic rubber, black, resistant to oil, abrasion. weather, sea water and ozone, fabric impression. On request corrugated cover for a better flexibility (CA 515)

Marking: Continuous transfer tape:

"ROITER® CA 415 MARINE - EN 1765 S15 - S&D WP 15 BAR - MADE IN ITALY" and embossed tape according to EN 1765





Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
102	4	15	132	15	600	9,00	40
152	6	19	190	15	900	14,00	40
203	8	21	245	15	1200	21,00	20
254	10	23	300	15	1500	29,00	12
305	12	27,5	360	15	2600	40,00	12
355	14	30	415	15	3000	46,70	12
405	16	30	465	15	3600	52,50	12
500	20	45	590	15	5900	75,00	12

#### **CV 416 FKM** ROOF DRAIN HOSE



**Application:** water draining from roofs of petrochemicals storage tanks -fuel and oil - with up to 100% aromatic

On request: fitted assemblies can be supplied on request, with ballast cable and lead weights, to ensure negative buoyancy. Clamps and chain for roof attachment are also available.

Notice: built in or swaged steel couplings with flanges, are available to suit customer's requirements, ANSI, DIN or others, made in C.S. or S.S.

All assembled hoses are hydrostatic factory tested and certified.

Temperature range: -30°C / +100°C. Safety factor: 4:1

Tube: synthetic rubber black, electrically conductive. smooth, resistant to crude petroleum oils

Reinforcement: wrapped textile reinforcements, steel wire, double copper wire.

Cover: FKM black, resistant to 100% aromatics. wrapped fabric finish.

Marking: continuous embossed tape, "ROITER® CV 416 FKM - ROOF DRAIN - WP 16 BAR - MADE IN ITALY", and continuous longitudinal coloured stripe to ensure correct allignement.



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
51	2	8	67	16	310	2,11	40
63,5	2 1/2	8	79,5	16	380	2,53	40
76	3	13	102	10	450	4,80	40
80	3 1/4	13	106	10	460	4,90	40
102	4	13	128	10	600	6,50	40
127	5	14	155	10	760	7,47	40
152	6	15	182	10	920	9,35	40
203	8	16	235	10	1150	15,41	40

## **BOP 5000**

#### FIRESAFE HOSE

Application: BOP hose is mainly used for Blow Out Prevention (BOP) and well control applications. Operating pressure is 5000PSI. It can be directly exposed to flame for more than 5min at the temperature of 704°C, to ensure control system can be operated under emergencies.

Feature: used for hydraulic connections between the well control equipment and the control system. Fittings: available with NPT /M threads or JIC Fire resistance: API 16D Flame test, 704°C x 5 minutes Temperature range: -40°C / +121°C.

Safety factor: 4:1

Tube: Black, smooth nitrile rubber, oil resistance, seawater resistance, high temperature resistance, acid & alkali resistance

Reinforcement: High tension steel wire

Cover: Red, chloroprene rubber, fire resistance, wear resistance, ozone & ageing resistance, oil resistance

Marking: continuous transfer tape:

"ROITER® BOP 5000 - FIRESAFE HOSE - WP 354 BAR / 5000 PSI - MADE IN ITALY" and additional embossed tape according to the Standard.



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
10	3/8	8	26	345	152	1,3	100
12,5	1/2	8,75	30	345	229	1,5	100
19	3/4	10	39	345	305	2,0	100
25	1	10	45	345	381	3,1	100
32	1.1/4	13	58	345	457	4,9	60
38	1.1/2	12,5	63	345	559	5,8	60
51	2	14,5	80	345	686	8,4	40

# Steam and hot water hoses

od ond

Hose for hot water and steam transfer in chemical, petrochemical and food industries. Used for cooling systems in steel or aluminum mills foundries and glass industries. Available with special covers resistant to heat.



VA 107 Steam hose - textile reinforcement 7 Bar



VA 318 BS Steam hose - steel reinforcement 18 Bar



VA 318 EN/ISO A Steam hose- steel reinforcement

18 Bar



VA 318 EN/ISOB
Steam hose - steel reinforcement
oil resistant cover
18 Bar



AC 107 WASHDOWN
Hot water/steam food quality
6 Bar



AC 210 - 120° C Hot water hose D 10 Bar



AC 510 - 120° C Hot water hose S&D 10 Bar



AC 112 GF
Industrial water cooling hose
12 Bar



AC 412 GF S & D water cooling hose 12 Bar



SI 210 Silicon delivery hose 10 Bar



SI 410 Silicon suction and delivery hose 10 Bar

## **VA 107 ISO**

#### STEAM HOSE TEXTILE REINFORCEMENT

Application: suitable for conveying low pressure saturated steam and hot water. Used in industry, refineries, workshops and process plants, suitable for tanks and pipelines steam cleaning in petrochemical industries. Available with red or black outer cover. Specifications: EN ISO 6134 TYPE 1 CLASS A

Temperature range: -40°C / +170°C (saturated steam) +95°C (hot water).

Safety factor: steam 10:1-hot water 3,15:1

**Tube:** synthetic rubber, black, smooth steam resistant.

Reinforcement: wrapped textile reinforcements Cover: synthetic rubber, red or black, resistant to ozone and weather, limited resistant to oil, fabric finish

impression, pin pricked.

Marking: continuous transfer tape "ROITER® VA 107 STEAM TEXTILE 170°C - WP 7 BAR - MADE IN ITALY".



Inter	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	6	25	S. 7 / W. 18	130	0,40	40
16	5/8	7	30	S. 7 / W. 18	160	0,60	40
19	3/4	7	33	S. 7 / W. 18	190	0,65	40
25	1	7,5	40	S. 7 / W. 18	250	0,87	40
32	1 1/4	8	48	S. 7 / W. 18	320	1,10	40
38	1 1/2	8	54	S. 7 / W. 18	380	1,35	40
51	2	9	69	S. 7 / W. 18	500	2,00	40

# **VA 318 BS**

# 3

#### STEAM HOSE STEEL REINFORCEMENT

Application: mandrel built steam hose, suitable for conveying high pressure saturated steam and hot water. Feature: electrically conductive: resistance R<10<sup>6</sup> Ohm. ATTENTION: use only suitable fittings (clamp fittings according to EN 14423:2016).

**ATTENTION:** superheated steam shortens considerably the service life of the hose.

For longer hose life, always drain after every use. **Specifications:** BS 5342:1985 TYPE 2 CLASS A.

Temperature range: -40°C / +210°C peaks up to 232°C (saturated steam). +120°C (hot water).

Safety factor: Steam 10:1 - Hot water 3,15:1

**Tube:** synthetic rubber, black, electrically conductive, smooth, resistant to saturated steam.

Reinforcement: double steel cord reinforcement.

**Cover:** synthetic rubber, red, or black on request, resistant to ozone and weather, fabric finish impression, pin pricked.

**Marking:** continuous transfer tape, red letters: "ROITER® VA 318 BS- WP 18 BAR 232°C - R < 10° Ohm - MADE IN ITALY", and continuous embossed tape according to BS 5342/2A



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5,5	24	S. 18 / W. 55	125	0,55	40
16	5/16	6	28	S. 18 / W. 55	155	0,60	40
19	3/4	6	31	S. 18 / W. 55	185	0,75	40
25	1	6	37	S. 18 / W. 55	240	0,95	40
32	1 1/4	7	46	S. 18 / W. 55	320	1,30	40
38	1 1/2	7	52	S. 18 / W. 55	380	1,60	40
51	2	7,5	66	S. 18 / W. 55	500	2,20	40
63	2 1/2	9	81	S. 18 / W. 55	630	3,20	40
76	3	9	94	S. 18 / W. 55	750	4,40	40
102	4	10	122	S. 18 / W. 55	1000	6,99	40

# **VA 318 A - SATSTEAM 232**

#### EN ISO 6134 2A - STEAM HOSE STEEL REINFORCEMENT

Application: suitable for conveying high pressure saturated steam at 232°C, up to WP 18 Bar.

Feature: used in petrochemical industries, and industrial applications in general.

ATTENTION: use only suitable fittings (clamp fittings according to EN 14423:2016).

ATTENTION: superheated steam shortens considerably the service life of the hose.

For longer life always drain after every use.

Standard approval: EN ISO 6134:2017 Type 2 Class A.

Temperature range: -40°C / +232°C

Safety factor: steam 10:1-hot water 3.15:1

Tube: synthetic rubber, black, electrically conductive, smooth

Reinforcement: double steel cord reinforcement Cover: synthetic rubber, red or black colour, resistant to

ozone and weather, cloth impression, pin pricked. Marking: continuous transfer tape, red letters: "ROITER® VA 318 EN ISO 2A - WP 18 BAR 232°C -MADE IN ITALY". and continuous embossed tape according to EN ISO 6134.



Interi	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	6	25	18	130	0,57	40
16	5/8	7	30	18	160	0,70	40
19	3/4	7	33	18	190	0,80	40
25	1	7,5	40	18	250	1,10	40
32	1 1/4	8	48	18	320	1,40	40
38	1 1/2	8	54	18	380	1,70	40
51	2	9	69	18	500	2,50	40
63	2 1/2	9	81	18	630	3,20	40
76	3	9	94	18	750	4,40	40

# **VA 318 B - SATSTEAM 232**

#### EN ISO 6134 2B - STEAM HOSE STEEL REINFORCEMENT

#### OIL RESISTANT COVER

Application: rubber hose for delivery of saturated steam at 232°C, up to WP of 18 Bar, with oil resistant cover.

Feature: used in petrochemical industries, and industrial applications in general.

ATTENTION: use only suitable fittings (clamp fittings according to EN 14423:2016).

ATTENTION: Superheated steam shortens considerably the service life of the hose!

For longer life, always drain after every use.

Standard approval: EN ISO 6134/17 Type 2 Class B.

Temperature range: -40°C / +232°C

Safety factor: Steam 10: 1. Hot water 3.15: 1

Tube: synthetic rubber, black, electrically conductive, smooth

Reinforcement: double steel cord reinforcement

Cover: synthetic rubber, black colour, oil resistant wrapped construction, fabric finish, pin pricked. Marking: continuous transfer tape, red letters: "ROITER® VA 318 EN ISO B -WP 18 BAR 232°C -MADE IN ITALY". and continuous embossed tape according to EN ISO 6134.



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	6,5	26	18	130	0,50	40
16	5/8	7	30	18	160	0,70	40
19	3/4	7	33	18	190	0,80	40
25	1	7,5	40	18	250	1,00	40
32	11/4	8	48	18	320	1,40	40
38	11/2	8	54	18	380	1,70	40
51	2	9	69	18	500	2,50	40
76	3	10	96	18	750	4,00	40

# **AC 107 WASHDOWN**



#### HOT WATER/STEAM HOSE FOOD QUALITY

Application: mandrel built delivery hose for steam cleaning and hot water washdown in dairies, creameries. used also as delivery hose for clean hot water mixed with steam and detergents. Used for washdown and sterilization in the food industry workshops.

Standard/approval: FDA title 21, art. 177.2600 for aqueous foods. Phthalate free. High resistance to many aggressive cleaning agents.

Temperature range: -40°C / +165°C (saturated steam), +95°C (hot water).

Safety factor: steam 10:1-hot water 3:1

**Tube:** white synthetic rubber food quality, resistant to cleaning agents, smooth.

Reinforcements: High strength synthetic plies

Cover: synthetic rubber, blue colour, resistant to heat and abrasion, wrapped fabric impression.

Marking: continuous transfer tape: "ROITER® AC 107 WASHDOWN FOOD QUALITY - WP 7 BAR - MADE IN ITALY".



Interna	al Diameter	Wall thickness	External Dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	S.7 / W.18	90	0,42	40
16	5/8	5	26	S.7 / W.18	100	0,50	40
19	3/4	5,5	30	S.7 / W.18	120	0,60	40
25	1	6	37	S.7 / W.18	160	0,80	40
32	11/4	7	46	S.7 / W.18	200	1,20	40
38	11/2	7	52	S.7 / W.18	240	1,63	40
51	2	8	67	S.7 / W.18	320	2,12	40

### AC 210 - 120°C HOT WATER HOSE - D



Application: mandrel built delivery hose for hot water mixed with steam (not saturated). Suitable for low pressure washer machines and for anti-freeze liquids. Commonly used for transfer of Ethylene glicol as antifreeze fluid or as a coolant or heat transfer agent. Note: Also available with tube and cover in white color rubber.

Temperature range: -40°C / +120°C.

Safety factor: 3:1

Tube: black smooth EPDM rubber compound

Reinforcement: multiple textile plies.

Cover: synthetic rubber, black, resistant to oil, ozone and

weather, wrapped finish, cloth impression.

Marking: continuous transfer tape, "ROITER® AC 210 - HOT WATER - T +120°C - WP 10 BAR- MADE IN ITALY".



Interr	nal dia	Wall thickness	External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	10	90	0,35	40
16	5/8	5	26	10	105	0,42	40
19	3/4	5,5	30	10	130	0,50	40
25	1	6	37	10	165	0,60	40
32	1 1/4	6	44	10	200	0,90	40
38	1 1/2	7	52	10	300	1,25	40
51	2	7	65	10	350	1,85	40
63,5	2 1/2	7	77,5	10	400	2,52	40
76	3	8	92	10	500	3,10	40
102	4	8	118	10	600	4,50	40

# AC 510 - 120°C

#### HOT WATER HOSE - S&D SEMI-CORRUGATED COVER

Application: mandrel built delivery hose for hot water mixed with steam (not saturated). Suitable for anti-freeze liquids. Extra flexible hose, thanks to the special corrugated

construction, and the helix wire reinforcement. Designed for cooling systems in industrial engines and power generators.

Temperature range: -40°C / +120°C.

Safety factor: 3:1

Tube: black smooth EPDM rubber compound Reinforcement: high tensile textile plies, helix wire

embedded.

Cover: synthetic rubber, black, semi-corrugated, resistant to oil, ozone and weather, wrapped finish, cloth impression.

Marking: continuous transfer tape, "ROITER® AC 510 -HOT WATER +120°C - WP 10 BAR - MADE IN ITALY".



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
19	3/4	6	31	10	100	0,80	40
25	1	6	37	10	125	0,90	40
32	1 1/4	6	44	10	150	1,07	40
38	1 1/2	7	52	10	200	1,20	40
51	2	7	65	10	250	2,00	40
63	2 1/2	7	77	10	400	2,60	40
76	3	8	92	10	500	3,30	40
102	4	8	118	10	650	5,60	40

## **AC 112 GF**

#### WATER COOLING GLASS FIBRE COATED HOSE

Application: mainly used as a cooling or hot water delivery hose in the iron and steel mill plants and glass

Feature: Vulcanised glass fabric cover protects against high external temperatures, radiation heat and sparks. On request:

AC 112 VCT - outer cover with VERMICULITE treatment. for higher radiation temperature resistance, (up to 800°C).

AC 112 SIL - outer cover made with special silicone impregnated glass fabric, excellent for the releasing and anti-stick properties.

AC 112 GGG - with multiple glass fabric cover.

AC 112 SPL - with outer metal wire spiral reinforcement, for additional protection against abrasion.

Temperature range: -40°C/+120°C, (+600°C radiation temperature).

Safety factor: 3:1

Tube: smooth, black (or white non-conductive) synthetic rubber, with special insulating properties and with excellent resistance to heat.

Reinforcement: textile wrapped high tensile fabrics Cover: Glass fiber braid, vulcanized with an internal layer of compound high temperature resistant and self extinguishing rubber. Resistant to occasional contact with molten materials.

Marking: none.



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil Iength
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	12	200	0,35	40
19	3/4	6	31	12	225	0,50	40
25	1	6,5	38	12	300	0,80	40
32	1 1/4	7,5	47	12	320	1,10	40
35	1 3/8	7,5	50	12	350	1,20	40
38	1 1/2	8	54	12	380	1,50	40
51	2	9	69	12	500	2,00	40
63,5	2 1/2	9	81,5	12	620	2,95	40
76	3	9	94	12	750	3,10	40
102	4	10	122	12	1000	5,10	40

# **AC 412 GF**

# 3

# WATER COOLING GLASS FIBRE COATED HOSE SPIRAL WIRE REINFORCED

**Application:** Suction & Delivery hose used for cooling water in very high ambient temperature, as steel mills, foundries, etc.

**Feature:** Vulcanised glass fabric cover protects against high external temperatures, radiation heat and sparks.

#### On request:

AC 412 VCT - outer cover with VERMICULITE treatment, for higher radiation temperature resistance, (up to 800°C).

AC 412 SIL - outer cover made with special silicone impregnated glass fabric, excellent for the releasing and anti-stick properties.

AC 412 GGG -with multiple glass fabric cover.

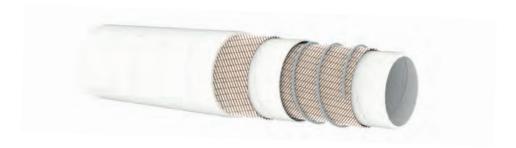
**Temperature range:** -40°C/+120°C, (+600°C radiation temperature).

#### Safety factor: 3:1

**Tube:** smooth, black (or white non-conductive) synthetic rubber, with special insulating properties and with excellent resistance to heat.

Reinforcement: Spiral wire, high tensile fabrics Cover: Glass fiber braid, vulcanized with an internal layer of compound, high temperature resistant.

Marking: None



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	12	200	0,40	40
19	3/4	6	31	12	225	0,50	40
25	1	6,5	38	12	300	0,80	40
32	1 1/4	7,5	47	12	320	1,10	40
35	1 3/8	7,5	50	12	350	1,20	40
38	1 1/2	8	54	12	380	1,50	40
51	2	9	69	12	500	2,00	40
63,5	2 1/2	9	81,5	12	620	2,95	40
76	3	9	94	12	750	3,10	40
102	4	10	122	12	1000	5,10	40

## SI 210

#### SILICONE HOSE - D

**Application:** Suitable for cooling and heating systems. Delivery hose for hot water and coolant flids, used in engine control systems, where resistance to continuous high temperatures is involved. Ideal for the automotive industry and for the cooling system of wind turbines. **Standard/approval:** According to EN 45545 and EU Directive 2002/95/FEC

**Feature:** Flame retardant and low smoke toxicity in case of fire. Excellent flexibility, and compression set. Good resistance to glycol, anti freeze or antirust liquids. Available in coils or straight lengths, or any special shape. Resists hardening, cracking, cold leaks, aging, and many chemicals. Ideal for extreme temperature and various pressure ranges where high performance leves are required.

#### Temperature range:

- SI 210 P -60°C / +200°C - SI 210 A -60°C / +250°C

Safety factor: 3:1

**Tube:** Silicone rubber red or white, smooth **Reinforcement:** textile wrapped polyester plies (SI 210 P) or aramidic (SI 210 A) reinforcements. **Cover:** Silicone rubber, red (R) or white (W), resistant to high temperatures and fire propagation. Resistant to UV, ozone and external environments. Other colors and diameters available on request.



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	13	120	0,30	40
16	5/8	5	26	13	120	0,35	40
19	3/4	5,5	30	13	180	0,43	40
25	1	5,5	36	10	200	0,58	40
32	1 1/4	5,5	43	10	225	0,70	40
38	1 1/2	6	50	10	250	0,85	40
51	2	6	63	10	280	1,00	40
63	3	6	75	10	350	1,30	40

# SI 410

#### SILICONE HOSE - S&D

Application: High temperature suction and delivery flexible hose. Suitable for cooling and heating systems. for hot water and coolant fluids, used in engine control systems, where resistance to continuous high temperatures is involved. Ideal in the automotive and for the cooling system of wind turbines.

Standard/approval: According to EN 45545 and EU Directive 2002/95/EEC

Feature: Flame retardant and low smoke toxicity in case of fire. Excellent flexibility, and compression set. Good resistance to glycol, anti freeze or antirust liquids. Other sizes and colour available on request.

#### Temperature range:

- SI 410 P -60°C / +200°C
- SI 410 A -60°C / +250°C

Safety factor: 3:1

Tube: Silicone rubber white or red, smooth,

Reinforcement: textile wrapped polyester plies (SI 410P) or aramidic (SI 410 A) reinforcements. Steel wire reinforcement or plastic spiral non conductive reinforcement, on request.

Cover: Silicone rubber, white (W) or red (R), resistant to high temperatures and fire propagation. Resistant to UV, ozone and external environmentals.



Interr	Internal dia		External dia	Working Pressure	Bending radius	Weight approx	Coil length
mm	inch	mm	mm	(max) bar	(min) mm	Kg/m	(max) m
13	1/2	5	23	10	90	0,50	20
19	5/8	5,5	30	10	100	0,62	20
25	3/4	5,5	36	10	150	0,74	20
32	1	5,5	43	10	160	0,80	20
38	1 1/4	6	50	10	200	1,10	20
51	1 1/2	6,5	64	10	260	1,70	20
63	2	7	77	10	350	2,15	20
76	3	7,5	91	10	400	2,80	20

# **DELTA® Transport system**

A suction and delivery hose for the hydraulic transport of abrasive materials, such as gypsum, ashes, bauxite, corundum, dolomite, ores, feldspar, waste glass, wood chips, industrial waste, coal, metallic powder, etc.



DELTA® - AB 510 Premium

Pneumatic transport of abrasive materials

10 Bar



DELTA® - AB 515

Pneumatic transport of abrasive materials

10 Bar



DELTA® - AB 520 Premium

Hydraulic transport of abrasive materials

10 Bar



DELTA® - AB 525

Hydraulic transport of abrasive materials

10 Bar



#### DELTA® - AB 530 Premium

Hydraulic transport of Chemical abrasive materials

10 Bar



#### DELTA® - AB 535

Hydraulic transport of Chemical abrasive materials

10 Bar



#### DELTA® - AB 540 Premium

Pneumatic & Hydraulic transport of Food like abrasive materials

10 Bar



#### DELTA® - AB 545

Pneumatic & Hydraulic transport of Food like abrasive materials

10 Bar

**DELTA®** material handling hose is a flexible modular system developed for easy integration into existing installations.

Since the setting up of the **DELTA®** transport system does not need much time, unnecessary downtimes are avoided and thus costs are reduced.

The right choice of elements of the **DELTA®** transport system, makes the transport of a wide range of media possible.

It is sufficient to have regular visual inspections; unlike steel pipes it is not necessary to have a protective coating when used outdoors.

All elements are easy to install. You do not need specially trained staff or special tools.

The metallic flange couplings are reusable. Required hose lengths can be cut on site.

Noise from dry goods transmitted through steel pipes can be significantly reduced when converting to the **DELTA® transport system**.

The energy absorbing characteristics of the rubber tube, greatly reduces noise levels, this is especially true on indoor applications, where noise is retained within the building.

In order to significantly extend service life, the hose can be rotated along it's axis, by loosening the flange bolts. Especially with dry media it is benefitial on bends, where the hose is subject to high levels of abrasion.

# **DELTA AB 510 - Premium**



#### PNEUMATIC TRANSPORT OF ABRASIVE MATERIALS

Application: The original Suction and delivery hose for the transport of abrasive media, with the premium long lasting rubber compounds.

A suction and delivery hose for the transport of abrasive materials, such as gypsum, ashes, bauxite, corundum, dolomite, ores, feldspar, waste glass, wood chips, industrial waste, coal, metallic

Temperature range: -35°C/+70°C

Safety factor: 3,2:1

**Tube:** NR, light tone, wear resistant and elastic, non conductive.

Reinforcement: Textile, steel wire helix.

**Cover:** CR Black, corrugated, resistant toabrasion, oil, weather andsea water, cloth impression, electrically conductive

Marking: continuous layline, red "ROITER® DELTA AB 510 PREMIUM - MADE IN ITALY".



Vacuum: -0.9 bar up to 203, others -0.5 bar

powder, etc.

Interi	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	40
82	3	16	114	10	2	350	7,5	40
102	4	15,5	133	10	2	500	8,0	40
114	4 1/2	13	162	10	4	600	10,5	40
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

### **DELTA AB 515**

# 3

#### PNEUMATIC TRANSPORT OF ABRASIVE MATERIALS

Application: A fuction and delivery hose for the hydraulic transport of abrasive materials, such as gypsum, ashes, bauxite, corundum, dolomite, ores, feldspar, waste glass, wood chips, industrial waste, coal. metallic powder. etc.

Temperature range: -35°C/+70°C

Safety factor: 3,2:1

Tube: NR, light tone, wear resistant and elastic,

non conductive.

Reinforcement: Textile steel wire helix.

**Cover:** EPDM black, corrugated, resistant to abrasion, weather and sea water, cloth impression,

electrically conductive.

Marking: continuous layline, red "ROITER® DELTA

AB 515 - MADE IN ITALY".



Vacuum: -0.9 bar up to 203, others -0.5 bar

Inter	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	40
82	3	16	114	10	2	350	7,5	40
102	4	15,5	133	10	2	500	8,0	40
114	4 1/2	13	162	10	4	600	10,5	40
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

# **DELTA AB 520- Premium**



#### HYDRAULIC TRANSPORT OF ABRASIVE MATERIALS

Application: The original Suction and delivery hose for the transport of abrasive media, with the Premium long lasting Rubber compounds Tube & Cover.

Premium suction and delivery hose for conveying abrasive materials, such as cement, sand, phosphates, quartz, dolomite, glass splinters, dry mixed animal food, grain, bark, wood shavings, etc. pneumatically and hydraulically.

Average wear of the tube 36 mm<sup>3</sup> (according to DIN ISO 4649:2014)

Temperature range: -35°C / +80°C

Safety factor: 3,2:1

Tube: NR/BR/SBR, antistatic abrasion-resistant.

Reinforcement: Textile, steel wire helix.

**Cover:** CR Black, corrugated, resistant to abrasion, weather and sea water, cloth impression,

electrically conductive.

Marking: continuous layline, blue "ROITER DELTA

AB 520 PREMIUM - MADE IN ITALY".



âVacuum: -0.9 bar up to 203, others -0.5 bar

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Inter	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght			
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m			
51	2	12	75	10	2	300	3,0	40			
82	3	16	114	10	2	350	7,5	40			
102	4	15,5	133	10	2	500	8,0	40			
114	4 1/2	13	162	10	4	600	10,5	40			
127	5	17,5	162	10	4	650	12,0	20			
152	6	18	188	10	4	750	14,0	20			
203	8	19	241	10	4	1750	18,0	12			
254	10	19	292	10	4	2000	22,0	12			
305	12	21,5	348	10	6	2500	28,0	12			
355	14	27	409	10	8	3000	37,0	12			
405	16	26,5	458	10	8	3500	47,0	12			
457	18	27,5	512	10	10	4500	55,0	12			

### **DELTA AB 525**

# 7

#### HYDRAULIC TRANSPORT OF ABRASIVE MATERIALS

**Application:** Premium suction and delivery hose for conveying abrasive materials, such as cement, sand, phosphates, quartz, dolomite, glass splinters, dry mixed animal food, grain, bark, wood shavings, etc. pneumatically and hydraulically. Average wear of the tube 50 mm3 (according to DIN ISO 4649:2014).

Temperature range: -35°C / + 80°C

Safety factor: 3,2:1

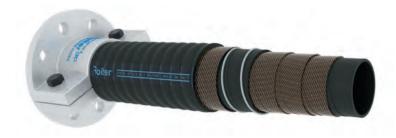
**Tube:** NR/BR/SBR, antistatic abrasion-resistant.

Reinforcement: Textile, steel wire helix.

Cover: EPDM Black corrugated, resistant to

abrasion, weather and sea water, cloth impression, electrically conductive.

Marking: continous layline, blue "ROITER DELTA AB 525 - MADE IN ITALY".



Vacuum: -0.9 bar up to 203, others -0.5 bar

Interi	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	40
82	3	16	114	10	2	350	7,5	40
102	4	15,5	133	10	2	500	8,0	40
114	4 1/2	13	162	10	4	600	10,5	40
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

# DELTA AB 530 - Premium CHEMICAL



### HYDRAULIC TRANSPORT OF ABRASIVE MATERIAL

Application: The original Suction and delivery hose for the transport of chemical abrasive media, with the premium long lasting rubber compounds.

A suction and delivery hose for conveying solid substances contained in liquids, especially corrosive substances, strong mineral acids and bases sulphure and phosphates, sea water & saline solutions, hypochlorites, alcohols, hydrofluoric acid, mineral oils and aliphatic hydrocarbons (up to 45%). Ideal for transfer of not refined acids containing abrasive particles.

Temperature range: -35°C / +125°C

Safety Factor: 3:1

Tube: CSM (Hypalon®) black conductive.

Reinforcement: Textile wrapped, steel wire helix.

**Cover: CR black** corrugated, resistant to abrasion, weather and sea water, cloth

impression.

Marking: continuous layline green colour: "ROITER DELTA AB 530 PREMIUM CHEMICAL -MADE IN ITALY"



Vacuum: -0.9 har up to 203, others -0.5 har

Inter	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	40
82	3	16	114	10	2	350	7,5	40
102	4	15,5	133	10	2	500	8,0	40
114	4 1/2	13	162	10	4	600	10,5	40
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

Please note: before using our products with new or untested media, or for applications that are not clearly indicated in the product information, written advice must be obtained from a specialist dealer or a Roiter application engineer. For safety reasons, all products must be inspected regularly for operational safety and replaced in the event of any damage (especially of the cover) or unusual signs of wear and tear. All products must be stored, handled and maintained in accordance with all our respective instructions and DIN 7716:1982. The information in our catalogue as well as each individual data sheet is subject to change at any time without notice since we are constantly developing and improving our products and due to constant technical developments after the latest release date of the catalogue and/or individual data sheets. In order to always have the latest product and safety information make sure you visit our website (www.roiter.com) regularly or contact one of our specialist dealers or a Roiter application engineer. All contracts with Roiter are exclusively subject to our general terms and conditions (available at www.roiter.com). Additional important general information about the range, choice and safe use of our products can be found on our website (www.roiter.com).

## **DELTA AB 535 CHEMICAL**



### HYDRAULIC TRANSPORT OF ABRASIVE MATERIAL

Application: A suction and delivery hose for conveying solid substances contained in liquids, especially corrosive substances, strong mineral acids and bases sulphure and phosphates, sea water & saline solutions, hypochlorites, alcohols, hydrofluoric acid, mineral oils and aliphatic hydrocarbons (up to 45%). Ideal for transfer of not refined acids containing abrasive particles.

Temperature range: -35 /+ 125°C

Safety Factor: 3:1

Tube: CSM (Hypalon®) black conductive.

**Reinforcement:** Textile wrapped, steel wire helix. **Cover:** EPDM blackcorrugated resistant to abrasion,

weather and sea water, cloth impression.

Marking: continuous layline, green

"ROITER® DELTA AB 535 CHEMICAL - MADE IN ITALY".



Vacuum: -0.9 bar up to 203, others -0.5 bar

Inter	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	40
82	3	16	114	10	2	350	7,5	40
102	4	15,5	133	10	2	500	8,0	40
114	4 1/2	13	162	10	4	600	10,5	40
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

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## **DELTA AB 540 - Premium**



# PNEUMATIC AND HYDRAULIC TRANSPORT OF SOLID AND DUST-LIKE FOOD STUFFS

Application: The original Suction and delivery hose for the transport of abrasive media, with the premium long lasting rubber compounds.

A suction and delivery hose for conveying solid and dust like food stuffs, such as animal feed, silo products, grain, light coloured plastic granulates and oil-laden substances, etc., pneumatically and hydraulically.

Temperature range: -35°C / + 80°C

Safety Factor: 3,2:1

Tube: NBR White, Food quality, antistatic, abrsion

resistant.

Reinforcement: Textile wrapped, steel wire helix.
Cover: CR black, corrugated, resistant to abrasion, oil, weather and sea water, cloth impression electrically conductive.

Marking: continuous layline, white "ROITER® DELTA AB 540 PREMIUM- NBR FOOD QUALITY - MADE IN ITALY"



Vacuum: -0.9 bar up to 203, others -0.5 bar

Inter	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	20
82	3	16	114	10	2	350	7,5	20
102	4	15,5	133	10	2	500	8,0	20
114	4 1/2	13	162	10	4	600	10,5	20
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

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## **DELTA AB 545**

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# PNEUMATIC AND HYDRAULIC TRANSPORT OF SOLID AND DUST-LIKE FOOD STUFFS

Application: A suction and delivery hose for conveying solid and dust-like food stuffs, such as animal feed, silo products, grain, light coloured plastic granulates and oil-laden substances, etc, pneumatically and hydraulically.

Temperature range: -35°C / +80°C

Safety Factor: 3,2:1

**Tube:** NBR White, Food quality, antistatic, abrasion resitant

**Reinforcement:** Textile, wrapped, steel wire helix. **Cover:** EPDM Black, corrugated, resist to abrasion, weather and sea water, cloth impression,

electrically conductive.

Marking: continuous layline, white "ROITER® DELTA AB 545 - NBR FOOD OUALITY - MADE IN ITALY".



Vacuum: -0.9 bar up to 203 others -0.5 bar

Interi	nal dia	Wall thickness	External dia	Work Pressure	Number of inserts	Bending radius	Weight approx	Coil lenght
mm	inch	mm	mm	(max) bar	(min) mm	(min) mm	Kg/m	(max) m
51	2	12	75	10	2	300	3,0	20
82	3	16	114	10	2	350	7,5	20
102	4	15,5	133	10	2	500	8,0	20
114	4 1/2	13	162	10	4	600	10,5	20
127	5	17,5	162	10	4	650	12,0	20
152	6	18	188	10	4	750	14,0	20
203	8	19	241	10	4	1750	18,0	12
254	10	19	292	10	4	2000	22,0	12
305	12	21,5	348	10	6	2500	28,0	12
355	14	27	409	10	8	3000	37,0	12
405	16	26,5	458	10	8	3500	47,0	12
457	18	27,5	512	10	10	4500	55,0	12

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## **DELTA®**



### TRANSPORT SYSTEM ELEMENTS

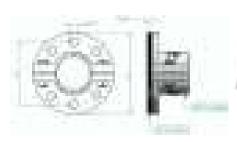
1. ROITER DELTA® Original Suction & Delivery Hose



#### 2. ROITER DELTA® COUPLINGS

#### 3.ROITER DELTA® GASKETS







DELTA AE		e General Data 625-AB530/535-AB	540/545	2	. DELTA Coup	ling	3.	DELTA Gaske	t
INNE	ER Diameter	OUTER Diameter	Length	F (External Diameter)	K (Center to Center)	Flange Holes	F (External Diameter)	K (Center to Center)	Thickness
mm	inch	mm	mt	mm	mm	nr/mm	mm	mm	mm
51	2	75	40	165	125	6 x 18	165	125	8
53; 60; 63,5	2,2/32; 2,3/8; 2,1/2	88	40	185	145	6 x 18	185	145	8
70	2,3/4	98	40	185	145	6 x 18	185	145	8
75; 82	3; 3,1/4	114	40	200	160	6 x 18	200	160	8
90; 102; 108	3,1/2; 4; 4,1/4	132	40	220	180	6 x 18	220	180	8
114; 127; 133	4,1/2; 5; 5,1/4	162	20	250	210	6 x 18	250	210	8
140	5,1/2	176	20	285	240	6 x 22	285	240	8
152	6	188	20	285	240	6 x 22	285	240	8
178	7	215	20	315	270	8 x 22	315	270	8
203	8	241	12	340	295	8 x 22	340	295	8
254	10	292	12	395	350	12 x 22	395	350	12
305	12	348	12	445	400	12 x 22	445	400	12
340	13,3/8	389	12	505	460	16 x 22	505	460	12
355	14	409	12	505	460	16 x 22	505	460	12
388	15,1/4	440	12	565	515	16 x 26	565	515	12
405	16	458	12	565	515	16 x 26	565	515	12
457	18	512	12	615	565	20 x 26	615	565	12

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# PERISTALTIC PERISTALTIC PUMP HOSES



Application: softwall rubber hose, especially designed to be used on peristaltic pumps. Designed to convey any type of fluid at any density, particularly suitable in case of pumping fluids that can't be contaminated, as happens using traditional pumps.

According to specific fluid to be conveyed, various type of Peristaltic pump hose can be available:

- food stuffs
- · fatty foods or oils:
- acids & solvents:
- · abrasive fluids

Temperature range: depending on type of compound.
Tube: NR black, NR FOOD Approved, EPDM, NBR electrically conductive, EPDM, HYPALON, VITON. Smooth, available with enlarged ends.

Reinforcement: textile wrapped, high tensile synthetic cord Cover: NR black, EPDM, NBR, cloth impression, abrasion resistant rubber. on request, grinded outside diameter.

Marking: on request.

**Notes:** Available with special rubber compounds for applications in chemical, pharmaceutical, food and beverage and building industries; oil resistant compounds are also available.

- Internal diameters, wall thickness and hose lenghts, always depends form type of pump and application. Please contact our Roiter Technical Department for the right choice of the hose.
- > Available in all sizes up to 152 mm internal diameter.
- All Peristaltic Pump Hose, are manufactured according to the customer requirements, and all hoses are supplied in application lenghts ready to be installed.
- > Peristaltic Pump Hoses, are available with grinded cover, rectified for extra precision and smoothness.
- Standard working pressures available form 5 to 15 bar, for higher pressures contact the Roiter Technical Department. Detailed data sheets available on request.



Principle of operation of a peristaltic pump: Peristaltic pumps are used to pump a wide variety of fluids. The fluid is contained inside the hose, which is installed inside the pump. The operating principle, called peristalsis, is based on the alternating phase compression and decompression of the tube wall, which has the effect of sucking the liquid and pushing the fluid contained inside. A bearing, or rotating roller, passes the length of the tube, creating a temporary seal between the suction and discharge sides of the pump. as the pump rotor rotates, this sealing pressure moves along the tube, forcing the liquid to advance towards the drain. When the pressure is released, the hose recovers to its original size, creating a vacuum that draws new fluid into the suction side of the pump. The combination of these suction and delivery principles results in a powerful self-priming positive displacement action.

**No contamination of the fluid:** The pumped liquid never comes into contact with any internal part of the pump because it is completely contained in the tube, also thanks to this principle, this makes the peristaltic pump an ideal pumping solution for hygienic and contamination-free solutions. Maintenance is also reduced, as the tube is the only consumable part, and can be easily replaced.

**Advantages of Peristaltic Pumps:** Each peristaltic pump is equipped with a flexible specific hose, with high abrasion resistance and easy transfer of product, high viscosity fluids, or density. Despite the large pumping capacity, the action of the pump is extremely delicate and this makes it suitable for pumping sensitive and delicate products, such as live fish in the fish farming sector. The pump flow rate is proportional to the rotation speed and the pipe diameter. It can therefore be used both, in laboratories or for mining applications.

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# PERISTALTIC PUMP HOSES



Application: The peristaltic pump hoses are specifically engineered for application on peristaltic pumps. Are designed and manufactured for long operational life and minimized cost.The peristaltic pump hoses are suitable to convey various fluids:

- 1) abrasive fluids
- 2) acids
- 3) liquid food
- 4) oily and fatty foods

in many type of industry, as Chemical, Food and Pharma. Mining and Fish indutries.

Feature: Extremely durable; High abrasion, ozone & weather resistance. The lowest possible friction between the hose and roller

Tube: Black and smooth rubber compound

Reinforcement: Multiply heavy duty synthetic cord

Cover: Black synthetic rubber; Wrapped

Temperature: -40°C to +100°C

**Note:** on request it is possible to grind the external diameter to specific diameters and tolerances.

#### AVAILABLE HOSE LINER MATERIALS

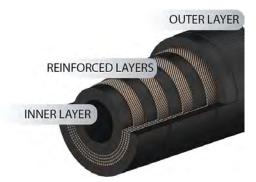
NATURAL RUBBER (NR): A general purpose material with excellent mechanical and abrasion resistant properties. Suitable for all water-based applications and mild acids, alkalis or oxidising agents.

Also available in the FOOD GRADE version.

Max. fluid temperature: 80 °C Min. temperature: -20 °C NITRILE (NBR): Acrylonitrile butadiene rubber. A durable materiai resistant to oils, greases, alkalis and detergents. Compliant to European BfR standards, this liner can also be used in a wide range of applications in the food industry.

Max. fluid temperature: 80 °C Min. temperature: -10 °C **EPDM:** Ethylene propylene diene rubber. Excellent chemical resistance, especially to ketones, esters, alcohols and concentrated acids.

Max. fluid temperature: 90 °C Min. temperature: -10 °C FKM (VITON®): FKM's or fluoroelastomers, are a family of elastomers with resistance to a broad range of chemicals combined with very good high temperature properties. Specialty types with differing monomer compositions and fluorine content are tailored for superior fluid resistance. Max. fluid temperature: 100 °C Min. temperature: -40 °C



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TYPE	MATERIAL	DESCRIPTION	ASSEMBLY	Recommended
SMS 1145	STAINLESS STEEL AISI 316	Fittings for food and beverage application, SMS couplings supplied with serrated or smooth hose shank with collar, SMS are not interchangeable with DIN 11851 couplings.	SMS can be crimped with serrated ferrule or assembled with EN 14420 safety clamps.	6 BAR
DIN 11851	STAINLESS STEEL AISI 316	Fittings for food and beverage application, they can be supplied with serrated or smoth hose shank with collar. SMS are not interchangeable with SMS couplings.	DIN 11851 can be crimped with serrated ferrule or assembled with EN 14420 safety clamps.	40 BAR
TRICLAMP	STAINLESS STEEL AISI 316	Symmetrical sanitary fittings for food and beverage application. Triclamp couplings can be supplied with serrated or smoth hose shank	TRICLAMP couplings can be crimped with serrated ferrule of assembled with EN 14420 safet clamps. TRICLAMP couplings are connected together with clamp rings.	
ENO GAROLLA	STAINLESS STEEL AISI 316	Symmetrical fittings for enological application, mainly used in Italy	ENO GAROLLA couplings can be crimped with serrated ferrule or assembled with EN 14420 safet clamps. ENO GAROLLA coupling are connected together with clamp rings	у
MACON	STAINLESS STEEL AISI 316	Symmetrical fittings for enological application, mainly used in France.	MACON couplings can be crimped with serrated ferrule or assembled with EN 14420 safet clamps.	
CAMLOCK	STAINLESS STEEL AISI 316 ALUMINIUM BRASS POLYPROPYLENE	Quick Connect coupling system used in a lot of industrial applications. Suitable to convey water, hot water, fuels, chemicals, foodstuffs and many others. No suitable to convey steam and gas.	CAMLOCKS can be assembled with crimping ferrule, clamps and BAND-IT. CAMLOCK EN 14420 can be as sembled with SAFETY CLAMP: 14440 / DIN 2817.	
GUILLEMIN	0741111 500 0755			





STAINLESS STEEL AISI 316 ALUMINIUM BRASS

Symmetric coupling system used to covey liquid food, chemicals, hydrocarbons, hot air, water and abrasive powder and granules.

GUILLEMIN can be assembled with SAFETY CLAMPS or crimping ferrules

16 BAR

## **COUPLINGS**



COUPLIN	65			
TYPE	MATERIAL	DESCRIPTION	ASSEMBLY Re	commende
STORZ	ALUMINIUM	Symmetric coupling system for transferring water, abrasive powder and granulates and in fire fighting application.	STORZ can be assembled with clamps, BAND-IT and crimping ferrule.	16 BAR
HOSE SHANK	STAINLESS STEEL AISI 316 BRASS	Threaded coupling system for fuel and chemical application. Male threaded or female threaded: - BSPP / BSPT - NPT - DIN2817	Hose shanks are available with serrated shank, assembled with ferrule by crimping, or smooth shank, assembled with safety clamps DIN 2817 / EN 14440.	25 BAR
TANKWAGEN 1420	STAINLESS STEEL AISI 316 BRASS	Rapid coupling system for fuel and chemical applications. Type MK (Female) Type VK (Male) Type Italian Rapid (CUNA)	Available with serrated shank or with BSPP screw	25 BAR
MORTAR	MALLEABLE IRON	Asymmetric coupling system similar to CAMLOCK for plaster machine.	MORTAR can be assembled with crimping ferrule. They can not be assembled with CAMLOCKS	50 BAR
SANDBLAST	MALLEABLE IRON BRASS NYLON	Symmetric coupling system used on blasting machine	SANDBLAST couplings are fixed with screw on the outer diameter of the hose.	40 BAR
CONCRETE	GALVANIZED STEEL CARBONITRITED	Symmetric coupling system used for concrete pumping: -VICTAULIC style -SCHWING style -SHOULDERED style	VICTAULIC fitting are assembled with crimping ferrules	100 BAR
FLANGES	CARBON STEEL STAINLESS STEEL 304/316	Used in many industrial of Marine applications. Available in UNI/ANSI/BS/JIS or other standards with different pressure rating. Supplied in Fix or Swivel version.	Can be assembled by swaging / crimping or built-in.	15/25/40 BAR

## **COUPLINGS**



JUUPLINGS						
TYPE	MATERIAL	DESCRIPTION	ASSEMBLY Re	ecommende		
TYPE B-BAUER	PLATED STEEL	Coupling system used for agricolture, construction and mining application	TYPE B-BAUER couplings are assembled with BAND-IT and clamps or swaged/crimped.	20 BAR		
TYPE C-CARDAN	PLATED STEEL	Asymmetric coupling system used for agricolture, construction and mining application	TYPE C-CARDAN / PERROT couplings are assembled with BAND-IT and clamps or swaged/crimped.	20 BAR		
XPRESS NFE 59-573	BRASS STAINLESS STEEL AISI 316	Symmetric coupling system used for air and water application.  Available with serrated shank, or male/female threaded BSPP	EXPRESS couplings are assembled with express clamps and worm gear clamps.  Can be crimped with ferrules.  Not interchangeable with GEKA.	10 BAR		
EU/US TYPE/GEKA	PLATED STEEL BRASS	Symmetric coupling system used for air and water application:  - EUROPEAN AIR DIN 3489 Plated steel  - US AIR COUPLINGS Plated steel  - GEKA Couplings Brass	Symmetric couplings are assembled with BAND-IT and worm gear clamps or by crimping ferrules. They are not interchangeable each others.  Can be crimped with ferrules.	10 BAR		
N14423/DIN 2826	STAINLESS STEEL PLATED STEEL BRASS	Coupling system for saturated steam up to 210 °C application.	EN 14423 / DIN 2826 are assembled with EN 14423 / DIN 2826 safety clamps.	18 BAR		
STEAM BOSS	CARBON STEEL	Three parts coupling system with hose shank or thread, for steam up to 210 °C application.	STEAM BOSS couplings are assembled with BOSS safety bolt clamps.	18 BAR		
DELTA® FLANGES	ALUMINIUM	Half shell coupling system with flanges suitable for material handling.	Half flanges are expecially designed to fit with the DELTA cover.	10 BAR		



Half flanges are expecially designed to fit with the DELTA cover. A gasket is put beetween the flanges and they are connected together with bolts.

## FERRULES & CLAMPS



### TYPE

#### SAFETY CLAMP

DIN 2817 / EN14430-3



#### MATERIAL

STAINLESS STEEL AISI 304

ALUMINIUM

CRIMPING FERRULES



GALVANIZED STEEL

STAINLESS STEEL

ALUMINIUM

SAFETY BOLT BOSS CLAMPS



PLATED STEEL

SAFETY CLAMPS

DIN 2826 / EN 14423







STAINLESS STEEL AISI 304

BRASS



MEDIUM	SBR	NR	EPDM	EPR	IIR	CR	NBR	CSM	FKM	PE-X	UHMWPE	PFA-FEP
Acetaldehyde	3	2	2	1			3	3	3	1	1	1
Acetic Acid 10%	. 2	2 2	1	1	2 1	2	3	2	2	1	1	1
Acetic Acid 50%	3	3	2	1	2	2	3	2	2	1	1	1
Acetic Acid, glacial	3	3	2	1	2	3	3	3	3	1	1	1
Acetic Anidride	3	3	2	2	2	3	3	2	3	1	1	1
Acetone	. 3	3	1	1		3	3	3	3	1	1	1
Acetone cyanohidrin		-	1	1	1 2	· -	-	·	-	1	1	1
Acetophenone			2	1	2				_	1	1	1
Acetyl Acetone	2	2	1	1	2	3			2	1	1	1
	3	3	·····	· · · · ·			į <u>.</u>	3	1	1	2	
Acetyl chloride Acetylene	1	1	1	2 1	2 1	3 2	1	1	1	1	1	
				3			į <u>†</u>		1			.
Acetylene dichloride		3	3	3	3			3	1	1	2	
Acqua regia		ļ <u>.</u>			ļ <u>.</u>		į	<u>.</u>	2	3	3	1/2
Acrolein		3		2	2 3		ļ	2	1	1	<u>2</u>	
Acrylonitrile Adipic acid			·	1	2		į	ļ	3	1	1	·
Air 160 °C		3	2	1	2	2	3	3	3	3	3	1
– Air 60°C	1	1	1	1	1	1	1	1	1	1	1	1
Air 60°C Allyl acetate Allyl Alcohol			-	-			1	<u>.</u>	2	1	1	1
Allyl Alcohol	. 1	1	1	1	1		1	1	1	1	1	1
Allyl bromide					ļ		ļ	ļ	2	1	2	1
Allyl chloride		ļ <u>.</u>			<u> </u>		ļ <u>.</u>	ļ <u>.</u>	2	1	2	1
Aluminium acetate Aluminium chloride		2	1	1		2	3	2		1	1	1
Aluminium chloride Aluminium fluoride		<u>-</u>	<u>†</u>	1	ļ <u>†</u>		į	ļ <u>†</u>	2	ļ	1	· · · · · · · · · · · · · · · · · · ·
Aluminium hydroxide		1		1	1 1	1 1	<u> </u>		2	1	1	1
Aluminium nitrate	1	1	1	1	1	1	1	1	1	1	1	1
Aluminium sulfate	. 1	1	1	1	1	. 1	1	1	1	1	1	1
Aminobenzene		-	-	-	-	-		-	-	1	2	1
Aminoethanol	2	2	1	1	1	i -	2	2	-	1	1	1
Ammonia anhydrous	3	3	3	3	3	3	3	3	-	2	2	1/2
Ammonia sol. 10%	2	2	1	1	11		ļ	1		1	1	
Ammonia sol. 50% Ammonium chloride	<u>f</u>	1	<u>†</u>	1	ļ <u>.</u>	1	ļ	1	7		1	·
Ammonium hidroxide		2	7	1	· · · · · · ·	1	ļ <u>.</u>	7	3	1	1	1
Ammonium nitrate	2	2	1	1	1	1	1	1	-	1	1	1
Ammonium phosphate	1	1	1	1	1	1	1	1	-	1	1	1
Ammonium sulphate Ammonium sulphite	1	1	1	1	1	1	1	1	-	1	1	1
Ammonium sulphite	. 1	1	1	1	1			1	-	1	1	1
Ammonium thiosulph.	1	1	1	1	1		į	11		1	1	1
Amyl acetate				3	2		ļ	ļ		1	1	
Amyl acetone Amyl alcohol			3	1			ļ	ļ		1 1	1	
Amyl bromide		3	2	2					-	1	1	1
Amyl bromide Amyl chloride	3	3	2	2	-		-	-	-	1	1	1
Amyl oleate	: -		-	-		-	1	-	-	1	1	1
Amyl phenol			-				ļ	ļ	1	1	1	1
Amyl phthalate		ļ <u>.</u>	2	1	2		į	.į	2	1	1	
Amylamine Amylamina	2	2	2	1	1		ļ	ļ <u>.</u>		1 1	1	1
Amylamine Anethole	<del>-</del>	3	3	3	2 3				7	7	3	1
Anethole Aniline Animal fate		3	2	1	2	1			2	1	1	.i
Animal fats	3	3	3	3	1/2	2	1	2	1	1	1	1
Antimony pentachlorid				-	· · · ·	· · · · · · · · · · · · · · · · · · ·		-	-	1	1	1
Animal fats Antimony pentachlorid Aromatic tar Arsenic acid			-	-	-		2		1	1	2	1
Arsenic acid	2	2	1	1	1	2	2	1	1	1	1	1
ASCOLDIC ACIO				1	-		ļ <u>.</u>	ļ		1	1	1
Asphalt 130°C							3	ļ	2	. 3	3	1/2
Asphalt 80°C ASTM FUEL A		3	3	3			1		1	1	1	1
ASTM FUEL B		3	3	3	3	3	1	5	1	<u>-</u>	1	1
ASTM FUEL C		3	3	3		. 3	1	3	1	2	2	1
ASTM OIL n*1	. 3	3	3	3	3	1	1	2	1	1	1	1
ASTM OIL n°2	. 3	3	3	3	. 3	2	1	2	1	1	1	1
ASTM OIL n*3		3	3	3	3	3	1	2	1	1	1	1
Banana oil	: 3	3	3	3	2	2	1	2	1	1	1	1
Barium carbonate Barium chloride		1	1	1	1	1	1	1	1	1	1	1
sarium chloride		1	1	1	1		1 1	1 1	1	1 1	1	
Barium hydroxide	1	1	1	1	1	1	1	1	1	1	1	1



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MEDIUM	SBR	NR	EPDM	EPR	IIR	CR	NBR	CSM	FKM	PE-X	UHMWPE	PFA-FEP
Barium sulfide	1	1	1	1	1	1	1	1	1	1	1	1
Beer Beet sugar liquors	2	1	2	2	1 1	2	2	2	2	1	1	1
Benzal chloride		i -		2	i -	· -	· · · · · · · · · · · · · · · · · · ·			1	1	1
Benzaldehyde	. 3	3	2	1	2		3			1	1	1
Benzene	3	3	3	3	3	3	3	3	11	1	2	1
Benzene carboxylic ac. Benzene sulfon ac.10%		ļ <u>.</u>			ļ <u>.</u>		ļ	ļ	1	1	1	1
Benzine petrol ether	3	3	3	3	3	3	1	3	1	1	1	1
Benzine petrol naphtha	: 3	3	3	3	3	. 3	1	3	1	1	1	1
Benzoic acid		3	3	3	3	3	ļ	2	11	1	1	1
Benzoic aldehyde Benzotrichloride	3	3	<u>2</u>	1	2		ļ	ļ	ļ	1 7	1	1
Benzyl acetate		3	3	2	2	1 -	· · · · · · · · · · · · · · · · · · ·	-	3	1	2	1
Benzyl alcohol	. 3	3	3	2	3	. 3			1	1	1	1
Benzyl chloride		ļ		2	ļ		ļ	ļ	2	1	2	1
Bichromate of soda Black sulphate liquor		ļ	ļ	2	ļ <u>.</u>	4	ļ	ļ	ļ <u>.</u>	1 1	1	1
Bleach (2-12% clorine)		ļ		2	i	1 -	ļ <u>.</u>	ļ	2	1	2	1
Bordeaux mixture			1	1	1	Ĭ	Ĭ	1	1	1	1	1
Boric acid	1	ļ	1	1	1	1	ļ	1	1	1	1	1
Brine	1	11	1	1	1	1	ļ	11	1	1	1	1/2
Bromic acid Bromine	. 3	3	3	3	3	3	3	3	<del>/</del>	3	3	1/2
Bromobenzene	3	3	3	. 3	3	3	3	3	2	. 3	3	1/2
Bromochloromethane	3	3	3	2		3	3			2	2	1
Bromoethane	3	3	3	ļ <u>.</u>	ļ <u>.</u>	<u>.</u>	3	ļ <u>.</u>	ļ <u>.</u>	ļ		1
Bromotoluene Bunker oil	3	3	3		3	3	1	3	2		1	1
Butadiene	3	3	3	3	3	3	3	3	2	1	1	1
Butane	3	3	3	2	2	2	1	2	1	1	1	1
Butanoic acid		ļ <u>.</u>		2	ļ <u>.</u>		ļ <u>.</u>	ļ	1	1		
Butanol Butanone	1	ļ <u>1</u>	1	ļ <u>1</u>	11	1	11	ļ <u>1</u>	ļ <u>1</u>	1 1	1	1
Butoxiethanol		-	-	1	ļ	1 -	-	-		1		1
Butyl acetate	3	3		2	2				3	1	1	1
Butyl acrylate	3	3	3	3	3	3	ļ	3	3	1	2	1
Butyl alcohol Butyl aldehyde		ļ <u>†</u>	2	ļ <u>†</u>			ļ <u>†</u>	ļ <u>t</u>	ļ <u>t</u>	ļ <u>†</u>	1	1
Butyl amine	-	-	2	1	2	-	2	-	ē -	1	1	1
Butyl benzene									1	1	1	1
Butyl benzoate		ļ <u>.</u>	ļ <u>.</u>	2	ļ <u>.</u>	ļ <u>.</u>	ļ <u>.</u>	ļ <u>.</u>	1	1		1
Butyl bromide Butyl butyrate									<u>+</u>			
Butyl carbitol	3	3	2	1	-	-	-	3	1	1	1	1
Butyl cellosolve	: 3	3	2	1	2	2	3	2	3	1	1	1
Butyl chloride	3	3	3	ļ	ļ	3	3	ļ	2	2		1
Butyl ether Butyl ether acetaldehy				1	, , ,	· · · · · · ·	<u>5</u>	į	į <u>.</u>	1	<u>+</u>	1
Butyl ethil ether	. 3	3	i	2	<del></del>		. 3	3		1		1
Butyl glicol		[	2	1	į		Į	[		1	1	1
Butyl oleate		3		2	2		3	į	11	11		11
Butyl Phenol Butyl phthalate		ļ <u>.</u>	ļ		7	4	ļ <u>.</u>	ļ	1 2	1 1	1	1
Butyl phthalate Butyl stearate	3	3	3	3	3		2	3	3	1	1	1
Butylene		: _ : _	3	3		3	2		1		:	1
Butyraldehyde	3	3	2	1	2		3	ļī	3	1	1	1
Butyric acid	3	3		22	ļ <u>.</u>		3	ļ <u>.</u>	22	1 1	1	1 1
Butyric anhydride Cadmium acetate	3	3	2	2			į	<del></del>		1	1	1
Calcium acetate	3	3	2	1	2	2	1	3	3	1	1	1
Calcium aluminate	1	1	1	1	ļ	1	ļ	1	1	1	1	1
Calcium Bichromate			2	1	2	<u>.</u>	į <u>.</u>	11	ļ <u>.</u>	1 1		1
Calcium bisulphite Calcium carbonate	1	1	1	1	1	1	1	1	1	1	1	1
Calcium chloride	1	1	1	1	1	1	1	1	1	1	1	1
Calcium hydroxide	2	1	1	1	1			2	1	1	1	1
Calcium hypochlorite	3	3	2	1	2	ļ <u>.</u>	3	ļ <u>.</u>	<u></u>	1	11	1
Calcium nitrate	: 1	: 1	1	1	: 1	: 1	1	1	1	1	. 1	1



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MEDIUM	SBR	÷ 1	NR	EPDN	1	EPR	: 111	R	CR	NBR	CSM	FI	KM	PE	-x	UHMW	PE	PFA	-FEP
Calcium sulfide	1			11		1					1		1	1 1	<u>.</u>	1		į	1
Calcium sulphate	. 1			1		1	1		1		1		1	ļ	<u>.</u>	1		ļ	1
Caprylic acid Carbamide			3	ļ		<u>/</u>							<u>.</u>	ļ		1		ļ	 1
Carbitol						1	2		2	-	-		-	1	i	1		1	1
Carbolic acid phenol			-			2	2		-	-	-		1	1	L	1			1
Carbon dioxide	1		1	1		1			1	1	1		1	11	l .	1		1	1
Carbon disulfide	3		3	3		3							1	ļ2	) 	2		ļ	2
Carbon tetrachloride			3	3		3			3				1	ļ		2		ļ	1
Carbon tetrafluoride Carbonic acid			i	<u> </u>			<u>1</u>			ļ <u>.</u>			<u>.</u>	ļ		ļ		ļ	‡ 1
Castor oil	2		-	· · · · · · · · · · · · · · · · · · ·		-			1	1	1		1	1 1	i	1			1
Caustic potash	2		1	1		1	1		2	2	-		-	1		1		1	1
Caustic soda	2		1	1		1	. 1		2	2				1 1		1		1	1
Cellosolve				2		1				2				ļ1	<u>.</u>	1		į	1
Cellosolve acetate			3	ļ <u>.</u>		2	2			ļ <u>.</u>				ļ		11		ļ	1
Chlorinated solvents Chlorine (dry)			3	į <u></u>			<u>.</u>		3		3		† 1	ļ		<u> </u>		1	/2
Chlorine (wet)	3	<u>i</u>	 3	3		3	3		3	3	3		†1		· · · · · · · · · · · · · · · · · · ·	2		i	/. <del>*</del> 1
Chlorine trifluoride	3		3	. 3		3	3		3	3	3		1		)	2			1
Chloroacetic acid	. 3		3	2		1	. 2						3	1		1			1
Chloroacetone	3		3	2		1	. 2						3	1	<u>.</u>	1		ļ	1
Chlorobenzene	3		3	3		3	3		3	3			1	ļ		1		ļ	1
Chlorobenzol Chlorobromomethane			2				·			ļ <u>.</u>			±	ļ		1 1		ļ	 1
Chlorobutane	3		3	3									ī 1		i	2		į	 1
Chloroform	3	· · · · · · · · · · · · · · · · · · ·	3	·		-	-		-	-	-		1	2	)	2		1	1
Chloropentane	. 3		3	. 3		3	. 3		3	-	-		1	1	L	1		1	1
Chiorosultonic acid	. 3		3	. 3		3	3		3	3	3		3			3		1	/2
Chlorotoluene	3		3			3	3		3	3			2	ļ	) 	3			/2
Chrome plating solutio Chromic acid			<u></u>	ļ					-	ļ <u>.</u>			1	ļ				ļ	1
Chromosulfuric acid	3		3	. 3			1		3	3	3		÷	ļ	)	3		ļ	 1
Citric acid	1			1			1		1	1	1		-	1	L	1			1
Coal oil	3		3	3		3	3		3	1	3		1	11	l .	1		1	1
Coal tar	. 3		3	3		3	3		3	1	3		1	ļ1	<u> </u>	1		į	1
Coconut oil			3	<u>3</u>		3	2		3	1				ļ		11		ļ	1
Coke oven gas Copper chloride			3	······································		1	· · · · · · · · · · · · · · · · · · ·	١	1		1		‡ 1	ļ		ļ		ļ	‡ 1
Copper cyanide			2	1		1			1	· · · · · ·	1		† 1	1	i	1		· · · · · · · · · · · · · · · · · · ·	 1
Copper hydrate			-	-		1	. 1		-		2		-	1	l	1		1	1
Copper hydroxide				2		1	. 1		-	·	2			1 1		1		1	1
Copper nitrate	1		2	ļ <u>1</u>		1	1		1		1		1	1		1		ļ	1
Copper sulphate			<u> </u>	<u> </u>			ļ <u>1</u>		1	ļ <u>.</u>	11		1	ļ		11		į	1
Corn oil Cottonseed oil			3						<del>-</del>		··[·····		† 1	ļ		1		ļ	 1
Creosote		· · · · · · · · · · · · · · · · · · ·	3	3		3	3		-		-		1	1	l	1		1	1
Cresols	3		3	3		3	3		3	1			1	1		1			1
Cresylic acid			3	3		3	3		3	ļī			1	į1		1		ļ	1
Crotonaldehyde			3	2		1	2		3	ļ <u>.</u>			3	ļ		1		ļ	1
Crude oil Cumene			3	3		3			3	,			±	ļ		1		ļ	 1
Cumene Cupric carbonate	2		۲ 2	1		1	1		1	1	1		† 1	1	i	1			1
Cupric nitrate	1		2	1		1	. 1		1	1	1		1	1		1			1
Cupric sulphate	1		2	1		1	. 1		1	1	1		1	] 1		1			1
Cutting oil	3		3	3		3			2	1			1	1		1		ļ	1
Cycloexane	3		3	3		3	.ļī			1			-	ļ		11		ļ	1
Cycloexanol Cycloexanone			<u></u>	<u> </u>			ļ		3				÷	ļ		1		ļ	1
Cyclopentane	3		 3	3		<del></del>	3		3	1 - 1	3		۲ 1	1 1		1		· · · · · · · · · · · · · · · · · · ·	1
Cyclopentanol	. 3		3	2		1	i -			1	<u>-</u>		2	1	L	1			1
Cyclopentanone	. 3		3			2			-	Ĭ			3	1	L	1			1
Decahydronaphtalene				į <u>.</u>											L	1			1
Decalin			3	3		3	3		3	3	3		1	ļ	<u>.</u>	1		ļ	1
Decanol Decal alcohol			<u>.</u>	2		1	2			11			<i>4</i>	ļ		11		ļ	1
Decyl alcohol Decyl aldehyde			÷	÷		1				ļ <u>.</u>			- 2	ļ		1		ļ	† 1
Decyl butyl phthalate	3		3	·····		1	1		-	2	-		2	1	i	1			1
Decyl carbinol				· · · · · · · · · · · · · · · · · · ·														· · · · · · · · · · · · · · · · · · ·	4



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MEDIUM	SBR	NR	EPDM	EPR	IIR	CR	NBR	CSM	FKM	PE-X	UHMWPE	PFA-FEP
MEDIUM  Denatured alcohol Detergents (water) Developer sel. (photo) Diacetone alcohol Diamyl naphtalene Diamyl Aphenol Diamyl Aphenol Diamylamine Diamylene Dibernyl ether Dibromobenzene Dibromobenzene Dibtyl amine Dibutyl amine Dibutyl ether	1	1 2	1	1	1	1 2	-	1	2	1	1	1
Detergents (water)	2	. 2	1	1	1	2	1	-	1	1	1	1
Developer sol. (photo)	: 2	. 2		<u>:</u>	. 2	: 1	1	1 1	-	1	1	: 1
Diacetone alcohol	2	2	ļ	1	1		-	2	2	1	1	1
Diamyl naphtalene	3								2	1	1	1
Diamyl Phenol		3	3		.i		ļ	į	1	1	ļ <u>1</u>	
Diamylamine				1		3	ļ	[		1	<u></u>	
Diamylene		3	3	ļ <u>.</u>	į <u>į</u> .		ļ		1	1	ļ	
Dibromohonzono		·•••••••••••••••••••••••••••••••••••••	·	2 3			ļ <u>.</u>	ļ		1		·
Dibromoethane				3			3			1		·
Dibutyl amine		•	ţ	2	3 3						!····	1
Dibutyl ether		•	ţ	÷	······			•		1	1	1
Dibutyl Phthalate	3	3	·	2			3	3	-	1	1	1 1
Dibutyl sebacate	3	. 3	-	1	2			3	-	1	1	1
Dicalcium phosphate	1	1	1	1	1	1	1	1	1	1	1	1
Dichloroacetic acid	3	3	1	2	-	3	3	3	3	1	1	1
Dichlorobenzene	3	. 3	3	3	. 3	. 3	3	3	1	1	1	1
Dichlorobutane	3	. 3	3	3	3	3	-	3	1	1	-	1
Dichlorodifluorometh.	. 3	3	3	3	3	. 3	3	3	2		_	1
Dibutyl amine Dibutyl ether Dibutyl ether Dibutyl Phthalate Dibutyl Sebacate Dibutyl Sebacate Dibutyl Sebacate Dibutyl Sebacate Dibutyl Sebacate Dichlorobenzene Dichlorobenzene Dichlorobenzene Dichlorodifluorometh Dichlorodifluorometh Dichlorodifluorometh Dichloroethyl ether Dichloroethyl ether Dichloromethane Dichloromethane Dichloromethane Dichloropentane Dichloropentane Dichloropentane Dichloropentane Dichloropentane Diesel oil Diesel oil Diethyl carbinol Diethyl carbinol Diethyl carbinol Diethyl ether	. 3	. 3	3	3	3	. 3			1	1	1	1
Dichloroethyl ether	. 3	3	3		3	. 3	3	3		1	1	1
Dichloroethylene	3	: 3	3	: 3	. 3	. 3	. 3	3	1	2	2	: 1
Dichlorohexane	. 3	3	3	3	3	. 3	3	ļ	1	1	1	1
Dichloromethane	: 3	: 3	3	. 3	3	: 3	3	-	1	1	1	1
Dichloropropane	3		3	33	3	3	3	į	1	1	ļ	1
Dichloropropene	3		3	3	3	3	3	ļ	1	2	2	
Diclhoropentane		. 3	3		3		3		1	1		
Diesel oil		. 3					1	ļ <u>.</u>	1	1	1	
Dietnanoiamine			ļ	<u>†</u>	1			2		1		
Dietnyi carbinoi			ļ	.it	1		ļ			1		
Diethyl kotono		· • · · · · · · · · · · · · · · · · · ·	į	· · · · · · · · · · · · · · · · · · ·	ļ <u>.</u>		ļ	ļ		1	ļ <u>†</u>	
Diethyl ovalate			·	ļ <u>†</u>	1					1	1	·
Diethyl ohthalate			·····	1	· · · · · · · · · · ·		7			1	1	1
Diethyl sebacate			·····	1	2	3	<u>.</u>	· · · · · · · · · · · · · · · · · · ·		1	1	1
Diethyl sul fate		• • • • • • • • • • • • • • • • • • • •	1	2	· · · · · · · · ·		·····	1	-	1		1 1
Diethyl carbinol Diethyl ether Diethyl ketone Diethyl oxolate Diethyl oxolate Diethyl phthalate Diethyl sebacate Diethyl sebacate Diethyl sebacate Diethyl sebacate Diethyl sebacate Diethyl sebacate Diethylamine Diethylamine Diethylemine Diethylemine Diethylemine Diethylemine	2	2	2	1	2	·····	: -	· · · · · · · · · · · · · · · · · · ·	-	1	1	1
Diethylamine	. 2	2	1	1	. 1	2	2	2	-	1	1	1
Diethylbenzene	3	3	3	3	3	3	-	-	1	1	1	1
Diethylene glicol	1	. 1	1	1	. 1	1	1	1	1	1	1	1
Dihydroxidietylether		-	1	1	1	-	-	1	-	1	1	1
Diisobutyl ketone	-	-	2	. 1	-		-	-	-	1	1	1
Diisodecyl phthalate	3	3	2	1	1		3		3	1	1	1
Diisooctyl adipate	. 3	3	2	1	1		3		3	1	1	1
Diisooctyl phthalate	3	3	2	1	1		3	į	3	1	1	1
Diisopropyl amine	2	2	Į	1	1		-	2		1	1	1
Dimethyl amine	2	2	2	1	1		2			1	1	1
Dimethyl benzene	3	. 3	3	3	. 3	3	3	3	1	1	1	1
Dimetnyl carbinol			1					1	3	1	1	
Dimethyl formamide		3	ļ	2			ļ	ļ	3	1	ļ <u>†</u>	
Dimethyl ketone			ļ	<u>/</u>	2			ļ		1	1	1
Diethylene giscol Dihydroxidietylether Diisobutyl ketone Diisodecyl phthalate Diisocytyl phthalate Diisocytyl phthalate Diisocytyl phthalate Diisocytyl phthalate Diisocytyl adipate Diimethyl amine Diimethyl benzene Diimethyl ether Diimethyl formamide Diimethyl formamide Diimethyl phenol Diimethyl phenol Diimethyl phthalate Diimethyl sulfoxyde Diintrobenzene		÷	<u> </u>	<u> </u>	-				1	1		ļ <u>†</u>
Dimethyl phenor				<u></u>	3				7	1	ļ	ļ <u>†</u>
Dimethyl sul fate			ļ	· · · · · · · · · · · · · · · · · · ·			ļ		····-	1	1	· · · · · · · · · · · · · · · · · · ·
Dimethyl sulfoxyde			<u> </u>	· · · · · · · · · · · · · · · · · · ·	1		l	1		1	1	1 1
Dinitrobenzene		. 3	······	2	2		-	-	1	1	1	1
Dioctyl adipate		. 3	-	1	1	-	2	-	2	1	1	1
Dioctyl phthalate	3	3	-	1	1	····	-	-	2	1	1	1
Dioctyl adipate Dioctyl phthalate Dioxane Dioxane Dioxolane	3	. 3	2	2	2	-	3		3	1	1	1
Dioxolane	3	3	3	2	3	-	-	-	3	1	1	1
	3	. 3	-	-	-		-	-	1	-	-	1
Diphenyl phthalate Dipropylamine	3	3	<u> </u>	1			<u>-</u>	-	-	1	1	1
Dipropylamine	. 2	2	2	1	1		2	2	-	1	1	1
Dipropylene glicol	1	1	1	1	1		1	1	1	1	1	1
Dipropylene glicol Disodium phosphate	1	1	1	1	1		1	1		1	1	1
Divinyl benzene Dodecyl benzene	3	. 3	3	3	3	3	3	3	1	1	1	1
Dodecyl benzene	3	3	3	3	3	3	3	3	1	1	1	1



"1" = GOOD. "2"	=SHORT SERVICE LIFE	"3" = NOT GOOD	"-" = NO INFORMATION

MEDIUM	: si	BR	. N	IR	ED	DM	EF	)D		R	С	0	. NB	R	cs	м	FK	м	PE	Υ	LIHM	IWPE	PF/	A-FEP
Downer		3		3		3		3		3		-	2		~		1		- 1		. 01111	1		1
Dowtherm A and E Dry cleaning fluids Ethanol		3		3		ĭ 3				3		3	3					i L	1			- 1		1
Dry cleaning fluids		-				- -	i		·	-		 -	2				1	ī				- -	1	1
Ethanol		1		1		1		L		1	1	i	1		1		. 2	2	1			1		1
Ethanol amine		2		2		1		L		1	2	2	2			3	3	3	1			1	-	1
Ethanol amine Ethyl acetate		3		3		-		2		2		3	3		3	3	3	3	1			1		1
Ethyl acetoacetate Ethyl acetoace Ethyl acetone Ethyl acrylate Ethyl acrylate		3		3		-		2		2		3	3		3	3	3	3	1			1	1	1
Ethyl acetone		3		3		-		L		2		3	3		3	3	3	3	1			1	1	1
Ethyl acrylate		3		3		-		2		2	3	3	. 3		3	}	3	3	2	!	[	1	1	1
Ethyl Al dichloride Ethyl aldehyde Ethyl amine		3	į	3		- - -	į		Į	-							2	·	1		ļ	1		1
Ethyl aldehyde	.]	-	Į	-		2	į1	L	Į	1		- 	ļ				3	3	1		: :	1		1
Ethyl amine		-	ļ	-		2 3 3	11	L		1	2	2	ļ						1		ļ	1		1
Ethyl benzene	.]	3	į	3		3	į	3	[	3		3	2/ 2/	3				L	1		<u>.</u>	1	į	1
Ethyl benzene Ethyl bromide Ethyl bromide	1,	3	įi	3		3	į	3	įi	3		3					1	l 	1			1		1
Ethyl butyl acetate Ethyl butyl alcohol		3	ļ	3		_	1/	2	11	/2 1 1 /2			ļ				<u>3</u>		1		į	1		1
Ethyl butyl alcohol	1	<u>/</u> 2	1,			1 feb	[]	L	ļ	1			1/	۷	]			<u>.</u>	]	·	ļ	1		1
Ethyl butyl amine Ethyl butyl ketone	.ļ	<u>.</u>	ļ		01-	тер 2				/>								<u>.</u>				1	ļ	1
Falso I Louis and a	.ii	<u>.</u>	į	· · · · · ·		<del>.</del>			ļ <del></del>	/			ļ					·		·	ļ			
Ethyl cellulose	· [ · · · · · · · ]							'2 '2 '2 '3	ļ	,							····	<u>.</u>		·	}	† 1	·	
Ethyl chloride	· [			 3		2 /3	1/	 /3	<u>ا</u> ۔۔۔۔ :	2 /3		·	ļ <u>.</u>		·		17	, '2		·	·····	† 1	·	1
Ethyl cellulose Ethyl chloride Ethyl dichloride				3		:		<u></u>		Ţ							1/	<u>,</u>			ļ	† 1	ļ	1
Ethyl ether	•						ļ	· · · · · ·	·····				· · · · · ·				: <u>f</u>				·····	÷		1
Ethyl formate	•	3		 3					·····	,		,	·····				•				<u> </u>	÷	·	1
Ethyl indide	· [	ī 3	į	3			ļ		į								·	· · · · · · ·			}	† 2	·	1
Ethyl phthalate		-						/3	·····								· · · · · · · · · · ·					1	·	1
Ethylbutyraldehyde	•	3	i	3			2 <i>)</i>		ļ	1			· · · · · ·								· · · · · · · · ·	† 1	·	1
	2	/3	2	/3				2		,			3								· · · · · · · · ·	† 1	·	1
Ethylene diamine		7	2,	,	1	/2	1	i		1	1	 I	·····		7		3		1			1	·	1
Ethylene dibromide	•	3		3		/2 3	2,	/3		3		3	-				1/	7			·	- 2	÷	1
Ethylene dichloride	1			3		3		 3		3			-				1/	 /2				2	1	1
Ethylene glycol		1		1		1				1		1			1		1		1			1		1
Ethylene oxide gas		-				3		3					-				3	3	1			1		1
Fatty acids				3		3		3		3	7.	/3	2/	3		3	. 1		1		:	1	1	1
Ethylene chlorohydrine Ethylene diamine Ethylene dibromide Ethylene dibromide Ethylene glycol Ethylene oxide gas Ethylene oxide gas Farty acids Ferric bromide Ferric oxide Ferric directione		1		1		1	: 1		: .	1		-	-		1		1	Ĺ	1			1		1
Ferric chloride		1		1		1		Ĺ		1 1		-	1		1		1	Ĺ	1	-		1	1	1
Ferric nitrate		1		1		1		L		1	1	1	1		1		1	Ĺ	1		•	1	Ī	1
Ferric sulfate Ferrous acetate Ferrous chloride		1		1		1		L		1 :		l	1		1		1	Ĺ	1			1	i	1
Ferrous acetate		3		3		2	1,	/2	1,	/2			1		3	1	3	3	1			1	1	1
Ferrous chloride			1			1	1 1	L		1	1	1	1		1		1	L	1		:	1		1
Ferrous cnioriae Ferrous hydroxide Ferrous sulfate Fluoboric acid Fluorine gas	2,	/3 1	2,	/3	1	/2	1	L	i	1			ļ		2	! 	2	·	1		<u>.</u>	1		1
Ferrous sulfate		1	į	1		1	įi	L	į	1		l	1/	2				L			į	1	į	1
Fluoboric acid		2	ļ	2		1	1	<u> </u>	Į	1		2	ļ		1		2	·	1			1		1
Fluorine gas		3	ļ	3		3	ļ	3	Į	3		3	3		3		1/	2	1		<u>.</u>	1		1/2
		-	į			-	į		Į				ļ							·	ļ	1	į	1
Fluosilicic acid		2	į	2		1	į	L	į	1			ļ <u>.</u>		1				1		ļ	1		1
Formaldehyde		<u>.</u>	ļ	<u>.</u>		- 	į	L	[]	1		5			]		į <u>†</u>		]	·	ļ	1		1
Fluosilicia acid Formaldehyde Formalin Formic acid		<u>-</u>	į			1	ļ	L		1			ļ				·					<u>.</u>		1
	4	<u>د</u>	ļ	2		±	ļ		į			- 	······		····		· · · · · · · · · · · · · · · · · · ·			·	·····	1	·	1
		<u>.</u>		3		? 3		į		į		<u>.</u>					<u>.</u>				}	<u>-</u>		 1
Freon SO2	• • • • • • • • • • • • • • • • • • • •	- -	ļ						•				•				•			·	}	1	ţ	1
Freon SO2 Fuel B (ASTM) Fuel C (ASTM)		3	ļ			- 3			ļ	3	2	·	1				·			·	<u> </u>	÷	·	1
Fuel C (ASTM)	•					3							1								·····	÷	÷	1
Fuel oil		3		3		3		 3					1		3			ī			}i	- 1	·	1
Fuel oil Furan	1	3		3		í 3				3			1		3		<u>.</u>			·	<u> </u>	- 1	·	1
Euran Furfuryl alcohol Gallic acid Gas, coke Gas, louifled petrol Guiconic acid Gluconic acid Glucose Glycerine		3		3						2		3	. 3				3	3	1		i	1	1	1
Furfuryl alcohol		3		3		3		2		2		3							1			1	-	1
Gallic acid		-		-		2				2		3	3		3		3		1			1		1
Gas, coke	1	3		3						-			2		1						: · · · · · · · · · · · · · · · · · · ·	-	· · · · · · · · · · · · · · · · · · ·	1
Gas, liquified petrol		3		3		3		3		3		3	2				· · · · ·		1		i	1	1	1
Gasoline		3		3		3		3		3		 -	1				. 1		1			1	1	1
Gluconic acid		3		3				2	·····	-			3						1			1	-	1
Glucose	1	1		1		2		i		1		2	2		1		-	· · · · · · · · · · · · · · · · · · ·	1	· · · · · · · · · · · · · · · · · · ·	: :	1		1
Glycerine		1		1		1		L		1	1	1	1		1		1	 L		· · · · · · · · · · · · · · · · · · ·		1		1
Glycil alcohol		-		-				i		-		-	-				-	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	:	1	i	1
Glycolic acid		-		-		-		2		-		-	-				-		1	· · · · · · · · · · · · · · · · · · ·	]	1		1
Glycols		1	: :	1		1		L		1	1	1	. 1		1		. 1	L	1			1		1
Grease		3		3		3		3		3	2	2	1				1	 L	1		<u> </u>	1	1	1
			_				_				_		_						_					



MEDIUM	: cn-	: NP	EPDM	FDF	: 115		: NDF	CSM	FKM F	PE-X	UHMWPE	: DEA FED	
	SBR	NR		EPR	IIR 1	CR	NBR 2			<b>PE-X</b>	UHMWPE 1	PFA-FEP	
Green sulphate liquor Halon 1211	1	1	1	1	1	2	2	1	1				
Halium				· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·		ļ	·			
lelium Ientanal					4		÷		ķ	· † · · · · · · · · · ·			
leptanal lentane			3	· · · · · · · · · · · · · · · · · · ·	1 1		1		1	1	······		
leptane Jeptane carboxyl acid				·			·		•	- <del>-</del>	······		
eptane carboxyl.acid lexaldehyde lexane			1	1			ļ			1	······	· · · · · · · · · · · · · · · · · · ·	
levane			3	· · · · · · · · · · · · · · · · · · ·	1 3		1	· · · · · · · · · · · · · · · · · · ·	1 1	1	1	1	
lexanol	1	1	1	1	1		1	1	5	1		1	
lavana		3	3	3	3			2	1 1 1	1 :	1	1	
lexyl alcohol lexyl methyl ketone lexylamine lexylene glycol lydraulic oil	1	1	1	1	1	2	1	1	2	1	1	1	
lexyl methyl ketone	3	3		2	2		3	3	3	1	1	1	
lexylamine	2	2	-		1		2	3	1 - 1	1	1	1	
lexylene glycol	1	1	1	1	1		: 1	1	1 1	1	1	1	
lydraulic oil	3	3	3	3	3	-	1	2	1	1	1	1	
	. 3	3	3	. 3	2	2	3		- 1	1	1	1	
ydrobromic acid	. 3	1	1			3	3	1		1	1	1	
ydrobromic acid ydrocl. ac.37%(cold)	3	2	1	1	2	· · · · · · · · · · · · · · · · · · ·	-	2	1	1	1	1	
ydrocl. ac.37%(hot) ydrocloric acid 15%	3	3	3	2	. 3	-	· -	3	2	1	1	. 1	
ydrocloric acid 15%	3	1	1	1	1	-	-	1	1	1	1	1	
ydrocyanic acid	3	3	-		2		Ĭ	3	i	1	1	1	
vdrofluoric acid cold	3	. 3		2	1/2	· · · ·	j	1	I	1	1	. 1	
ydrofluoric acid hot	3	3	3 3	3	3 1/2	· · · ·	Ì	3	i - i	1	1	1	
vdrofluosilicic acid	3	3	2	1		3	-	1	- 1	1	1	1	
ydrogen dioxide 10%	3	3	-	2	2		Ĭ	2	1	1	1	1	
yarogen gas	2		-	1		1	1	2	2	1	1	1	
ydrogen perox. >10%	3	2 3	-	3	1 3	-	-	3	1	1	1	1	
ydrogen perox. 10%	. 3	3	-	2	2		-	2	1	1	1	1	
ydrogen perox. >10% ydrogen perox. 10% ydrogen sulfide	3	3	2	1	2	-	3	3	3	1	1	. 1	
dine	. 3	3	3	3	3	-	-	1	3	1	1	1	
on acetate on salts	3	3	2	1	. 2	-	-	-	3	1	1	1	
on salts	1	1	1	1	1	1	1	1	1	1	1	1	
oamyl acetate	3	3	2	1	2	-	-	-	3	1	1	1	
oamyl alcohol	1	1	1	1	1	-	1	1	2	1	1	1	
oamyl bromide	3	3	3	2	-	-	-	1	1 1	1	1	1	
obutane	3	3	3	3	3	-	1		1	1	1	1	
on sairs soamyl acetate soamyl alcohol soamyl bromide sobutane sobutyl acetate sobutyl aldehyde sobutyl amine sobutyl amine	3	3	-	2	-	3	-	3	3	1	1	1	
obutyl aldehyde	. 3	3	2	1	1	·	. 3	2	3 :	1	1	1	
obutyl amine	. 2	2	1	1	1		2	2	<u> </u>	1	1	1	
obutyl bromide obutyl carbinol	3	3	3	3	3	3	3	3	2	1	-	1	
obutyl carbinol	1	1	1	1	1		: 1	1	1	1	1	. 1	
obutyl cloride	. 3	3	3	3	. 3	3	; 3	3	2	1	-	1	
obutyl ether	. 3	3	-	2	2	. 3	3	3	<u> </u>	1	1	1	
obutylene	3	3	3		3	3	2	3	1	1	1	1	
ooctane	. 3	3	3	3	3	3	: 1	3	1	1	1	1	
opentane	. 3	3	3	3	3	3	1	3	1	1	1	1	
opropanol amine	2	2		1	1		2	3	I IIII	1	1	1	
opropyl acetate	3	3		2	2	3	3	3	3	1	1	1	
opropyl alcohol	1	1	1	1	1	1	1	1	2	1	1	. 1	
opropyl amine	2	2	1	1	1		2	3	ļ	1	1	1	
opropyl benzene	3	3	3	3	3	. 3	<u> </u>	3	1	1	1	1	
opropyl ether	3	3	3	3	3	3	3	3	3	1	1	1	
opropyl toluene	3	. 3	3	3	. 3	. 3	3	3	1	1	1	. 1	
t fuels	3	3	3	3	3	3	1	3	1	1	1	1	
etones etones etic acid (cold) etic acid (hot) equers solvents	3	3	3	. 3	3	2	. 1	3	1	1	1	1	
tones	3	3	1	1	1	3	3	3	3	1	1	1	
ctic acid (cold)	2	2		1	1	1	3	2	1	1	1	. 1	
ctic acid (hot)	. 3	3			. [		į		3	2	2	1/2	
quers solvents	. 3	3	3		3	3	3	3	3	1	1	1	
ru	3	3	-		1/2	1	1	3	3	1	1	1	
uryl alcohol uryl alcohol	1	1	1	1	1		1	1	2	1	1	1	
uryl alcohol	1	1	1	1	1		1	1	2	1	1	. 1	
vender oil	. 3	3	3	3	3	3	2	3	1 1	1	1	1	
ad acetate	. 3	2	2	1	2	1	2	3	3	1	1	. 1	
ad sulfate	. 1	1	1	1	1	1	1	1	1 1	1	1	1	
me bleach	2	2	1	1	1	2	1	2	1 1	1	1	1	
me sulfur	. 3	3	1	1	1	1	3	1	1 1	1	1	1	
noleic acid	. 3	3	3				2	-	2	1	1	. 1	
nseed oil				. 3			: 4			4	4	: 4	



		"1" = GOOD, "2" =SHORT SERVICE LIFE, "3" = NOT GOOD, "-" = NO INFORMATION													
MEDIUM	SBR	NR	EPDM	EPR	IIR	CR	NBR	CSM	FKM	PE-X	UHMWPE	PFA-FEP			
Liquid Petroleum Gas	3	3	3	3	3 3	Į	1	-	1	1	1	1			
Lubricating oils	3	3	3	3	3	2	1	ļ <u>.</u>	1	1	1	1			
Lye solutions Meg	3	3	2	1	2	1	1	3	3	1	1	1			
Magnesium acetate	3	3		. 2	2			<u> </u>		1	1	1			
Magnesium chloride Magnesium hydrate	1	1	1	1	1	11	1	1	1	1	1	1			
Magnesium hydrate Magnesium hydroxide Magnesium sulfate Maleic acid Maleic anhydride Malic acid	2	2	1	1	1	2	2	2	2	1	1	1			
Magnesium sulfate	1	1	1	1	1	1	1	1		1	1	1			
Maleic acid		3	3	2	ļ	3	3	3		1	ļ <u>1</u>	1			
Malic acid	3	2	1	2	1	1	1	2	1	1	1	1			
Manganese sulphate Manganese sulphite	2	2	1	1	1	Ì	<u>.</u>	1	1	1	1	1			
Manganese sulphite	2	2	1		1	<u>.</u>		1	1	1	1	1			
Mercury Mesityl oxide	1 1	1 1	7	, ,	ļ <u>†</u>	ļ <u>†</u>	ļ	ļ <u>†</u>		1	ļ <u>†</u>	1			
Methallyl alcohol Methanecarboxylic acd	1	1	1	1	1	Í	1	1	3	1	1	1			
Methanecarboxylic acd	3	3	3		ļ	2				1	1	1			
Methanoic acid Methanoil	3	3	ļ <u>.</u>	2	ļ	ļ <u>.</u>	ļ <u>.</u>	ļ <u>.</u>	ļ <u>.</u>	1	1	1			
Methoxy ethanol	3	3	<u> </u>	2	<u> </u>	· · · · · ·	<u> </u>	-		1	1	1			
Methoxy ethanol Methyl 1,2-pentanediol	3	3	į		<u> </u>					1	1	1			
Methyl acetate	3	3	2	1	2	ļ	ļ	3	3	1	1	1			
Methyl acetone Methyl alcohol	1	1 1	1		1	1 1	1 1	1	2	1	<u> </u>	1			
Methyl allyl acetate	3	3	-	2	-			-	3	1	1	1			
Methyl allyl alcohol		į	-	2		-	-	-	-	1	1	1			
Methyl allyl chloride Methyl amyl acetate	3	: 3	<u>.</u>	. 2	ļ	<u>.</u>	<u>.</u>	-	3	1	2	1			
Methyl amyl carbinol	1	1	1	1	1			1	3	1	1	1			
Methyl benzene	3	3	3	3	3	3	3	3	1	2	2	1			
Methyl amyl carbinol Methyl benzene Methyl bromide Methyl butane	3	3	3	3	3	3	3	3	1	2	2	1			
Methyl butanol	1	1	1	1	1		1	1		1	1	1			
Methyl butyl ketone	3	3	2	1	2	ĵ	-		3	1	1	1			
Methyl carbitol	3	. 3	ļ <u>.</u>	2	ļ <u>.</u>		ļ <u>.</u>		3	1	1	1			
Methyl cellosolve Methyl chloride	3	3	2	1 3	2	-	2/3	3	1/2	1/2	1/2	1/2			
Methyl cyclohexane	3	3	3	3	3	3	2/3	3	1/2	1/2	1/2	1			
Methyl ethyl ketone	. 3	. 3	2	. 1	2	Ĭ	-	3	3	1	1	1			
Methyl hexanol	1	1 1	1		1/2	1	1	1	2	1	11	1			
Methyl hexanone Methyl isobut carbinol	2	2	1	1	1/2		ļ <u>?</u>	3	3	1	1	1			
Methyl isobutyl cheton	3	. 3	3	. 2	2	3	3	-	3	1	1	1			
Methyl methacrylate	3	3	3	3	3	. į	<u>.</u>	3	3	1	1	1			
Methyl n amyl chetone Methyl propyl ether	3			2	1/2 2		ļ		3	1	1	1			
Methyl salicylate	3	3	-	1/2	1/2	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	-	3	1	1	1			
Methyl ter butyl ether Methylene bromide	3	3		2	2	Į	į	-	3	1	1	1			
Methylene bromide Methylene bromide	3	3	3		3			3	1/2	1/2	1/2	1/2			
Methylene bromide Methylene bromide Methylene chloride Methylene chloride	3	. 3	3		. 3	3	3	3	1/2	1/2	1/2	1/2			
Methylene chloride	. 3	3	3	3	. 3	3	3	3	-	2	2	1/2			
	3	3	3	1/2	ļ <u>.</u>	2	1	ļ <u>.</u>	ļ	1	1	1			
Molten sulphur Monobutyl ether	3	3	3	1/2 2		ļ <u>.</u>	<u> </u>		3	1	1	1			
Monochloroacetic acid	3	2	1	. 2	1		3	3	3	1	1	1			
Monochlorobenzene	3	3	3	3	3	3	3	3	1	1/2	1/2	1			
Monoclhorodifluormet Monoethanol amine	3	3	3		2	3	ļ <u>.</u>	<u>-</u>		1/2 1	1/2	1			
Monoethyl amine		<u> </u>	2	1/2	2	· -	<u> </u>	2	1	1	1	1			
MTBE (ter butyl metil Ether)	3	3	<u>.</u>	2	<u>.</u>	Ĭ		[	3	1		1			
Muriatic acid		1	2	2	2	ļ <u>.</u>	ļ		1	1	1	1			
Naphta Naphtalene	3	. 3	3		3	. 3	3	3	2	1	1	1			
Naphtalene Naphtenic acid	3	3	3	3	3	3	2	3	1	1	1	1			
Natural gas	3	3	3	3	3	3	1/2 1/2	2	1	1	1	1			
Neohexane	3	3	3	3	3	3	1/2	-	1	1	1	1			



1450004			EPDM	EPR			MDD	CSM	FKM	PE-X	UHMWPE	: PFA-FEP
MEDIUM	SBR 1	NR 1	1 EPDM	1 1	IIR 1	CR 2	NBR 1	2 <b>SM</b>	<b>FKM</b> 1	PE-X	UHMWPE	: PFA-FEP
Jickel chloride Jickel nitrate	1	1	1	1	1	2	1	1	1	1	î	1
lickel sulphate	1	1	1	1	1	1	1	1	1	1	1	1
litric acid ? fuming	. 3	3	. 3	3	3	3	-	3	2/3	3	3	1/2
itiric acid 7 fuming itiric acid 10% itiric acid 10% itiric acid 30% itiric acid 30% itiric acid 40% itiric acid 40% itiric acid 40% itiric acid 40-60% itiric acid 40-60% itirobenzene itirocellulose itirogen gas itiromethane	3	. 3	2	1	1			1	1	1	1	1
itric acid 20%	3	3	3	1	2		-	2	1	1	1	1
itric acid 30%		<u>3</u>	3	22	2			3	1	1	1	
itric acid 40%		<u> </u>			. 3	3		3	1	1	1	
itrohanzana		ļ	·	·						1		· · · · · · · · · · · · · · · · · · ·
trocellulose		·····	· • · · · · · · · · · · · · · · · · · ·	·······					<u>-</u>	1	1	
trogen gas		1	1	1	1	1	1	1	1	1	1	1
itromethane	3	2	2	1	1			3		1	1	1
tropropane		-	-	-	-	-	-	-	-	1	1	1
itrous oxide gas	. 1	1	1	1	1	-	-	1	-	1	1	1
onenes	. 3	. 3	. 3		3	-	1/2	-	1	1	1	1
ctadecanoic acid	3	3	3	3	3	-	1/2 1/2		-	1	1	1
tadecanoic acid tane	3	3	3	3	3		1		1	1	1	1
ctanoi	2	2	2	1	2		2	2	2	1	1	1
tyl acetate tyl alcohol	3	3	2	2	2			3	3	1	1	1
ctyl alcohol ctyl aldehyde	3		2	1 1	2					1	1	1
				· · · · · · · · · · · · · · · · · · ·					3	1	ļ	· · · · · · · · · · · · · · · · · · ·
ctyl carbinol		<u>f</u>	·•·····	1 1	1		1	1		1	i	· · · · · · · · · · · · · · · · · · ·
		1 1	1	1	1		1	j	-	1	i i	1
l ? petroleum leic acid eum	3	3	3	3	3	2/3	1	2/3	1	1	1	1
eic acid	3	3	· [	2	3	-	2	3	2	1	1	1
eum	. 3	. 3	3	3	3	3	3	3	2	3	3	1/2
ive oil	3	3	.i	2	1	1	1	3	1	1	1	1
thodiclorobenzene	3	. 3	3	. 3	3	3	3	3	1	1/2	1/2	1
thodiclorobenzol	3	3	3	3	3	3	3	3	1/2	1/2	1/2	1
thoxylene		3	3	3	3	3 3 3 3	3	3	1	1	1	1
calic acid		3	1	11	1	3	3	3	3	1	1	
eum thodiclorobenzene thodiclorobenzene thodiclorobenzol thosylene dalic acid tygen tone		<del></del>			3 3 1 1 1/2		<u> </u>	<u> </u>			ļ <u>†</u>	
int		į		÷	1/2	<del>/</del>		·····-	5		1	
int Imitic acid		ļ <u></u>	· † · · · · · · · · · · · · · · · · · ·				1		3	1	1	·
ılmitic acid ıpermakers alum ıraffin	1	1	1	1	1	1	1	1	1	1	1	1
raffin	3	3	3	3	3	2	1	3	1	1	1	1
araidenyde	. 3	3	-	1/2	1/2	3	3	!····	3	1	1	1
ıraxylene	. 3	3	3	3	3	3	3	3	1	1/2	1/2	1
largonic acid	. 3	3	-	1	1	-	2	3	-	1	1	1
entachloroethene	3	3	3	3	3	3	3	3	1	1	1	1
ntadione	. 3	3		2			-	3	3	1	1	1
ntane	3	3		3	3	2	1	3	1	1	1	. 1
ntanone		<u> </u>		2	ļ <u>.</u>			3	3	1	1	. 1
ritas0l				1	1			1	1	1	1	1
raxylene diargonic acid intachloroethene intadione intane intane intane intanone intasol intasol irchloric acid irchloroethylene ttroleum crude ttroleum die ittroleum oils enol isenol		. 3				3	3	3	1	1	<u> </u>	
troleum crude	3		· · · · · · · · · · · · · · · · · · ·	·			1		1	1	1	· · · · · · · · · · · · · · · · · · ·
troleum ether		. 3	3	3	3	3	1/2	3	1	1	1	1 1
troleum oils	. 3	3	3	3	3	-	1	3	1	1	1	1
ienol	3	3	3	-	2	-	3	-	1	1	1	1
enul uphonic acid enyl chloride enylamine enylhydrazine osphoric acid 10%	3	3	3	2/3		-	-	3	3	1	1	1
enyl chloride	3	3	3	3	2/3 3	3	3	3	1	1	1	1
enylamine		į		2/3		-	-	-	-	1/2	1/2	1
enylhydrazine	2	1/2	2	2	2	3	3	3	1	1/2	1/2	1
osphoric acid 10%	1	1	1	1	1	2		1	1	1	1	1
OSPITOTIC BCIG 10-0570			1	1	1/2	2	3	1	1	1	1	
ric acid (alcoholic)				<u>.</u>	1/2					1	<u> </u>	· · · · · · · · · · · · · · · · · · ·
ne oil nene							,	1	1	1	1	ļ <u>†</u>
lvethylene glycol	1	1 1	1	· · · · · · · · · · · · · · · · · · ·	1	-	1	1	1	1	1	· · · · · · · · · · · · · · · · · · ·
lvol ester							1/2		1/2	1	1	
lypropylene glycol	1	1	1	1	1	-	1	1	1	1	1	· 1
ie oii iyethylene glycol iyol ester ilypropylene glycol itassium acetate itassium bisulfate itassium bisulfate	3	3	1	1	2	2	2	3	3	1	1	1
tassium bisulfate	1	1	1	1	1	1	-	1	-	1	1	1
tassium busulfite	1	. 1	1	. 1	1	-	-	1	-	1	1	. 1
tassium carbonate	1	: 1	: 1	: 1	1	1	1	1	_	1	1	: 1



		"1" = GOOD, "2" =SHORT SERVICE LIFE, "3" = NOT GOOD, "-" = NO INFORMATION													
MEDIUM	SBR	NR	EPDM	EPR	IIR	CR	NBR	CSM	FKM	PE-X	UHMWPE	PFA-FEP			
otassium chloride	1	1	1	1	1	1	1	1	-	1	1	1			
Potassium chromate		-	ļ	1 1	1 1	ļ <u>.</u>	ļ	. 2	1	1 1	1				
Potassium cyanide Potassium dichromate		<u>+</u>	<u>+</u>	į <u>†</u>	ļ <u>†</u>		÷	ļ <u>.</u>		ļ <u>†</u>	1	1			
otassium hydroxide		· · · · · · · · · · · · · · · · · · ·	1		<del></del>		• • • • • • • • • • • • • • • • • • • •	· · · · · · · · · · · · · · · · · · ·	<u>.</u>	1 1					
otassium nitrate	1	1	1	1	1	1	1	1	1	1	1	1			
	i -	-	-		-	-	-	1	-	1	1	1			
otassium silicate	1	1	1	1	1	-	-	1	1	1	1	1			
Propane	3	3	3	3	3	3	1	2	1	1	1	1			
Propanediol Propanol	1	1	1	1	1			1	1	1	1	1			
ropanol	1	1	1	1	1		ļ	1	2	1	1	1			
Propanolamine				ļ <u>.</u>	ļ <u>.</u>			ļ	3	1 1	1				
Propanone		ļ		<u>+</u>	£			ļ		t	1				
Propenenitrile			ļ	ļ	ļ <u>.</u>	ļ	ļ	ļ	ļ	ļ					
Propionic acid Propyl acetate		3	·	1/2	5		······	ļ		· · · · · · · · · · · · · · · · · · ·	1				
Propyl alcohol		1	1	1	1		7	1		1	1	1			
Propyl aldehyde	3	3	2	1	2		-	†	3	1	1	1			
Propyl benzene	3	3	3	. 3	3	· ·	2/3	· · · · · · · · · · · · · · · · · · ·	1	1	1	1			
Propyl chloride	. 3	3	3	. 3	3	3	3	-	2	1	1/2	1			
Propyl ether		-		2			· · · · · · · · · · · · · · · · · · ·			1	1/2	1			
Propylene	. 3	3	3	3	3	3	3	<u> </u>	1	1	-	1			
Propylene dichloride Propylene glycol Red oil	3	3	3	. 3	3	3	3	<u>.</u>	2	1	1/2	1			
Propylene glycol	1	1	1	1	1	į <u>.</u>	<u>-</u>	1	1	1	1	1			
Ked oil	3	3	3	3	3	2	1	2	1	1 1	1				
Resorcinol				ļ	ļ		ļ	ļ		ļ	1/2				
Richfield D. 229/				ļ	ļ		÷	ļ	<u> </u>	· · · · · · · · · · · · · · · · · · ·	1				
Richfield A, 100% Richfield D, 33% Sea water		1			ļ <u>.</u>	ļ <u>.</u>		ļ		1	1				
Sewage		5	· · · · · · · · · · · · · · · · · · ·	<u>.</u>	·	1 1	1	1 1		1 1	1	1			
Sewage Silicate esters			1	<u> </u>		1		÷		1 1	1	1			
Silicate esters Silicate of soda	1	1	1	1	1	-	······	1	· · · · · · · · · · · · · · · · · · ·	1	1	1			
Silicone grease	. 1	1	1	1	1	1	1	1	-	1	1	1			
Silicone oil	1	1	1	1	1	1	1	1	-	1	1	1			
Silver nitrate	: 1	1	1	1	1	1	2	1	1	1	1	. 1			
Skydrol 500B Soap solutions		-		1	2	3		3	3	1	1	1			
Soap solutions	2	2	22	1	1	2	1	1	1	1	1	1			
soda ash		1	11	1	1	1	1	į <u>1</u>	11	1	1	1			
oda lime		2	ļ2	1	1		ļ	<u>.</u>	<u></u>	ļļ					
Soda, caustic		2	<u>.</u>	į <u>†</u>	ļ <u>.</u>			<u>\$</u>	<u>.</u>	<u>1</u>	1				
Sodium acetate Sodium aluminate		1	······································	·····	1	1		· · · · · · · · · · · · · · · · · · ·	·····	· · · · · · · · · · · · · · · · · · ·					
Sodium hicarhonate		1	1		1	1	ļ <u>.</u>		ļ <u>.</u>	<u>.</u>	1				
Sodium bisulphate	2	2	2	1	1	1	1	1	ļ <u>.</u>	1	1	1			
Sodium bisulphite	2	2	2	1	1	-	1	1	-	1	1	1			
Sodium borate	1	1	1	1	1	1	1	1	1	1	1	1			
Sodium borate Sodium chloride	1	1	1	1	1	. 1	1	. 1	1	1	1	1			
sodium cyanide	. 3	3	3	1	1	3	3	1		1	1	1			
soulum dichromate	3	3	3	1	1	į		2	3	1	1				
Sodium Hypochlorite	3	3	3	2	2	-	<u>.</u>	2	2	1	1	1			
odium metaphosphate	. 2	2	2	1	11	2	2	2	<u>.</u>	1 1	1				
odium nitrate		1	<u>†</u>	1	1	ļ <u>.</u>	ļ <u>.</u>	1	11	1	1				
Sodium perborate		<u>\$</u>	<u>.</u>	ļ	ļ <u>†</u>	į <u>.</u>	£	ļ	ļ	ļ					
odium peroxide odium Silicate		1	<del></del>	ļ <u>†</u>	ļ <u>†</u>	1		1	ļ	1	1				
odium Thiosulfate	····	1	1	· · · · · · · · · · · · · · · · · · ·	1 1	1 1	·····	· · · · · · · · · · · · · · · · · · ·	1	1	1	1			
ovhean oil		3	3	7	1	2	1		1	1	1	1			
oybean oil tannic chloride team, max 176°C	1	1	1	1	1	!····	-	1	ļ <u>.</u>	1	1	1			
iteam, max 176°C	3	3	1	1	1/2	3	3	-	3	3	3	1			
tearic acid	. 3	3	2	1	2	2	2	3	3	1	1	1			
itoddarts solvent	3	3	3	3	3		1	3	1	1	1	1			
tyrene	. 3	3	3	3	3	3	3	3	2	2	2	1			
itearic acid itoddaris solvent lyvene slujhamic acid slujhonic acid slujhonic acid slujhoric acid 25% slujhoric acid 25%	2	2	1	1	1	2	2	2	. 3	1	1	1			
sulphonic acid	3	3	3	3	3	3	3	2	<u> </u>	1	1	1			
ulphur	3	3	3	2/3	2/3	į	; ;	2/3	2	1	1	1			
ulphur dioxide	3	3	2	2	į	ļ	ļ	2		1	1	1			
sulphur trioxide	. 3	3	3	3	ļ <u>.</u>	ļ <u>-</u>	<u>;</u>	ļ <u>.</u>	ļ <u>-</u>	3	3	. 1			
ouipnuric acid 25%		2	1	1 1	1	2	ļ	1	1	1 1	1				
sulpriuric acid 50%		3	1	1	1	-		1	1	1	1	1			



"1" = GOOD	"2" -CHOP1	CEDVICE LIEE	"2" - NOT G	:OOD "-" -	NO INFORMATION	

14550014													_										
MEDIUM					EPI		EF		<u> </u>			NE			M	FK							-FEP
Sulphuric acid 75%		3 3 3	įi	3		2	1 1		2	2	-				1	1	·	1,	L		1		1
Sulphuric acid 96%	. i	3		3		3			3			į <del>.</del>			2						1	į	1
Sulphuric acid 98%				3		3					-			£	3						2	<u> </u>	1
Sulphuric acid –fuming		3	į	3	ļ	3		3	3	3	3	Ī3	3	į	3		}	ļ	3		3	į	1
Sulphurous acid 10%		2		2		1	. 1	L	1	L	-				1				L	:	1	1	1
Sulphurous acid 85%		3		3		1	1	L	1	L	-	-			1			1	L		1		1
Sulphydric acid (H2S)		3		3		2	1	l	1	L	-	3	3		1				L	:	1		1
Tall oil		3		3		3	1	3	3	3	2	1	L		3	1			L		1	:	1
Tallow	-	3		3	1	3	3	3	3	3	-	1			3				L	1	1		1
Tannic acid	· · · · · ·	7		2		1	1 1		1		-				1				l	 :	1		1
Tar		3		3	: · · · · · · ·	3		3			2/3		,		-	1			3	<u>:</u>	7	· · · · · · · · ·	1
Tartaric acid	· •	ĭ	· · · · ·	3		7	· · · · · · · · · · · · · · · · · · ·	í I			2	, ,		· · · · · ·	1				í		1	ļ	1
Tertiary butyl alcohol		<u> </u>	· · · · ·	<u>.</u>		1	·				· · · · · · · · · · · · · · · · · · ·			· · · · · ·	1							· · · · · · · · · · · · · · · · · · ·	
Tertiary butyl mercapt		3		<u>-</u>										· · · · · ·	-			· · · · · · · · · · · · · · · · · · ·			±	· · · · · · · ·	1
			ļ	<u> </u>		?			s					į	<u>.</u>							į	±
Tetrachlorobenzene		3	į	3	Ş	3			3		3	3			· · · · · · · ·	1/			<u>.</u>		/2		1
Tetrachloroetane		3		3	• • • • • • • • • • • • • • • • • • • •	3			3		3	3		į		1					2	įi	1
Tetrachloroethylene		3	įi	3					3		3	3						1/		c	1	Įi	1
Tetrachloromethane	. i	3	ii	3			.]		3		3	3		įi				1			1	i	1
Tetrachloronaphtalene	.i	3	i	3		3	13		3		3	3			3	1/	2	1			1	i	1
Tetrahydrofuran		3	įi	3		3	] 3	3	3	3	3	3	3		3			1/	2	<u>.</u>	1	į	1
Tin chloride	1	2	: :	2	1 2	2	1	L	1		-	2	2	: :	1			1	L		1		1
Toluene		3		3	3	3	3	3	3	3	-	3	3		-	1		1/	2	1	/2		1
Toluidine		3		3		3		3	3	3	-	3	3		-	2	!	2	2	:	1		1
Toluol		3		3		3	1 3	3	3	3	-	3	3		3	1		1			1	:	1
Transformer oil		3			: · · · · · ·	3		3	3		2	1			-	1		1	l		1	:	1
Tributyl amine		2		 2		-			2		2	2			3			1			1		1
Trichloroacetic acid		3		3		2	1		2			· · · · · · · · · · · · · · · · · · ·				7		1			1	· · · · · · · · ·	1
Trichlorobenzene		3	·	3		2			3		3	3				2					2	ļ	1
Trichloroethane		۲ 3				3			3		3	3				1/		1/	· · · · · · · · · · · · · · · · · · ·		/2	· · · · · · · · · · · · · · · · · · ·	
Trichloroethylene		3					3		3		3	3				1/		1/			2	· · · · · · · ·	1
		3		3		3					3				3			ļ			1	<u> </u>	±
Trichloropropane			·			5			3		- 3	ļ	5	[ · · · · · · · · · · · · · · · · · · ·	ī	2							1
Tricresyl phosphate		3	******	3	į			2	1/	·		Į			3			į	L		1	įi	1
Triethanolamine		3	įi	2	į	2	1/				2		3	ļ	2				L	č	1	įi	1
Triethylamine		3	įi	3		2			2		-				-			ļ <sup>1</sup>	L	č	1		1
Triethylene glycol Trimethylamine Trinitrotoluene Trioctyl phosphate Tung oil Turnettine	. i	1	į	1		1	. 1	L	1	l	-	[			1			[	L		1		1
Trimethylamine		3		3		-	į	-	-		-	į		į.,,,,,,	-	3		ļ	L		1	į	1
Trinitrotoluene	. i	3	1	3	i	3	.]3	3	3	3	3	33	3	1		2	<u>.</u>	ļ	2	. 1	/2	1	1
Trioctyl phosphate	1	3		3		-	1 2	2	2	2	-	-		1	-			1	L		1		1
Tung oil		3		3		3	3	3	3	3	2	1	L		2	1	L		L		1		1
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Via Grandi 5, 45100 Rovigo (Ro) - Italy T. +39 0425 37 76 11 - info@roiter.com

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