

VERDERFLEX

Chemical Compatibility Guide

**Choosing the
best hose and tube
for your application**

Verderflex Tube Selection

Choosing the best tube for your application

The tube is the heart and soul of any peristaltic pump: a poorly selected tube will result in frequent tube changes and increased overall cost of ownership of any equipment. Conventionally, tube size is stated as Internal Diameter (ID) x Wall Thickness (WT).



Key Tube Selection Issues Include:

Chemical Compatibility

Verderprene is an economic, general purpose tubing that resists many chemicals whilst offering excellent dynamic resistance. Some materials have better chemical strength at the expense of mechanical life and material cost.

Life/Duty Cycle

Tubing life is related to the tube's mechanical strength, the number of compressions and the operating cycle. Again, Verderprene is the most economic solution with the best mechanical life.

Suction Lift

Suction lift is determined by a combination of the tube's ID and WT, ideally the smallest tube diameter should be combined with the thickest wall tube and the tube material's inherent restitution properties. Verderprene and Silicone have superior lift capabilities than similar sized materials such as Tygon® or Viton®.

Cost

Most tubing is produced by thermoplastic extrusion, hence, tubing cost is related to the raw materials used. Highly chemical resistive materials like Tygon® and Viton® are more expensive to produce than Verderprene or Silicone.





Verderprene® - General Purpose Tubing

This opaque, cream coloured tube is the most popular choice for tube pumps having:

- Best mechanical strength for optimal lifespan
- Good mechanical recovery for optimal suction lift
- Wide chemical resistance including most oxidising agents
- Low gas permeability
- Temp. range: +10°C to +85°C (50°F to 185°F)
- Food grade, meets FDA, EC1935/2000 and NSF Standard 51: food equipment materials
- Can be autoclaved, compatible with most CIP solutions and SIP

Tygon® - Chemical Fluids Tubing

Specifically designed for most fuels and industrial lubricants, Tygon resists the swelling and hardening caused by hydrocarbon based fluids, significantly reduce the risk of failure due to cracking and leakage.

- Temp. range: 0°C to +50°C (32°F to +122°F)
- Yellow colour for positive identification
- Suitable for fuels, heating oils, glycol, coolants and cutting fluids

Platinum Cured Silicone - For Higher Purity

Platinum cured Silicone is a translucent, odourless tubing with low residuals.

- Autoclavable and is used in many applications
- Good mechanical recovery for optimal suction lift
- Medium gas permeability
- Temp. range: -20°C to +85°C (-4°F to +185°F)
- Medical/ food grade to FDA, EC1935/2000, USP Class VI and BGW/ BGA XV criteria

Viton® - Aggressive Chemical Tubing

Viton® is strong, resilient and flexible tube resistant to corrosive chemicals, oils, fuels, solvents and most mineral acids. It can also handle corrosive chemicals at temperatures as high as 204°C.

- Temp. range: - 22 to +85°C (-8°F to +185°F)
- Resists ozone, sunlight and weathering
- Opaque black color helps protect light sensitive fluids

Immersion Testing

With many proprietary solutions chemical compatibility can be verified with an immersion test:

1. Immerse half a tube sample in a closed container for 48 hour.
2. Then compare against the remaining half for signs of attack, swelling, embrittlement or any other kind of deterioration – all of which indicate chemical attack or an unsuitable tube material.

Please contact Verderflex for samples of tubing materials.



The Verderflex Hose

The Heart Of The Process

The successful use of hose pumps in a number of fields led Verder to develop a hose with an enhanced construction. Hoses in peristaltic pumps generally fail due to fatigue between the rubber layers and the reinforcement. However, Verder hoses are specifically designed and manufactured to reduce fatigue, resulting in an extremely long hose service life.



Technical Summary

- Hoses are available in Natural Rubber (NR), Nitrile Buna Rubber (NBR), Food Grade NBRF, EPDM and Hypalon® (CSM)
- 12 standard hose sizes from 5mm (3/16") to 125mm (5")
- All are designed to maximise hose life by optimising the hoses' fatigue strength
- Hoses have colour coded identification tapes bonded into the outer surface during manufacture to clearly identify material type.

Internal diameter of the hose and rotor speed determine the flow rate of the pump. Hose wall thickness compared to its diameter and the number of reinforcement layers are responsible for the restitution of the hose after compression which creates a virtual vacuum in the hose. The construction of the textile reinforcement allows a discharge pressure of the pump of up to 16 Bar/230 PSI for all pump types.

Inserts

Stainless Steel 316

Resistant to most acids, bases and solvents. Can handle halogenated hydrocarbons. Good resistance to abrasive media.

Polypropylene

Wide chemical compatibility. General Purpose. Limited temperature resistant. Maximum working temperatures of 40°C or 104°F.

PVDF (Kynar®)

PVDF is the best choice for even the most chemically aggressive media



Hose selection

Some industrial hose pumps in today's market have machined exteriors, a process generally employed to achieve an equal wall thickness. In comparison, the unique Verderflex® production process is so precise that the exact wall thickness and outer diameter tolerances are maintained at each and every point. For this reason Verderflex® hoses do not have to undergo this additional process of external machining. When Verderflex® hoses are tested alongside their competitors, results indicate that there is no additional friction loss due to the wounded surface. The textured surface actually creates micropockets of lubricant which promotes even lubrication coverage which results in longer hose life.

For corrosive applications requiring EPDM hose, Verderflex® recognizes the importance of a homogeneous material. Under normal use, a hose

will fail in the "cheeks" of the hose and form a leak path through to the outer layer. Some hose pump manufacturers simply use an EPDM inner core and supplement this with natural rubber in the cord and outer layers. This accelerates hose failure through these layers in corrosive applications and creates a dissimilar material junction reducing, fatigue strength. Verderflex® uses a homogenous EPDM material throughout the hose, which helps to extend hose life and protect the pump in these aggressive applications.

All Verderflex hoses have a coloured lettering on the exterior which indicates the type of hose. The Verderflex lettering is white for a NR hose, yellow for a NBR, red for a EPDM hose type, yellow with a white stripe for the Food Grade NBRF and green for Hypalon® or CSM.

	PRINT COLOUR	TEMPERATURE		PRESSURE	
		CELSIUS	FARENHEIT	bar	PSI
 <p>NR Most common hose for all market segments is the Natural Rubber (NR) hose. Both the liner and cover are made from NR which is highly resistant to abrasion. Suitable for use with lightly corrosive chemicals, highly abrasive slurries, inorganic products, etc</p>	White	-20°C to +80°C	-5°F to +175°F	16	230
 <p>NBR This hose is particularly suitable for use with oily or fatty products, and with organic materials. The inner liner is of nitrile buna rubber (NBR) and the cover is a blend of SBR/NR.</p>	Yellow	-20°C to +80°C	-5°F to +175°F	16	230
 <p>NBRF The NBRF hose has an FDA and EC1935 approved food grade inner liner for use in EHEDG compliant or similar hygienic applications.</p>	White / Yellow	-20°C to +80°C	-5°F to +175°F	16	230
 <p>EPDM This hose is suitable for corrosive chemicals and inorganic products, the liner is made of EPDM rubber. The cover of this hose is also made of EPDM, in contrast to many other hoses whose cover is made of natural rubber. This feature makes the hose exceptionally resistant to corrosive chemicals, even those for diffusing media</p>	Red	-20°C to +100°C	-5°F to +210°F	16	230
<i>*This hose can be run for short time up to 120° C / 250° F</i>					
 <p>CSM The CSM, or Hypalon® hose, is used to pump highly corrosive products such as strong oxidising agents. This hose has a CSM inner liner and an SBR/NR outer cover; it has a maximum continuous temperature rating of 85°C/185°F</p>	Green	-20°C / +85°C	-5°F / +185°F	16	230

Hypalon® is a registered trademark of DuPont Dow Elastomers





Suggested hose test method

1 Introduction

When a product comes in contact with correctly vulcanized rubber, it may react with either the base material of the rubber (VERDERFLEX hoses are available as NR, NBR, NBRF, EPDM or CSM) or with the additives in the rubber compound such as the fillers and chemicals.

When there is a chemical reaction between the pumping solution and the hose, then one of the hose's physical parameters will change, e.g. the rubber's hardness, its weight or volume, its tensile strength or its elongation.

At higher temperatures, the chemical reaction is always stronger than the reaction at an ambient temperature. As a general rule, chemical action for 3 days at 70°C/160°F is equal to the chemical action for 3 months at ambient temperature.

To determine whether a solution may have a chemical reaction with a particular hose type, you should run a chemical resistance test. By measuring the changes in the rubber's hardness and the presence or absence of swelling, it is possible to predict whether a product and a particular VERDERFLEX hose type are compatible. Such a test will give an indication of the rubber's chemical resistance performance, but it does not determine the hose life or performance, as the specific ratings on hose life and performance can only be deduced from an assessment of the performance of the hose in the pump unit at the specified duty.

2 Equipment Required to Test Samples of Hose Material

- Product sample, minimum 0.25 litre (0.07 Gallon)
- Rubber samples of: NR (white lettering as per the hoses, sample may be without lettering), NBR (yellow lettering), NBRF (Yellow lettering with a white stripe), EPDM (red lettering), CSM or Hypalon® (Green lettering)
- Hardness tester
- Marking gauge
- Knife
- Clean water (for cleaning the samples after the test)
- Heating system for quick results - this can be as simple as a cup filled with water on an electric heater with thermostat and temperature gauge

3 Chemical Compatibility Test Procedure

- 1) Put approx. 0.25 litre of the sample solution in a sample pot.
- 2) Cut 2 x 2 cm / (0.75" x 0.75") rubber samples from the sheets.
- 3) Measure the size and thickness of the samples with the marking gauge
- 4) Measure the hardness of the sample rubber with the hardness tester in "Shore A"
- 5) Immerse the samples in the product for 3 months, or if a heating system is used, for 3 days at 70°C(160°F), having first set the heater's thermostat to give this average temperature
- 6) After the relevant testing period has finished, take the samples out of the sample solution and let them cool down to an ambient temperature again



4 Analyzing the Results

4.1 Hardness Change

Hardness Change (in °Shore A)	Categorisation	Chemical Compatibility Rating
0-3 °Shore A	No or little action	A
3-5 °Shore A	Moderate action	B
> 5 °Shore A	Strong action	C

4.2 Swelling

Volume Change	Categorisation	Chemical Compatibility Rating
0-3 %	No or little action	A
3-5 %	Moderate action	B
> 5 %	Strong action	C

Detailed chemical resistance tables are available for many standard chemicals, which give their chemical resistance as an A, B or C rating.

For further information, please contact your local Verderflex distributor or contact the Verderflex team directly on info@verderflex.com



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C: strong action

Do not use

- : no data available

Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
ACETAL	-	-	-	-	C	C	C	C	C	-	C	C	-
ACETIC ACID 10%	A	B	A	B	A	C	C	A	A	-	A	A	A
ACETIC ACID 20%,	A	B	A	B	B	C	C	A	A	-	A	A	A
ACETIC ACID 30%	A	B	B	B	B	C	C	A	A	-	A	C	A
ACETIC ACID 50%	A	B	B	B	B	C	C	A	A	-	A	C	A
ACETIC ACID 99%	B	B	C	B	C	C	C	A	B	-	A	C	A
ACETIC ACID (ICE)	B	B	-	B	C	C	C	B	B	-	A	B	A
ACETIC ACID ANHYDRIDE	C	B	-	C	C	C	C	B	C	-	A	C	B
ACETONE	B	C	C	A	A	C	C	A	C	-	A	A	C
ACETONITRILE	C	-	C	-	C	C	C	C	C	-	A	A	A
ACETOPHENONE	C	C	C	C	C	C	C	C	C	-	C	C	-
ACETYLENE	A	B	C	A	C	B	B	C	B	-	A	-	A
ACRYL ARYL SULPHONATE SLURRY	-	-	-	-	A	C	C	A	B	-	-	-	-
ACRYLATE (POLYMER)	-	-	-	-	-	-	-	A	-	-	-	-	-
ACRYLATE (MONOMER)	-	-	-	-	C	C	C	C	C	-	-	-	-
ACRYLIC ACID (323 K)	-	-	-	-	C	C	C	C	C	-	-	-	-
ACRYLIC MONOMER	-	-	-	-	C	C	C	C	C	-	-	-	-
ACRYLONITRILE	C	C	C	C	C	C	C	C	C	-	A	A	-
AIR	A	A	A	A	A	A	A	A	A	-	A	A	A
ALCOHOL (ETHYL)	A	B	A	A	A	A	A	A	A	-	-	B	A

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
ALKYLARYL BENZENE SULPHONATE	-	-	-	-	C	A	A	A	C	-	-	-	-
ALLYL ALCOHOL	A	-	B	A	A	B	B	A	B	-	A	A	A
ALLYL CHLORIDE	C	A	-	B	C	C	C	C	C	-	A	A	A
ALUM	A	A	A	-	A	A	A	A	A	-	C	A	A
ALUMINIUM CHLORIDE	A	B	A	A	A	A	A	A	A	-	C	A	A
ALUMINIUM FLUORIDE	A	B	B	A	A	A	A	A	A	-	C	A	A
ALUMINIUM HYDROXIDE	A	A	A	A	A	A	A	A	A	-	C	A	A
ALUMINIUM SILICATE	A	A	A	-	A	A	A	A	A	-	-	-	-
ALUMINIUM SULPHATE	A	A	A	-	A	A	A	A	A	-	-	A	A
AMMONIA ANHYDRIC	A	C	B	-	A	B	B	A	A	-	A	A	A
AMMONIA (AQUEOUS)	A	B	B	B	A	A	A	A	A	-	A	-	-
AMMONIA (GAS)	A	A	C	-	A	A	A	A	A	-	A	A	A
AMMONIUM BICARBONATE	A	A	A	-	A	A	A	A	A	-	-	-	-
AMMONIUM BISULPHATE 50%	A	A	A	-	A	C	C	A	A	-	-	-	-
AMMONIUM BROMIDE	A	A	A	-	B	C	C	A	A	-	-	-	-
AMMONIUM CARBONATE	A	B	A	-	A	A	A	A	A	-	C	A	A
AMMONIUM CHLORIDE	A	B	A	-	A	A	A	A	A	-	C	A	A
AMMONIUM FORMATE	A	A	A	-	A	A	A	A	A	-	-	-	-
AMMONIUM HYDROXIDE	A	A	A	B	A	A	A	A	A	-	-	A	A
AMMONIUM METAPHOSPHATE	A	A	A	A	A	A	A	A	A	-	A	A	A

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AMMONIUM NITRATE	A	B	A	A	A	A	A	A	A	-	A	A	A
AMMONIUM NITRITE	A	B	A	A	A	A	A	A	A	-	-	A	A
AMMONIUM PERSULPHATE	A	C	A	A	B	B	B	A	A	-	C	A	-
AMMONIUM PHOSPHATE	A	A	A	A	A	A	A	A	A	-	C	A	-
AMMONIUM PROPIONATE	A	-	-	-	A	C	C	A	B	-	-	-	-
AMMONIUM SULPHATE	A	A	A	A	A	A	A	A	A	-	C	A	A
AMMONIUM THIOCYANATE	A	A	A	-	A	A	A	A	A	-	-	-	-
AMYL ACETATE	C	C	C	-	B	B	B	B	C	-	A	A	A
AMYL ALCOHOL	A	A	A	-	B	B	B	B	B	-	A	A	A
AMYL AMINE	C	-	-	-	C	C	C	C	C	-	-	-	-
AMYL BORATE	C	C	-	-	B	C	C	B	C	-	-	-	-
AMYL BROMIDE	C	-	-	-	B	C	C	B	C	-	-	-	-
AMYL CHLORIDE	C	C	C	-	C	C	C	C	C	-	A	C	A
AMYL CHLORONAPHTHALENE	C	C	C	-	C	C	C	C	C	-	-	-	-
AMYL ETHER	C	-	-	-	C	C	C	C	C	-	-	-	-
AMYL IODIDE	C	-	-	-	C	C	C	C	C	-	-	-	-
AMYL NAPHTHALENE	C	C	C	-	C	C	C	C	C	-	-	-	-
AMYL PHENOL	C	-	-	-	C	C	C	C	C	-	A	-	-
AMYLENE	C	-	-	-	C	C	C	C	C	-	-	-	-
ANILINE	B	B	C	-	C	C	C	C	C	-	A	B	A

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ANILINE PAINT	-	B	C	-	B	C	C	C	C	-	A	A	-
ANIMAL FAT	-	B	B	-	C	B	B	C	B	-	A	-	A
ANIMAL GLUE	-	B	-	-	A	A	A	A	A	-	-	-	-
ANTHRAQUINONE (55 °C)	-	-	-	-	A	B	B	A	C	-	-	-	-
ANTI-FREEZE	A	B	B	-	A	A	A	A	A	-	A	-	-
ANTIMONY CHLORIDE 50%	A	-	A	-	B	C	C	A	A	-	C	A	-
AQUA REGIA	C	C	C	-	C	C	C	B	B	-	C	B	C
ARSENIC TRIOXIDE	A	-	B	-	A	A	A	A	A	-	-	-	-
ARSENIC ACID	-	A	B	-	C	C	C	B	A	-	C	A	-
ASCORBIC ACID	A	-	-	-	A	A	A	A	A	-	A	-	-
ASPHALT	C	C	B	A	C	B	B	C	C	-	A	A	A
ASTOR OIL 1-2-3	-	-	-	-	C	C	C	C	C	-	A	-	-
AVIATION GASOLINE	C	-	-	-	C	B	B	C	C	-	A	-	-
BARIUM CARBONATE	A	A	A	A	A	A	A	A	A	-	A	A	A
BARIUM CHLORIDE	A	A	A	A	A	A	A	A	A	-	C	A	-
BARIUM FERRITE	A	A	A	-	A	A	A	A	A	-	-	-	-
BARIUM HYDROXIDE	A	A	A	A	A	A	A	A	A	-	-	A	A
BARIUM SULPHATE	A	A	A	A	A	A	A	A	A	-	C	A	A
BARIUM SULPHIDE	A	A	A	A	A	A	A	A	A	-	C	A	A
BEER	A	A	A	A	A	A	A	A	A	-	A	A	A

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BEET ROOT SYRUP	A	A	A	A	A	A	A	A	A	-	A	A	A
BENZALDEHYDE	A	B	C	C	C	C	C	B	C	-	C	A	B
BENZENE (BENZOL)	C	C	C	C	C	C	A	C	C	-	C	B	B
BENZENESULPHONIC ACID	-	C	C	-	C	C	C	C	C	-	A	C	A
BENZOYL CHLORIDE	C	C	-	-	C	C	C	C	C	-	C	B	A
BENZYL ALCOHOL	C	-	B	-	C	C	C	C	C	-	A	A	A
BENZYL BENZOATE	C	C	-	-	C	C	C	C	C	-	A	-	-
BIRD LIME (GLUE)	-	-	-	-	A	A	-	A	A	-	A	-	-
BICALCIUM PHOSPHATE	-	-	-	-	A	-	A	A	A	-	-	-	-
BISMUTH CARBONATE	A	-	-	-	A	A	A	A	A	-	A	A	-
BLACK SULPHATE LIQUOR	C	B	-	-	A	A	A	A	A	-	A	-	-
BLAST FURNACE GAS	-	A	-	-	C	A	A	C	C	-	-	-	-
BOR(AC)IC ACID	A	A	A	A	A	A	A	A	A	-	-	A	A
BORAX	A	B	A	A	A	A	A	A	A	-	A	A	A
BROMINE	C	C	B	A	C	C	C	C	B	-	C	C	-
BUTADIENE	C	C	C	A	C	B	B	C	C	-	A	C	A
BUTANE	C	C	C	A	C	C	C	C	C	-	A	C	A
BUTANE FLUID	C	C	C	-	C	B	B	C	C	-	-	-	-
BUTTER	-	B	B	-	C	A	A	C	C	-	A	-	-
BUTTER ACID	A	-	-	-	B	B	B	C	C	-	-	-	-

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BUTYL ACETATE	C	C	C	C	C	C	C	B	C	-	A	B	A
BUTYL ALCOHOL	A	B	B	A	B	B	B	A	C	-	A	A	A
BUTYL ALDEHYDE	A	C	-	-	C	C	C	C	C	-	-	-	-
BUTYL CELLOSOLVE	-	C	C	-	C	C	C	C	A	-	A	-	A
BUTYL CELLOSOLVE ADIPATE	-	B	-	-	C	C	C	C	C	-	-	-	-
BUTYL ETHER	C	C	-	-	C	C	C	C	C	-	A	C	A
BUTYL GLYCOL	A	A	A	-	A	A	A	A	A	-	-	-	-
BUTYL IODIDE	C	C	C	-	C	C	C	C	C	-	-	-	-
BUTYL STEARATE	C	-	-	-	C	B	B	C	C	-	A	-	A
BUTYRONITRILE	C	-	-	-	C	C	C	C	C	-	-	-	-
CALCIUM ACETATE	A	C	-	A	A	A	A	A	A	-	A	A	-
CALCIUM BISULPHATE	A	B	C	A	A	A	A	A	A	-	A	A	-
CALCIUM BISULPHITE	A	C	B	-	A	A	-	A	A	-	-	A	A
CALCIUM BROMIDE	A	-	-	A	-	-	-	A	-	-	-	-	-
CALCIUM CARBONATE	A	A	A	A	A	A	A	A	A	-	C	A	A
CALCIUM CHLORATE	A	A	A	A	A	B	B	A	A	-	C	A	-
CALCIUM CHLORIDE	A	A	A	A	A	A	A	A	A	-	-	A	-
CALCIUM FLUORIDE	A	-	-	-	A	A	A	A	A	-	-	-	-
CALCIUM HYDROXIDE	A	A	A	A	A	A	A	A	A	-	C	A	-
CALCIUM HYPOCHLORITE	A	B	B	A	C	C	C	A	A	-	-	-	-

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Do not use

- : no data available

Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
CALCIUM HYPOCHLORITE 30%	A	B	B	A	B	B	B	A	A	-	-	A	A
CALCIUM NITRATE	A	B	-	A	A	A	A	A	A	-	C	A	-
CALCIUM STEARATE	-	-	-	-	B	B	B	C	C	-	-	-	-
CALCIUM SULPHATE	A	-	A	-	A	A	A	A	A	-	C	A	A
CALCIUM SULPHIDE	A	B	-	-	A	A	A	A	A	-	A	A	A
CALCIUM TETRAFLUORIDE	-	-	-	-	C	C	C	B	A	-	A	A	-
CALIC LIQUOR	-	A	-	-	A	A	A	A	A	-	-	-	-
CANE SUGAR LIQUOR	A	A	A	-	A	A	A	A	A	-	A	A	A
CARBIDE LIME / CARBIDE SLUDGE	-	-	-	-	A	A	A	A	A	-	-	-	-
CARBITOL	C	B	-	-	C	C	C	C	C	-	A	-	-
CARBOLIC ACID (PHENOL)	C	C	C	A	C	C	C	C	C	-	A	B	A
CARBON DIOXIDE (DRY)	A	B	A	A	A	A	A	A	A	-	A	A	A
CARBON DIOXIDE (MOIST)	A	B	C	A	A	A	A	A	A	-	A	A	A
CARBON DISULPHIDE	-	C	-	-	C	A	A	C	C	-	A	C	A
CARBON MONOXIDE (338 K)	A	A	B	-	A	B	B	A	A	-	A	A	A
CARBON TETRACHLORIDE	C	C	C	-	C	C	C	C	C	-	-	-	-
CARBONIC ACID	A	A	A	-	A	A	A	A	A	-	C	A	A
CARBOXYMETHYL CELLULOSE 12%	-	-	-	-	A	A	A	A	A	-	-	-	-
CASTOR OIL	C	A	A	A	C	B	B	C	C	-	A	A	A
CAUSTIC SODA (max. 50%)	A	A	B	A	B	B	B	A	A	-	B	A	A
CELLOSOLVE	A	C	C	-	C	C	C	C	C	-	A	A	A
CELLOSOLVE ACETATE	A	C	C	-	C	C	C	C	C	-	A	-	-

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Verderflex

Tube and hose selection



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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
CELLULOSE ACETATE	-	-	-	-	-	B	B	C	C	-	A	-	-
CHINA WOOD OIL (TUNG OIL)	-	C	-	-	C	C	C	C	C	-	A	-	-
CHLORIC ACID	-	-	A	A	C	C	C	A	A	-	C	-	-
CHLORIC ACID SULPHUROUS	-	-	-	-	C	C	C	B	A	-	-	-	-
CHLORINATED SOLVENTS	C	C	C	-	C	C	C	C	C	-	-	-	-
CHLORINE AQUEOUS SOLUTION 3%	-	-	C	A	C	C	C	A	A	-	A	A	A
CHLORINE (DRY)	C	C	C	A	C	C	C	B	C	-	C	C	A
CHLORINE (MOIST)	C	C	B	A	C	C	C	A	A	-	A	C	A
CHLORINE LYE	-	A	B	A	C	C	C	A	A	-	-	-	-
CHLOROACETONE	C	C	C	-	C	B	B	B	C	-	-	-	-
CHLOROACETONITRILE	C	-	-	-	C	C	C	C	C	-	-	-	-
CHLOROBENZENE	C	C	C	A	C	C	C	C	C	-	A	-	-
CHLOROBROMOMETHANE	C	C	C	-	C	C	C	C	C	-	A	-	-
CHLOROETHYL ACETATE	C	C	C	-	C	C	C	C	C	-	-	-	-
CHLOROMETHYL	C	C	C	A	C	C	C	C	C	-	-	-	-
CHLORONAPHTALENE	C	C	C	-	C	C	C	C	C	-	A	-	-
CHLORO NITROETHANE	C	C	C	-	C	C	C	C	C	-	-	-	-
CHLOROSULPHONIC ACID	C	C	C	A	C	C	C	-	C	-	-	-	-
CHLOROTOLUENE	C	-	-	-	C	C	C	C	C	-	A	-	-
CHLOROFORM	C	C	C	A	C	C	C	C	C	-	A	B	A

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CHROMIC ACID 10%	A	C	C	A	C	C	C	-	A	-	C	C	A
CHROMIC ACID 25%	A	C	C	A	C	C	C	-	A	-	C	C	A
CHROMIC ACID 50%	A	C	C	B	C	C	C	-	A	-	C	C	A
CHROMIUM HYDROXIDE	A	-	-	-	C	C	C	A	A	-	-	-	-
CHROMIUM SULPHATE	A	-	-	-	C	C	C	A	-	-	-	-	-
CITRIC ACID	A	A	B	-	A	B	B	A	A	-	-	A	-
CITRUS PULP	A	A	B	-	A	B	B	A	A	-	-	-	-
COCONUT OIL	C	A	C	A	C	B	B	C	C	-	A	A	A
COD LIVER OIL	C	B	-	-	C	B	B	C	C	-	A	-	-
COKES OVEN GAS	-	B	B	-	C	B	B	C	C	-	-	-	A
COMPRESSOR OIL	C	-	-	-	C	A	A	C	B	-	-	-	-
COPPER ARSENATE	A	-	A	-	B	B	B	A	A	-	A	-	-
COPPER(I) CHLORIDE	A	A	B	A	A	A	A	A	A	-	C	A	A
COPPER(II) CHLORIDE	A	A	B	A	A	A	A	A	A	-	C	A	A
COPPER CYANIDE	A	A	B	A	B	A	A	A	A	-	-	A	A
COPPER NITRATE	A	-	B	A	A	B	B	A	A	-	-	A	-
COPPER OXYCHLORIDE	A	A	A	-	B	B	B	A	A	-	-	-	-
COPPER SULPHATE	A	A	B	A	A	B	B	A	A	-	-	A	-
COTTONSEED OIL	-	A	B	A	C	B	B	C	C	-	A	A	A
CREOSOTE OIL	C	C	C	A	C	C	C	C	C	-	C	B	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
CREOSOTE WOOD	C	C	C	A	C	C	C	C	C	-	A	C	-
CREOSOTE COAL TAR	C	C	C	A	C	C	C	C	C	-	A	C	-
CRESOL 90%, XYLOL 5%, DDT 5%	C	C	C	A	C	C	C	C	C	-	A	C	A
CRESOL 95%, XYLOL 5%	C	C	C	A	C	C	C	C	C	-	A	C	A
CRESYLIC ACID (= cresol)	C	C	C	A	C	C	C	C	C	-	A	C	A
CRUDE OIL	C	C	C	-	C	B	B	C	B	-	A	A	A
CRYOLITE 10%	-	-	-	A	B	B	B	B	A	-	A	-	-
CYANIDE	-	-	B	A	A	A	A	A	A	-	-	A	-
CYCLOHEXANE	C	C	C	-	C	B	B	C	C	-	A	C	A
CYCLOHEXANOL	C	C	C	-	C	C	C	C	C	-	C	A	A
CYCLOHEXANONE	C	C	C	-	C	C	C	C	C	-	A	B	-
CYCLOPENTANE	C	-	-	-	C	C	C	C	C	-	A	-	-
p-CYMENE	C	C	-	-	C	C	C	C	C	-	-	-	-
DDT2 KEROSEN	C	C	C	-	C	B	B	C	C	-	A	-	-
DECAHYDRONAPHTENE (decaline)	C	C	B	-	C	C	C	C	C	-	-	-	-
DECALIN	C	-	-	-	C	C	C	C	C	-	-	C	-
DECANE	C	B	-	-	C	C	C	C	C	-	-	A	A
DIESEL OIL	C	C	C	A	C	C	C	C	C	-	A	B	A
DIACETONE ALCOHOL	-	B	C	A	C	C	C	C	C	-	A	-	-
DIAMYL PHTALATE	C	-	-	-	C	C	C	C	C	-	-	-	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
DIAMYL NAPHTENE	C	-	-	-	C	C	C	C	C	-	-	-	-
DIBENZYL ETHER	-	-	C	A	C	C	C	C	C	-	A	-	-
DIBUTYL AMINE	C	C	C	A	C	C	C	C	C	-	-	-	-
DIBUTYL ETHER	C	C	-	A	C	C	C	C	-	-	A	-	-
DIBUTYL PHTALATE	C	B	C	B	C	C	C	C	C	-	A	-	-
DIBUTYL SEBACATE	C	B	-	A	C	C	C	C	C	-	-	-	-
DICHLORINE ACID	-	-	-	-	C	C	C	C	C	-	-	-	-
DICHLOROBENZENE	C	C	C	B	C	C	C	C	C	-	A	-	-
DICHLOROBUTENE	C	C	C	-	C	C	C	C	C	-	-	-	-
DICHLORODIFLUORO-METHANE	C	C	C	-	C	C	C	C	C	-	A	A	-
DICHLOROMETHANE	C	C	C	-	C	C	C	C	C	-	-	-	-
DICHLOROPROPENE	C	C	C	-	C	C	C	C	C	-	-	-	-
DICHLOROTETRA-FLUOROETHANE	C	C	C	-	C	C	C	C	C	-	A	A	-
DICHLOROPHENOXY ACETIC ACID	C	-	-	-	C	C	C	C	C	-	-	-	-
DICYCLOHEXYLAMINE	C	C	-	-	C	C	C	C	C	-	-	-	-
DI-DOWTHERM (A+E)	-	B	C	-	C	C	C	C	C	-	A	-	-
DIETHYL AMINE	C	B	C	A	C	C	C	C	C	-	A	-	-
DIETHYL CARBONATE	-	C	-	-	C	C	C	C	C	-	-	-	-
DIETHYL ETHER	C	C	C	A	C	C	C	C	C	-	A	-	-
DIETHYL FATTY ACID	-	-	-	-	-	C	C	C	C	-	-	-	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
DIETHYL PHTALATE	C	-	C	-	C	C	C	C	C	-	A	-	-
DIETHYL GLYCOL	A	B	B	A	A	A	A	A	A	-	A	A	-
DIETHYL KETONE	B	-	C	-	B	C	C	B	C	-	-	-	-
DIETHYL OXALATE	C	-	C	-	C	C	C	C	C	-	-	-	-
DIETHYL SEBACATE	C	B	-	-	C	C	C	C	C	-	A	-	-
DIISOBUTENE	C	C	-	A	C	-	-	C	C	-	A	-	-
DIISOBUTYL KETONE	C	-	-	C	C	C	C	C	C	-	A	-	-
DIISOPROPYL ETHER	C	C	C	C	C	C	C	C	C	-	-	-	-
DIISOPROPYL KETONE	C	C	C	C	C	C	C	C	C	-	A	-	-
DIMETHYL AMINE	C	-	-	C	C	C	C	C	C	-	-	-	-
DIMETHYL ANILINE	C	C	C	-	C	C	C	C	C	-	-	-	-
DIMETHYL ETHER	C	A	-	C	C	C	C	C	C	-	A	-	-
DIMETHYL FORMAMIDE	C	C	C	A	A	B	B	A	C	-	A	-	-
DIMETHYL PHOSPHITE	-	-	-	-	B	C	C	B	C	-	-	-	-
DIMETHYL PHTALATE	C	-	-	-	C	C	C	C	C	-	-	-	-
DIMETHYL SULPHIDE	-	-	-	-	C	C	C	C	C	-	-	-	-
DIOCTYL ADIPATE	C	-	-	-	C	C	C	C	C	-	-	-	-
DIOCTYL PHTALATE (DOP)	C	C	C	A	C	C	C	C	C	-	-	-	-
DIOCTYL SEBACATE	C	C	C	-	C	C	C	C	C	-	-	-	-
DIOXANE	C	C	C	C	C	C	C	C	C	-	A	-	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
DIVINYL BENZENE	C	C	-	-	C	C	C	C	C	-	-	-	-
DODECYL BENZENE	C	-	-	-	C	C	C	C	C	-	A	C	C
DODECYL TOLUENE SULFONATE	C	-	-	-	C	C	C	C	C	-	-	-	-
EPICHLOROHYDRINE	C	C	C	C	C	C	C	C	C	-	A	A	C
ETHANOLAMINE	-	B	C	-	C	C	C	C	C	-	A	C	B
ETHER	C	C	C	B	C	C	C	C	C	-	C	-	-
ETHYL ACETATE	B	B	C	A	B	C	C	B	C	-	C	A	A
ETHYL ALCOHOL	A	B	C	A	A	A	A	A	B	-	A	B	A
ETHYL AMINE	C	C	C	-	-	C	C	C	C	-	A	C	C
ETHYL BENZENE	C	C	C	-	C	C	C	C	C	-	A	C	A
ETHYL BENZOATE	C	C	C	-	C	C	C	C	C	-	A	A	-
ETHYL BROMIDE	C	C	C	-	C	C	C	C	C	-	A	-	-
ETHYL BUTYRATE	C	-	C	-	C	C	C	C	C	-	A	A	-
ETHYL CELLULOSE	-	C	C	-	A	B	B	A	B	-	A	B	-
ETHYL CHLORIDE	C	C	C	-	C	C	C	C	C	-	A	B	A
ETHYLCHLOROFORMATE	C	C	-	-	C	C	C	C	C	-	-	A	-
ETHYL CYANOACETATE	C	-	-	-	-	C	C	-	C	-	-	-	-
ETHYL DICHLORIDE	C	C	-	-	C	C	C	C	C	-	-	-	-
ETHYL ETHER	C	C	C	C	C	C	C	C	C	-	A	B	A
ETHYL FORMATE	B	C	C	C	C	C	C	B	C	-	A	-	-

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ETHYL HEXANOL	-	B	-	-	C	C	C	C	C	-	-	-	-
ETHYL IODIDE	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYL ISOBUTYLETHER	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYL ISOBUTYRATE	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYL MERCAPTAN	C	C	-	-	C	C	C	C	C	-	-	-	-
ETHYL OXALATE	C	C	-	-	-	C	C	C	C	-	-	-	-
ETHYL PENTACHLOROBENZENE	C	C	-	-	C	C	C	C	C	-	-	-	-
ETHYL PROPIONATE	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYL PROPYLETHER	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYL SILICATE	-	-	C	-	A	A	A	A	A	-	A	-	-
ETHYLAMYL KETONE	C	-	-	-	C	C	C	C	C	-	-	-	-
ETHYLENE DIAMINE	C	A	C	-	C	C	C	C	C	-	-	-	-
ETHYLENE GLYCOL	A	A	A	A	A	A	A	A	A	-	A	A	-
ETHYLENE OXYDE	A	C	C	A	C	C	C	C	C	-	A	-	A
ETHYLHEXYL PHOSPHATE DIPHENYL	-	-	-	-	C	C	C	C	C	-	-	-	-
ETHYLMETHYL KETONE	B	C	C	-	B	C	C	B	C	-	-	-	-
FAECES	A	A	A	-	A	A	A	A	A	-	A	A	-
FERRIC OXIDE	A	A	A	-	A	A	A	A	A	-	-	-	-
FERRIFEROUS CHLORIDE (338 K)	A	-	-	A	A	A	-	A	A	-	A	-	-
FERRO HYDROXIDE	A	-	-	A	C	C	C	A	A	-	-	-	-

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FERROUS SULPHATE	A	B	A	-	A	A	A	A	A	-	A	A	-
FLEXOL 300 (dioctyl phtalate - DOP)	C	C	C	-	C	C	C	C	C	-	-	-	-
FLUOBORIC	A	A	B	-	A	B	B	A	A	-	A	A	-
FLUORIC ACID	A	-	-	-	C	C	C	B	A	-	C	A	A
FLUOBORIC ACID 65%	A	A	B	-	C	C	C	C	A	-	A	-	-
FLUOROBENZENE	C	C	C	-	C	C	C	C	C	-	-	-	-
FLUROSILICIC ACID	A	C	B	-	-	C	C	-	A	-	-	-	-
FLUROSILICIC ACID 50%	A	C	B	-	-	C	C	-	A	-	-	-	-
FORMALDEHYDE 37%	A	A	B	-	A	B	B	A	B	-	A	A	A
FORMALDEHYDE 40% (343 K)	A	A	B	-	C	C	C	A	C	-	A	A	A
FORMAMIDE (FORMYLAMINE)	A	-	-	-	A	B	B	A	A	-	A	-	-
FORMIC ACID	A	C	C	-	C	C	C	B	C	-	B	A	A
FREON 11	C	C	C	-	C	C	C	C	C	-	A	A	A
FREON 112	C	C	C	-	C	C	C	C	C	-	A	A	-
FREON 113	C	C	C	-	C	C	C	C	C	-	A	A	-
FREON 114	C	C	-	-	C	C	C	C	C	-	A	A	A
FREON 115	C	C	-	-	C	C	C	C	C	-	A	A	-
FREON 12 (LIQUID)	C	C	-	-	C	C	C	C	C	-	A	A	A
FREON 13	C	C	-	-	C	C	C	C	C	-	A	A	-
FREON 14	C	C	-	-	C	C	C	C	C	-	A	A	-

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FREON 21	C	C	-	C	C	C	C	C	C	-	A	B	A
FREON 22	C	C	-	C	C	C	C	C	C	-	A	-	A
FREON C 316	C	C	-	-	C	C	C	C	C	-	A	A	-
FREON C 318	C	C	-	-	C	C	C	C	C	-	A	A	-
FUEL OIL	C	C	B	-	C	B	B	C	C	-	A	A	A
FURAN	C	C	A	C	C	C	C	C	C	-	A	A	C
FURFURAL	A	C	C	B	C	C	C	C	C	-	A	A	A
GALLNUTOIL	-	-	-	-	B	C	C	B	A	-	A	-	-
GARLIC	-	-	-	-	A	A	A	-	-	-	A	A	A
GASOLINE OCTANE 100	C	C	C	A	C	C	C	C	C	-	A	B	A
GASOLINE OCTANE 65	C	-	-	A	C	C	C	C	C	-	A	B	A
GELATIN (GLUE)	A	A	A	A	A	A	A	A	A	-	A	A	A
GLUCOSE	A	A	A	-	A	A	A	A	A	-	A	A	A
GLUE	A	A	A	A	B	A	A	A	A	-	A	A	-
GLYCERINE	A	A	A	A	A	A	A	A	A	-	A	A	A
GLYCEROL	A	A	A	A	A	A	A	A	A	-	A	A	A
GLYCOL	A	A	A	A	A	A	B	A	A	-	-	A	-
GRAINSEED OIL	-	C	-	-	C	B	B	C	C	-	A	A	-
GREEN SULPHATE LIQUOR	-	A	A	-	A	B	C	A	A	-	A	A	-
HEPTANE	C	C	C	A	C	C	C	C	C	-	A	A	A

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Verderflex

Tube and hose selection



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Do not use

- : no data available

Chemicals	Tubing						Hose					Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
HEXALDEHYDE	-	B	C	-	C	C	C	C	C	-	A	-	-
HEXANE	C	C	C	A	C	C	B	C	C	-	A	C	A
HEXENE	C	C	-	A	C	B	B	C	C	-	-	-	-
HEXYL ALCOHOL	-	B	B	A	B	B	B	C	C	-	A	A	A
HOG FAT	-	B	B	-	C	B	C	C	B	-	A	A	-
HYDRAULIC OIL ESTER BASE	C	C	C	-	B	C	B	C	C	-	A	A	-
HYDRAULIC OIL MINERAL BASE	C	C	C	-	C	B	C	C	C	-	A	A	-
HYDRAULIC OIL PYDRAUL BASE	C	C	C	-	C	C	C	C	C	-	A	A	-
HYDRAULIC OIL SKYDROL BASE	C	-	-	-	C	C	C	C	C	-	A	A	-
HYDROCYANIC ACID	A	B	B	A	B	C	C	A	A	-	A	A	A
HYDROBROMIC ACID	A	C	C	A	B	B	B	A	A	-	-	A	A
HYDROBROMIC ACID 40%	A	C	C	A	C	C	C	B	A	-	C	A	A
HYDROCHLORIC ACID (338 K)	A	C	A	A	C	C	C	A	A	-	-	A	-
HYDROCHLORIC ACID 15%	A	C	A	A	A	A	A	A	A	-	C	A	A
HYDROCHLORIC ACID 30%	A	C	B	A	B	C	C	A	A	-	C	A	A
HYDROCHLORIC ACID 33% (323 K)	A	C	B	A	C	C	C	B	A	-	-	-	-
HYDROCHLORIC ACID CONC. 38%	A	C	C	B	C	C	C	A	A	-	C	A	A
HYDROFLUORIC ACID	A	B	C	A	C	C	C	B	A	-	C	A	A
HYDROFLUOSILICIC ACID	-	B	C	A	A	B	B	A	C	-	C	A	-
HYDROGEN FLUORIDE (COLD)	A	C	-	C	C	C	C	B	A	-	C	C	A

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Chemicals	Tubing						Hose					Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
HYDROGEN FLUORIDE (HOT)	C	C	-	C	C	C	C	C	C	-	C	C	-
HYDROGEN GAS (338 K)	A	C	B	A	A	A	A	A	A	-	A	A	A
HYDROGEN GAS (COLD)	A	C	B	A	A	A	A	A	A	-	A	A	A
HYDROGEN PEROXIDE 10%	C	A	B	A	C	C	C	A	A	-	A	A	A
HYDROGEN PEROXIDE 30%	C	A	C	A	C	C	C	C	A	-	A	A	A
HYDROGEN PEROXIDE 88%	C	B	C	C	C	C	C	C	A	-	A	A	-
HYDROGEN SULPHIDE	A	C	A	A	A	B	B	A	A	-	C	A	A
HYDROGEN SULPHIDE (DRY, COLD)	A	C	A	A	A	C	C	A	A	-	A	A	-
HYDROGEN SULPHIDE (DRY, WARM)	A	C	A	A	A	C	C	A	A	-	A	A	-
HYDROGEN SULPHIDE (MOIST, COLD)	A	C	A	A	A	C	C	A	A	-	A	A	-
HYDROGEN SULPHIDE (MOIST, WARM)	A	C	A	A	A	C	C	A	A	-	A	A	-
HYDROGEN SUPEROXIDE 35%	A	-	-	-	-	-	-	A	A	-	-	-	-
INK OIL	C	-	-	-	C	B	B	C	A	-	A	-	-
IODINE	A	C	B	-	C	C	C	C	A	-	C	A	A
IRON(II) ACETATE SOLUTION	A	C	-	A	A	A	A	B	A	-	-	-	-
IRON CHLORIDE	A	B	A	-	A	A	A	A	A	-	C	A	-
IRON CHLORIDE SULPHATE	A	B	A	-	B	-	-	A	A	-	-	-	-
IRON HYDROXIDE	A	-	-	-	C	C	C	A	A	-	-	-	-
IRON and ZINC PHOSPHATE SOLUTION	A	A	A	-	A	A	A	A	A	-	-	-	-
IRON NITRATE (338 K)	A	B	-	-	A	A	-	A	A	-	A	A	-

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Chemicals	Tubing						Hose					Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
IRON SULPHATE	A	B	A	-	A	A	A	A	A	-	A	A	-
ISOAMYLACETATE	C	C	-	-	C	C	C	C	C	-	A	-	-
ISOAMYLALCOHOL	C	C	-	-	C	C	C	C	C	-	-	-	-
ISOAMYLFORMATE	C	-	-	-	C	C	C	C	C	-	-	-	-
ISOBUTENE	C	C	B	-	C	C	C	C	C	-	A	A	-
ISOBUTYL ACETATE	C	-	-	A	C	C	C	C	C	-	A	-	-
ISOBUTYL ALCOHOL	A	A	B	A	B	C	C	B	C	-	-	A	A
ISOBUTYLALDEHYDE	-	C	-	-	C	C	C	C	C	-	-	-	-
ISOBUTYL FORMATE	C	-	-	-	C	C	C	C	C	-	-	-	-
ISOCYANATE	-	-	C	-	C	C	C	C	C	-	-	-	-
ISODECANE	C	-	-	-	C	C	C	C	C	-	-	-	-
ISODODECANE	C	C	-	-	C	C	C	C	C	-	-	-	-
ISOOCTANE	C	C	B	A	C	B	B	C	C	-	A	A	-
ISOPROPYL ACETATE	B	C	C	C	B	C	C	B	B	-	A	A	-
ISOPROPYL ALCOHOL	A	A	B	A	A	B	B	A	C	-	A	A	A
ISOPROPYL CHLORIDE	C	C	-	A	C	C	C	C	A	-	A	C	-
ISOPROPYL ETHER	C	C	A	C	C	C	C	C	C	-	A	C	A
JET FUELS (JP1 TILL JP5)	C	C	B	A	C	B	B	C	C	-	A	A	A
KEROSENE	C	C	C	A	C	B	B	C	C	-	A	A	A
LACQUERS	-	C	C	C	C	-	-	C	C	-	A	-	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
LACQUER SOLVENTS	C	C	C	C	C	-	-	C	C	-	A	B	C
LACTIC ACID	A	A	A	A	B	-	-	B	A	-	-	A	-
LACTOL	-	-	-	-	C	B	B	C	C	-	A	-	-
LARD	A	A	B	A	C	B	B	C	B	-	A	B	A
LAURYL ETHER SULPHATE	A	-	-	-	B	C	C	A	B	-	-	-	-
LEAD ACETATE	A	C	B	A	A	A	A	A	A	-	A	A	-
LEAD ARSENATE	A	C	B	A	A	B	B	A	A	-	A	A	-
LEAD NITRATE	A	B	A	A	A	A	A	A	A	-	C	A	A
LEAD SULPHAMATE	A	B	A	A	A	A	A	A	A	-	-	A	-
LIME SULPHUR	A	B	A	A	A	A	A	A	A	-	A	A	-
LIME WATER	A	B	A	A	A	A	A	A	A	-	A	-	-
LINSEED OIL	C	B	-	A	C	C	C	C	B	-	A	A	A
LIQUID MANURE	A	-	-	-	A	A	A	A	A	-	A	A	-
LITHIUM HYDROXIDE	A	C	-	A	A	A	A	A	A	-	A	A	A
LUBRICATING OIL	C	C	B	-	C	B	B	C	B	-	A	-	A
LYE (CAUSTIC)	A	A	A	A	A	A	A	A	A	-	A	A	A
MAGNESIUM CARBONATE	A	-	B	A	A	A	A	A	A	-	A	A	-
MAGNESIUM CHLORIDE	A	A	A	A	A	A	A	A	A	-	C	A	-
MAGNESIUM HYDROXIDE	A	B	A	A	A	A	A	A	A	-	A	A	A
MAGNESIUM NITRATE	A	B	B	A	A	A	A	A	A	-	A	A	-

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	Verderprene®	Silicon	Tygon®	Viton®	NIR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
MAGNESIUM SULPHATE	A	A	C	A	A	A	A	A	A	-	A	A	-
MAGNESIUM SULPHIDE	A	C	C	-	-	-	-	A	A	-	-	-	-
MAGNESIUM SULPHITE	A	A	-	-	-	-	-	A	A	-	-	-	-
MANGANESE SULPHATE	A	C	C	A	A	A	A	A	A	-	-	-	-
MARGARINE OIL	-	-	-	-	C	A	A	C	C	-	-	-	-
MERCAPTANE (mercaptane group)	C	-	-	-	C	C	-	C	C	-	-	-	-
MERCURY	A	A	B	A	A	A	A	A	A	-	A	A	A
MERCURY(I) CHLORIDE	A	A	-	A	A	B	B	A	A	-	C	A	-
MERCURY(II) CHLORIDE	A	A	-	A	A	B	B	A	A	-	C	A	-
MERCURY CYANIDE	A	-	-	A	A	B	B	A	A	-	A	A	A
METHANOL (methyl alcohol)	A	A	A	A	A	A	A	A	A	-	A	A	A
METHYL ACETATE	B	C	C	C	B	C	C	B	C	-	A	B	A
METHYL ACETONE	B	-	A	-	B	C	C	B	C	-	A	-	C
METHYL ACETOACETATE	C	B	-	-	C	C	C	C	C	-	A	-	-
METHYL AMINE	C	-	C	A	C	C	C	C	C	-	A	C	B
METHYL AMYLACETATE	C	-	-	-	C	C	C	C	C	-	A	-	-
METHYLAMYL CARBINOL	C	-	-	-	C	C	C	C	C	-	A	-	-
METHYL ANILINE	C	-	-	A	C	C	C	C	C	-	-	-	-
METHYL BROMIDE	C	-	C	-	C	C	B	C	C	-	A	C	A
METHYL BUTYL KETONE	C	C	C	-	B	B	C	B	C	-	A	C	C

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
METHYL BUTYRATE	C	-	-	-	C	C	C	C	C	-	-	-	-
METHYLCELLOSOLVE (2-methoxyethanol)	A	C	A	B	C	C	C	C	C	-	A	A	A
METHYLCHLORIDE	C	C	C	C	C	C	C	C	C	-	A	B	A
METHYL ETHYL KETONE (MEK)	B	C	C	-	C	C	C	C	C	-	A	C	C
METHYLFORMATE	B	C	-	A	C	C	C	C	C	-	-	-	-
METHYL IODIDE	C	-	-	-	C	C	C	C	C	-	A	-	-
METHYLISOBUTYLCARBINOL	-	-	-	C	C	C	B	C	C	-	-	-	-
METHYLISOBUTYL KETONE	C	C	C	-	B	B	C	C	C	-	A	A	B
METHYLISOBUTYRATE	C	-	-	C	C	C	C	C	C	-	-	-	-
METHYL ISOPROPYL KETONE	C	C	C	A	C	C	C	C	C	-	A	B	A
METHYL METHACRYLATE	C	C	C	-	C	C	C	C	C	-	A	-	A
METHYL OLEATE	C	-	-	-	C	C	C	C	C	-	-	-	-
METHYL PROPIONATE	C	-	-	-	C	C	C	C	C	-	-	-	-
METHYL SALICYLATE	C	-	C	-	C	C	A	C	C	-	-	-	-
METHYLENE CHLORIDE	C	C	C	-	C	C	B	C	C	-	A	C	B
MILK	A	A	A	A	B	A	C	B	A	-	A	A	A
MINERAL OIL	C	A	A	A	C	A	-	C	A	-	A	A	A
MOLASSES	A	A	A	A	A	A	C	A	A	-	A	A	A
MONOBROMOBENZENE	C	A	C	A	C	C	C	C	C	-	-	-	-
MONOCHLOROANILINE	C	-	-	A	C	C	A	C	C	-	-	-	-

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
MONOCHLORO BENZENE	C	C	C	-	C	C	C	C	C	-	A	-	-
MONOCHLORODI-FLUOROMETHANE	C	C	C	-	C	C	C	C	C	-	A	A	-
MONOCHLOROTRI-FLUOROMETHANE	C	C	C	-	C	C	C	C	C	-	-	-	-
MONOETHANOLAMINE	C	B	-	-	C	C	C	C	C	-	A	A	B
MONOSODIUM GLUTAMATE	A	-	-	-	C	A	C	A	B	-	-	-	-
MOTOR OIL	C	-	B	-	C	B	A	C	B	-	A	-	-
MURIATIC ACID (hydrochloric acid)	A	C	A	-	B	C	B	A	A	-	-	-	-
NAPHTA	C	C	C	A	C	-	C	C	C	-	A	A	-
NAPHTALENE	C	C	C	A	C	C	C	C	C	-	A	C	A
NAPHTHENE	C	C	C	A	C	C	C	C	C	-	A	-	-
NATURAL GAS	A	A	B	A	B	A	A	B	B	-	A	A	-
NATURAL GAS (DRY)	A	A	B	A	B	A	A	B	A	-	A	A	-
NATURAL GAS (WET)	A	A	B	A	B	A	A	B	A	-	A	A	-
NICKEL CHLORIDE	A	A	B	A	A	A	A	A	A	-	C	A	-
NICKEL HYDROXIDE	A	A	B	-	B	-	-	A	A	-	-	-	-
NICKEL NITRATE	A	-	-	A	A	A	A	A	A	-	C	A	-
NICKEL SULPHATE	A	A	A	A	A	A	A	A	A	-	A	A	-
NICOTINE BENTONITE	-	-	-	A	C	B	B	C	C	-	-	-	-
NICOTINE SULPHATE	-	-	-	-	A	A	A	A	A	-	-	-	-
NITRIC ACID 2%	A	A	A	A	C	C	C	A	A	-	A	A	A

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Chemicals	Tubing							Hose				Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
NITRIC ACID 10%	A	B	A	A	C	C	C	A	A	-	A	A	A
NITRIC ACID 25%	B	C	B	A	C	C	C	B	A	-	-	A	A
NITRIC ACID 40%	B	C	B	A	C	C	C	B	B	-	A	A	A
NITRIC ACID 50%	-	C	C	A	C	C	C	C	C	-	A	C	A
NITRIC ACID 60%	C	C	C	A	C	C	C	C	C	-	A	C	A
NITRIC ACID 70%	C	C	C	B	C	C	C	C	C	-	A	C	C
NITRIC ACID (FUMING)	C	C	C	B	C	C	C	C	C	-	C	C	-
NITRO-BENZENE	C	C	C	A	C	C	C	C	C	-	A	A	A
NITROGLYCERINE	-	-	-	-	C	C	C	C	C	-	-	-	-
NITROSYL CHLORIDE	C	-	-	-	C	C	C	C	C	-	A	-	-
NITROETHANE	-	C	C	C	C	C	C	C	C	-	A	B	A
NITROMETHANE	-	C	C	-	C	C	C	C	C	-	A	B	A
NITRO-OCTANE	C	C	C	-	C	C	C	C	C	-	-	-	-
NITROPROPANE	-	C	C	-	C	C	C	C	C	-	A	-	-
NITROUS ACID	A	A	A	A	C	C	C	A	A	-	A	A	-
OCTANE	C	C	-	A	C	B	B	C	C	-	-	C	A
OCTYL ALCOHOL	C	B	C	-	C	C	C	C	C	-	A	-	-
OCTYL ALDEHYDE	C	B	-	-	C	C	C	C	C	-	-	-	-
OLEIC ACID	B	C	B	-	C	C	C	C	C	-	-	-	-
OLEINIC ACID	B	C	B	-	C	C	C	C	C	-	A	-	-

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Chemicals	Tubing						Hose					Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
OLEUM (fuming sulfuric acid)	B	C	C	A	C	C	A	B	B	-	-	A	-
OLIVE OIL	-	B	B	A	C	B	A	C	C	-	A	A	A
OXALIC ACID	A	B	B	-	A	B	-	A	A	-	C	A	A
OXYGEN	A	A	A	A	B	B	A	A	A	-	A	A	A
OZONE	A	A	A	A	C	C	A	A	A	-	A	C	A
PALMITIC ACID	A	C	C	A	C	B	B	C	C	-	A	A	A
PALM OIL	A	C	B	-	C	B	A	C	C	-	A	-	-
PARAFORMALDEHYDE	-	-	-	B	C	B	C	C	C	-	A	-	-
PARAFFIN OIL 50%	C	C	A	A	C	C	C	C	C	-	A	A	A
PENTANE	C	C	C	A	C	B	C	C	C	-	-	-	-
PENTACHLOROPHENOL	C	-	C	A	C	C	C	C	C	-	-	-	-
PERACETIC ACID 15% (peroxyacetic acid)	A	B	B	A	C	C	C	A	A	-	-	A	-
PERCHLORIC ACID	A	C	C	A	C	C	C	C	B	-	A	-	-
PERCHLORO ETHENE	C	B	C	B	C	C	C	C	C	-	A	-	-
PETROLEUM (to 363 K)	C	C	B	A	C	C	C	C	C	-	A	C	A
PHENOL	C	C	C	C	C	C	C	C	C	-	-	A	A
PHENYL ETHYL ETHER	C	C	-	-	C	C	C	C	C	-	-	-	-
PHOSPHORIC ACID 7% (50 °C)	A	B	A	-	A	A	C	A	A	-	-	-	-
PHOSPHORIC ACID 7% (70 °C)	A	B	B	-	B	B	C	A	A	-	-	-	-
PHOSPHORIC ACID 8% (80 °C)	A	B	B	-	C	C	C	A	A	-	-	-	-

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Verderflex

Tube and hose selection



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C: strong action

Do not use

- : no data available

Chemicals	Tubing							Hose					Inserts
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
PHOSPHORIC ACID 50%	A	B	B	-	A	B	C	A	A	-	A	-	A
PHOSPHORIC ACID 75%	A	C	B	A	A	B	C	A	A	-	-	A	A
PHOSPHORIC ACID 85%	A	C	B	A	A	B	B	A	A	-	-	A	A
PHOSPHOR TRIBUTYRATE	-	-	-	-	-	C	C	C	C	-	-	-	-
PHOSPHOROUS OXYCHLORIDE	C	-	-	-	C	C	C	C	C	-	-	-	-
PICKLE SOL. (20% NITR. ACID, 4% HF)	-	C	-	-	C	C	C	B	A	-	-	-	-
PICRIC ACID	A	C	C	-	B	C	C	A	A	-	A	A	C
PINE OIL	-	C	C	C	C	B	C	C	C	-	A	-	-
PINE TREE OIL	-	C	C	A	C	B	B	C	C	-	-	-	-
POLYACRYLIC ACID	-	-	-	A	C	C	B	C	C	-	-	-	-
POLYALKYLENE GLYCOL	-	-	-	A	C	B	B	C	B	-	-	-	-
POLYALUMINIUM CHLORIDE	A	-	-	A	B	A	C	B	-	-	-	-	-
POLYVINYL ACETATE	-	C	-	-	A	-	B	A	-	-	-	-	-
POLYVINYL ALCOHOL (CONCENTRATED)	-	-	-	A	C	C	B	C	-	-	-	-	-
POLYVINYL ALCOHOL (SOLUTION)	-	-	-	A	A	C	C	A	-	-	-	-	-
POTASSIUM BICHROMATE	A	A	B	-	B	B	B	A	A	-	-	-	-
POTASSIUM BORATE	A	-	B	-	A	A	C	A	A	-	A	A	A
POTASSIUM BROMIDE	A	A	B	A	A	A	C	A	A	-	C	A	A
POTASSIUM CARBONATE	A	B	B	A	A	A	C	A	A	-	A	A	A
POTASSIUM CHLORATE	A	B	B	A	B	B	C	A	A	-	A	A	-

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
POTASSIUM CHLORIDE	A	A	A	-	A	A	C	A	A	-	A	A	-
POTASSIUM CYANIDE	A	A	A	A	A	A	C	A	A	-	A	A	-
POTASSIUM DICHROMATE	A	A	B	-	B	B	C	A	A	-	A	A	-
POTASSIUM HYDROXIDE	A	C	B	-	A	B	B	A	A	-	A	-	-
POTASSIUM NITRATE	A	A	A	A	A	A	A	A	A	-	A	A	-
POTASSIUM PERMANGANATE	A	-	B	A	B	B	B	A	A	-	A	A	-
POTASSIUM SULPHATE	A	A	B	A	A	A	A	A	A	-	-	A	A
POTASSIUM SULPHITE	A	A	B	A	A	A	A	A	A	-	A	-	-
PRODUCER GAS (WOOD GAS)	-	B	A	-	B	A	A	B	A	-	A	A	-
PROPANE GAS	C	C	A	A	C	A	A	C	B	-	A	C	A
PROPANE LIQUID	C	C	A	A	C	A	A	C	B	-	A	A	A
PROPENE BROMIDE	C	C	C	-	C	C	C	C	C	-	-	-	-
PROPIONIC ACID	-	A	C	C	C	C	C	C	C	-	A	A	-
PROPIONITRILE	C	-	-	-	C	C	C	C	C	-	A	A	-
PROPYL ACETATE	B	C	C	C	B	C	C	B	C	-	A	B	A
PROPYL ALCOHOL	A	A	A	A	A	C	C	A	C	-	A	A	A
PROPYLBENZENE	C	-	-	-	C	C	C	C	C	-	-	-	-
PROPYL DICHLORIDE	C	-	-	A	C	C	C	C	C	-	-	-	-
PROPYL FORMATE	B	-	-	-	C	C	C	C	C	-	-	-	-
PROPYL PROPIONATE	C	-	-	-	C	C	C	C	C	-	-	-	-

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	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
PROPYLENE CARBONATE	A	-	-	-	A	C	C	A	C	-	-	-	-
PROPYLENE CHLOROHYDRINE	C	-	-	-	C	C	C	C	C	-	-	-	-
PROPYLENE CHLORIDE	C	-	-	A	C	C	C	C	C	-	-	-	-
PROPYLENE GLYCOL	A	A	B	-	A	A	A	A	A	-	A	A	-
PROPYLENE OXIDE	-	C	C	C	C	C	C	-	C	-	-	-	-
PROPYLENE DICHLORIDE	C	C	-	-	C	C	C	C	C	-	A	-	-
PROPYLENE DIAMINE	C	-	-	-	C	C	C	C	C	-	-	-	-
PROPYLENE TRICHLORIDE	C	-	-	-	C	C	C	C	C	-	-	-	-
PRUSSIC ACID 20%	A	B	B	A	A	B	B	A	A	-	-	-	-
PRUSSIC ACID 98% CONCENTRATED	-	B	B	A	B	B	B	A	A	-	-	-	-
PYRANOL	-	C	-	-	C	C	C	C	C	-	-	-	-
PYRIDINE	C	C	C	C	C	C	C	C	C	-	A	-	B
RAPESEED OIL	-	C	-	A	C	B	B	C	C	-	A	-	-
RESIN (ROSIN)	-	-	-	-	C	B	B	C	C	-	A	A	-
ROTENONE IN WATER	-	-	-	-	A	A	A	A	A	-	A	-	-
SEA WATER	A	A	A	A	A	A	A	A	A	-	A	A	A
SEWAGE WATER (no hydrocarbons)	A	A	A	A	A	A	A	A	A	-	A	A	A
SHELL DD	C	-	-	-	C	B	B	C	A	-	-	-	-
SILICON CARBIDE (SLURRY)	A	A	A	-	A	A	A	A	A	-	-	-	-
SILICON FLUORIDE	A	C	-	-	A	C	C	A	A	-	-	-	-

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
SILICON TETRACHLORIDE	-	-	-	-	-	-	-	-	-	-	-	-	-
SILICONE OIL	A	C	B	A	A	A	A	A	A	-	A	A	A
SILVER CYANIDE (74 g/l)	A	C	B	A	A	B	B	A	A	-	-	A	A
SILVER NITRATE	A	A	B	A	A	A	A	A	A	-	C	A	-
SOAP OIL	-	-	-	A	C	B	B	C	A	-	A	A	-
SOAP SOLUTIONS	A	A	A	A	A	B	B	A	A	-	A	A	A
SODA	A	A	A	A	A	A	A	A	A	-	A	A	-
SODA LYE 1.25%	A	A	A	B	B	B	B	A	A	-	A	A	A
SODA LYE 2.5%	A	A	A	B	B	B	B	A	A	-	A	A	A
SODA LYE 50% (338 K)	B	-	-	C	C	C	C	B	B	-	A	A	-
SODIUM ACETATE	A	C	B	A	A	A	A	A	A	-	A	A	A
SODIUM ALUMINATE 3%	A	-	B	A	A	B	B	A	A	-	-	-	-
SODIUM ALUMINIUM SILICATE	A	A	B	-	A	A	A	A	A	-	-	-	-
SODIUM BICARBONATE	A	A	A	A	A	A	A	A	A	-	-	A	A
SODIUM BISULPHATE	A	A	A	A	A	A	A	A	A	-	-	A	A
SODIUM BROMIDE	A	-	B	A	A	C	C	A	A	-	C	A	A
SODIUM CARBONATE	A	A	B	A	A	A	A	A	A	-	-	A	A
SODIUM CHLORATE	A	C	B	A	C	C	C	A	A	-	C	A	-
SODIUM CHLORIDE	A	A	B	A	A	A	A	A	A	-	C	A	-
SODIUM CHLORIDE 25%	A	A	B	A	A	A	A	A	A	-	-	-	-

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
SODIUM CYANIDE	A	A	A	A	A	A	A	A	A	-	A	A	-
SODIUM DICHROMATE	A	B	B	A	B	B	B	A	A	-	-	A	A
SODIUM FLUOALUMINATE	A	-	B	-	A	A	A	A	A	-	-	-	-
SODIUM FLUORIDE	A	-	C	A	A	A	A	A	A	-	C	A	-
SODIUM HYDROSULPHIDE	A	A	A	-	A	A	A	A	A	-	-	-	-
SODIUM HYDROXIDE <5% (90 °C)	-	A	B	-	B	B	B	A	A	-	-	-	-
SODIUM HYDROXIDE 50% MAX.	A	B	C	C	B	B	B	A	A	-	A	A	A
SODIUM HYPOCHLORITE	A	B	C	A	C	C	C	A	A	-	-	-	-
SODIUM HYPOCHLORITE 20%	A	B	B	A	C	C	C	A	A	-	C	B	A
SODIUM IODIDE	A	C	B	A	B	C	C	A	A	-	-	-	-
SODIUM METABISULPHATE <2%	-	-	-	-	C	C	C	B	C	-	-	-	-
SODIUM METABISULPHATE >2%	-	-	-	-	C	C	C	C	C	-	C	C	C
SODIUM METABISULPHITE <2%	-	-	-	-	C	C	C	B	C	-	-	-	-
SODIUM METABISULPHITE >2%	-	-	-	-	C	C	C	C	C	-	C	C	C
SODIUM METABORATE 18% (333 K)	A	-	-	-	A	A	A	A	A	-	-	-	-
SODIUM METAPHOSPHATE	A	A	B	-	A	A	A	A	A	-	A	C	-
SODIUM NITRATE	A	C	A	A	A	A	A	A	A	-	-	A	A
SODIUM NITRITE	A	B	B	A	A	A	A	A	A	-	-	A	-
SODIUM OLEATE	-	-	-	-	C	C	C	C	C	-	-	-	-
SODIUM PERBORATE	A	B	A	A	B	C	C	A	A	-	C	A	-

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
SODIUM PEROXIDE	A	B	A	A	C	C	C	A	A	-	A	A	-
SODIUM PHOSPHATE	A	C	A	A	A	A	A	A	A	-	A	A	A
SODIUM PHOSPHATE (DI-BASIC)	A	C	B	A	A	A	A	A	A	-	A	A	-
SODIUM PHOSPHATE (MONO-BASIC)	A	C	B	A	A	A	A	A	A	-	A	A	-
SODIUM PHOSPHATE (TRI-BASIC)	A	B	B	A	A	A	A	A	A	-	A	A	-
SODIUM SALT	A	A	A	A	A	A	A	A	A	-	A	A	-
SODIUM SILICATE	A	A	A	-	A	A	A	A	A	-	A	A	A
SODIUM SILICOALUMINATE	A	A	A	-	A	A	A	A	A	-	-	-	-
SODIUM SULPHATE	A	A	A	A	A	A	A	A	A	-	A	A	-
SODIUM SULPHIDE	A	A	A	A	A	A	A	A	A	-	A	A	A
SODIUM SULPHITE	A	A	A	A	A	A	A	A	A	-	A	A	A
SODIUM THIOSULPHATE	A	A	A	A	A	A	A	A	A	-	A	A	-
SOYA OIL	C	C	B	A	C	A	A	C	B	-	A	A	-
SPENT SULPHITE LIQUOR	-	C	A	-	-	-	-	A	A	-	-	-	-
SPIRIT (85% ETHYL ALCOHOL)	A	B	C	A	A	A	A	A	A	-	A	A	-
STANNIC CHLORIDE	A	B	B	A	A	B	B	B	A	-	-	A	A
STEARIC ACID	A	B	A	A	C	B	B	C	C	-	A	A	A
STRONTIUM FERRITE	-	-	-	-	A	-	-	-	-	-	-	-	-
STYRENE	C	C	C	A	C	C	C	C	C	-	A	C	A
SUCCINIC ACID / AMBER ACID	A	-	-	A	A	-	-	A	-	-	-	-	-

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Chemicals	Tubing					Hose						Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
SULPHAMINIC ACID 2%	-	-	-	-	A	B	B	A	A	-	-	-	-
SULPHUR (363 K)	C	C	C	-	C	C	C	C	C	-	-	A	-
SULPHUR CHLORIDE	C	C	C	A	B	C	C	A	A	-	A	B	A-
SULPHUR DIOXIDE 1.5%	-	B	B	A	-	-	C	C	-	-	-	-	-
SULPHUR DIOXIDE 5% IN WATER	A	B	B	A	A	B	-	A	A	-	-	-	-
SULPHUR DIOXIDE GAS	A	A	A	A	C	C	B	A	A	-	-	-	-
SULPHUR SMOKE	-	-	-	A	A	B	C	A	A	-	-	-	-
SULPHUR TRIOXIDE	A	B	B	C	C	C	C	B	A	-	-	-	-
SULPHURIC ACID (338 K)	A	B	A	A	-	-	-	-	A	-	-	-	-
SULPHURIC ACID 5% (358 K)	A	B	A	C	-	-	-	-	A	-	-	-	-
SULPHURIC ACID 10% (COLD)	A	B	A	A	A	A	A	A	A	-	A	A	A
SULPHURIC ACID 10% (348 K)	A	B	A	A	-	-	B	A	A	-	-	-	-
SULPHURIC ACID 20%	A	C	A	A	A	B	B	A	A	-	A	A	A
SULPHURIC ACID 30%	A	C	A	A	A	B	B	A	A	-	A	A	A
SULPHURIC ACID 50%	A	C	A	A	B	B	B	A	A	-	C	A	A
SULPHURIC ACID 75% (COLD)	A	C	B	A	C	C	C	A	A	-	C	A	A
SULPHURIC ACID 95% (COLD)	A	C	C	A	C	C	C	B	A	-	A	C	A
SULPHURIC ACID 97%	A	C	C	C	C	C	C	C	A	-	-	C	-
SULPHURIC ACID 98%	A	C	C	C	C	C	C	C	B	-	-	C	-
SULPHUROUS ACID 10%	A	C	A	A	A	B	B	A	A	-	-	-	-

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Chemicals	Tubing							Hose				Inserts	
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
SULPHUROUS ACID 75%	A	C	B	A	B	C	C	A	A	-	-	-	-
SULPHONIC ACID	-	-	-	-	C	C	C	C	B	-	-	-	-
SUNFLOWER OIL	-	-	-	-	C	A	A	C	C	-	-	-	-
TALC	A	A	A	-	A	A	A	A	A	-	-	-	-
TALLOW (BEEF)	-	B	B	A	C	B	B	C	B	-	A	A	-
TANNIC ACID	A	B	A	A	A	A	A	A	A	-	A	A	A
TAR	C	B	C	-	C	C	C	C	C	-	A	A	A
TARTARIC ACID	A	A	A	A	A	B	B	A	A	-	A	A	A
TETRABROMOETHANE	C	C	C	-	C	C	C	C	C	-	-	C	-
TETRABUTYLTITANATE	-	-	-	-	C	C	C	C	C	-	-	-	-
TETRACHLOROCARBON	C	C	C	A	C	C	C	C	C	-	-	-	-
TETRACHLORODIFLUOROETHANE	C	C	C	-	C	C	C	C	C	-	-	-	-
TETRACHLOROETHANE	C	C	C	A	C	C	C	C	C	-	B	C	A
TETRACHLORONAFTALENE	C	-	-	-	C	C	C	C	C	-	-	-	-
TETRAFLUOROCARBON	C	-	-	-	C	C	C	C	C	-	-	-	-
TETRAHYDROFURAN (THF)	C	C	C	A	C	C	C	C	C	-	A	B	A
THORIUM SLURRY	-	-	-	-	A	B	B	A	A	-	-	-	-
TITANIUM DIOXIDE (30%)	A	-	A	A	A	B	B	A	A	-	-	-	-
TITANIUM SULPHATE (1%)	A	A	A	A	A	B	B	A	A	-	-	-	-
TOLUENE	C	C	C	A	C	C	C	C	C	-	A	C	A

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Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
TRIBUTYOXYPHOSPHATE	-	C	C	-	C	C	C	C	C	-	-	-	-
TRIBUTYLPHOSPHATE	-	C	C	C	C	C	C	C	C	-	A	A	A
TRICHLOROENZENE	C	C	-	-	C	C	C	C	C	-	A	-	-
TRICHLOROETHYLENE	C	C	C	A	C	C	C	C	C	-	A	-	-
TRICHLOROFLUOROMETHANE	C	-	C	-	C	C	C	C	C	-	A	A	-
TRICHLOROTRIFLUOROETHANE	C	-	-	-	C	C	C	C	C	-	A	A	-
TRICRESYL PHOSPHATE	-	C	C	A	C	C	C	C	C	-	-	-	-
TRIETHANOLAMINE	C	C	-	-	C	C	C	C	C	-	A	C	C
TRIPHENYL PHOSPHATE	-	-	-	-	A	A	A	A	A	-	-	-	-
TRISODIUM PHOSPHATE (TSP)	A	A	A	-	A	A	A	A	A	-	A	A	-
TUNG OIL (China wood oil)	C	C	-	-	C	C	C	C	C	-	A	A	-
TURPENTINE (mainly pinene)	C	C	B	A	C	C	C	C	C	-	A	B	-
URANIUM	-	A	-	A	A	A	A	A	A	-	-	-	-
UREA	A	B	A	A	A	B	B	A	A	-	A	A	A
URINE	-	-	-	A	A	B	B	A	A	-	A	A	A
VEGETABLE OIL	AB	B	C	A	C	B	B	C	B	-	A	A	A
VINEGAR ANHYDRIDE 50%	-	-	-	A	C	C	C	B	B	-	A	A	-
VINYLCHLORIDE	C	-	C	C	C	C	C	C	C	-	A	C	A
WATER	A	A	A	A	A	A	A	A	A	-	A	C	-
WATER, CONDENSATION	A	A	A	A	A	A	A	A	A	-	A	A	-

Note: All information provided is advisory and a compatibility test should be carried out by the end user in the event of any doubt



Verderflex

Tube and hose selection



VERDERFLEX®

A: no or little action
Should be acceptable for use in pump

B: moderate action
Use if no alternative is available
or if short service is acceptable

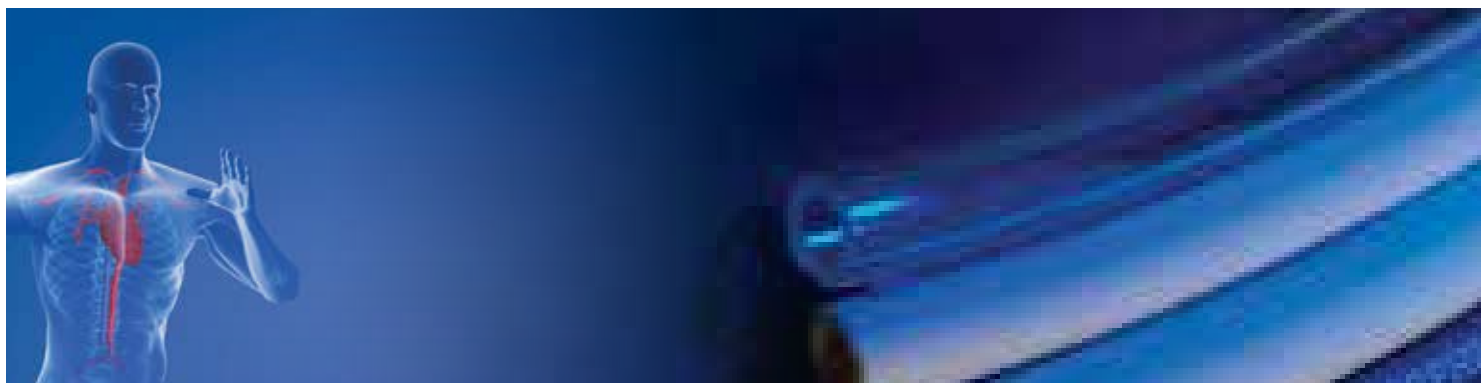
C: strong action
Do not use

- : no data available

Chemicals	Tubing					Hose					Inserts		
	Verderprene®	Silicon	Tygon®	Viton®	NR	NBR	NBRF	EPDM	CSM	FKM	SS316	Polypropylene	PVDF
WATER, DISTILLED	A	A	A	A	A	A	A	A	A	-	A	A	A
WATER, DRINK	A	A	A	A	A	A	A	A	A	-	A	A	-
WATER, MIN. WITH OXYD. SALTS	A	-	-	-	B	C	C	A	A	-	-	-	-
WATER, MIN. WITHOUT OXYD.SALTS	A	-	-	-	A	A	A	A	A	-	-	-	-
WHISKY AND WINE	A	A	A	A	A	A	A	A	A	-	A	A	A
WHITE OIL 10%	-	C	-	-	C	A	A	C	C	-	A	-	-
WHITE SPIRIT	C	C	B	-	C	B	B	C	C	-	-	-	-
WOOD OIL	-	C	A	-	C	C	C	C	C	-	-	-	-
WOOLFAT	-	-	B	-	C	C	C	C	-	-	-	-	-
XYLENE	C	C	C	A	C	C	C	C	C	-	A	C	A
ZEOLITE	-	-	B	-	B	B	B	A	A	-	A	-	-
ZINC AMMONIUM CHLORIDE	A	A	A	-	A	C	C	A	A	-	-	-	-
ZINC BORATE	A	A	A	-	A	A	A	A	A	-	-	-	-
ZINC CHLORIDE	A	A	A	A	A	A	A	A	A	-	C	A	-
ZINC HYDROXIDE	A	A	A	-	A	B	B	A	A	-	-	-	-
ZINC OXIDE (300 K)	A	A	A	-	A	A	A	A	A	-	-	-	-
ZINC SULPHATE	A	A	A	A	A	A	A	A	A	-	-	A	-

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Any questions? You may still have questions and/or comments after reading this brochure. Please feel free to contact us on +44 (0)1924 221 020. You can also respond via email to info@verderflex.com. For more information about Verderflex please visit our website www.verderflex.com

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IN Pune **NL** Groningen/Vleuten **PL** Katowice **RO** Bucuresti/Sibiu
SK Bratislava **TH** Bangkok **US** Macon (GA) **ZA** Northriding