



Chemical Resistance Table

The Chemical Resistance Table was compiled for use as a guide in selecting the most satisfactory hose tube and cover stocks for specific chemical applications. The data included are the best available to us at this time and will be revised as additional test information is obtained. It is always advisable to test rubber stocks under actual application conditions whenever possible.

We recognize that much of the material contained in this resistance table must be, to a degree, general in nature. Factors such as method of compounding, temperature, chemical concentrations, conditions of exposure, etc., can appreciably affect polymer behavior.

For certain applications, hoses designed for these applications must be used; therefore, the choice of tube stocks is restricted. These applications are:

Steam	—	Hose from the Steam Hose line
Edible Products	—	FDA, 3A, USDA
Concentrated Chemicals	—	Hose from the Acid-Chemical Hose line
L.P Gas	—	LP Gas Hose only
Gasoline and Petroleum Products	—	Hoses from the Petroleum Transfer Hose line
Hydraulic	—	Hoses from Hydraulic Products Catalog

The nature of certain chemicals is such that Gates cannot offer a suitable hose to handle them.

Many of the common chemicals are included in the Chemical Resistance Table. If they are not listed, please contact Hose/Connectors Product Application, Denver.

NOTE: Before using a Gates hose to convey a chemical not listed in this Chemical Resistance Table, contact Denver Product Application for a recommendation. Phone (303) 744-5070.

Hose Selection Procedure:

- | | |
|---|--|
| <p>1. Identify the...
Size of Hose required.
Temperature of material being conveyed and environmental temperature.
Application conditions/requirements such as vibration, flexing, abrasion.
Material Being Conveyed
Pressure of operation and maximum obtainable in the system including "spikes" and pump/valve ratings.</p> | <p>3. with a 1 or 2 rating. For continuous contact applications make note of tube materials with a 1 rating only.</p> <p>4. Use the Industrial Hose Catalog, Industrial Hose Finder, or Hydraulic Hose Catalog to select hoses that have satisfactory working pressure ratings.</p> <p>5. Verify maximum and minimum operating temperatures.</p> <p>6. Select the hose that has the best chemical resistance rating (i.e. 1 is Preferred, 2 is Acceptable).</p> <p>7. Select the proper coupling for the hose chosen from the Industrial Hose/List Price Catalog</p> |
| <p>2. Locate the material being conveyed in the chemical resistance chart and identify potential tube materials: For intermittent contact or transfer service, make note of all tube materials</p> | |

NOTE: For Gates Acid/Chemical Hose, permanent style Couplings must be used for service temperatures above 125°F (52°C).

Due to continual product improvements, Gates reserves the right to alter specs and prices without prior notice.





LISTING OF GATES HOSE STOCK TYPES

Stock Type	Composition
A	Polychloroprene (Neoprene)
A ₂	Similar to Type A except it is white and is used primarily for edible products
C	Acrylonitrile and Butadiene (NBR)
C ₂	A blend of Type C and plastic. Used primarily as hose cover material
C ₃	Modification of Type C, with some properties similar to Type A
D	Natural Rubber (NR) and Styrene Butadiene (SBR)
D ₂	Similar to Type D, except it is white and compounded to handle food products
G	PolyVinyl Chloride (PVC)
H	Isobutylene and Isoprene (Butyl)
J	Chlorinated Polyethylene (CPE)
K	Specially compounded Cross-Linked Polyethylene (Gatron™)
L	Ultra High Molecular Weight Polyethylene Ethylene (UHMWPE)
M	Chlorosulfonated Polyethylene (Hypalon®)
P	Ethylene, Propylene Diene (EPDM)
S	Specially Compounded Material (Sanitron™)
T	Fluorinated Thermoplastic (Teflon®)
T ₁	FEP
T ₂	PTFE
U	Urethane
V	Fluorocarbon (FKM)
Z	Polyamide Resins (Nylon)

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CHARACTERISTICS AND RESISTANCE INFORMATION FOR HOSE TUBE AND COVER COMPOUNDS

These ratings are for normal or usual range of the specified compounds.
 Many are also modified to meet the needs of specific applications.
 See notes below.

GATES TYPE	A	C	D	G	H	J	K	L	M	P	T	U	V	Z
Elastomer	Poly Chloroprene	Acrylonitrile and Butadiene	Natural Rubber or Styrene Butadiene	Polyvinyl Chloride (plasticized)	Isobutylene and Isoprene	Chlorinated Polyethylene	Cross Linked Polyethylene	Ultra High Molecular Weight Polyethylene	Chloro-sulfonated Polyethylene	Ethylene Propylene Diene	Teflon®	Polyurethane	Fluoro-carbon Fluoro-elastomer	Polyamide Resins
Common Name or Trade Name	Neoprene	Buna-N Nitrile Petrothane™	Gum Rubber, Buna-S	PVC	Butyl	CPE	Gatron™	UHMWPE	Hypalon®	EPDM	Teflon	Urethane	FKM Viton Fluorel	Nylon
ASTM	CR	NBR	NR or SBR	—	IIR	CM	XLPE	UHPE	CSM	EPDM	FEP/PTFE	EU	FKM	PA
Physical Strength	Good	Good	Excellent	Fair to Good	Fair to Good	Good	Good	Very Good	Good to Excellent	Good	Very Good	Excellent	Good	Good
RESISTANCE TO: Abrasion	Good to Excellent	Fair to Good	Excellent	Good to Excellent	Fair to Good	Good	Good	Excellent	Good to Excellent	Good	Excellent	Excellent	Good to Excellent	Good to Excellent
Weather/Ozone	Good to Excellent	Poor	Poor to Fair	Excellent	Excellent	Good	Excellent	Good	Excellent	Excellent	Excellent	Fair to Good	Excellent	Excellent
Gas Permeation	Good	Good to Excellent	Good	Good	Excellent	Good	Good	Excellent	Good to Excellent	Fair to Good	Excellent	Fair to Good	Good	Excellent
Petroleum Oils	Excellent	Excellent	Poor	Good to Excellent	Poor	Good	Excellent	Excellent	Good to Excellent	Poor	Excellent	Good	Excellent	Excellent
Gasolines	Fair to Good	Excellent	Poor	Fair	Poor	Good	Excellent	Excellent	Fair	Poor	Excellent	Fair	Excellent	Excellent
High Temperatures	Good	Good To Excellent	Fair	Poor	Excellent	Excellent	Good	Fair	Good to Excellent	Excellent	Excellent	Fair	Excellent	Good
Low Temperatures	Fair to Good	Fair to Good	Good	Poor	Good	Good	Fair to Good	Fair	Fair	Fair to Good	Good	Excellent	Good	Excellent

- A₂ White food grade Neoprene, complies with FDA (tube)
- C₂ Modification of Nitrile with increased ozone resistance (tube and cover)
- C₄ Modification to Nitrile tube
- C₄ Modification of Nitrile with excellent abrasion, tearing and gouging resistance (cover)
- D₂ White food grade Natural Rubber, complies with FDA (tube)
- D₃ Natural Rubber
- B₁ B₂ R Proprietary for special applications. Contact Denver Hose Product Application
- P₂ Special for Steam Hose applications
- T₁ FEP
- T₂ PTFE





Gates Chemical Rating System

NOTE: Ratings are for the effect on the **polymer only.**

"1" Preferred: Constant Contact — This chemical is expected to have minor or no effect on the Polymer. Hose approved for continuous contact. Environmental changes such as temperature, concentration, etc., may promote increased degradation.

"2" Acceptable: Intermittent Contact — This polymer should give reasonably satisfactory service. Due to the nature of this chemical, and under prolonged continuous exposure, the rubber may show minor to moderate deterioration and/or solution discoloration. Hose in-tended for transfer service only. Environmental changes such as temperature, concentration, etc., may promote increased degradation.

"X" Not Recommended — The polymer is unsatisfactory for this chemical and should not be used.

"-" (Dash) — Insufficient or no data available for this material. Testing is advised.

NOTE 1. The above ratings as applied to the Chemical Resistance Table are intended as guides only. They are compiled from the best data available to us. Ratings shown in the table are based on 100% concentrated or saturated solutions, unless otherwise noted, and up to 100 F (+38°C), unless otherwise stated.

NOTE 2. If unusual conditions exist, a polymer test in the fluid is suggested.

NOTE 3. Where a chemical listed in the Resistance Table is soluble in a solvent other than water, the solvent should also be checked for its suitability with the polymer.

NOTE 4. Discoloration of fluids conveyed in the hose. There are no generally accepted standard tests for measuring or rating discoloration of fluids passing through a hose. The amount of discoloration that can be tolerated is usually established by the user on the basis of application. Obviously, products such as paint must be conveyed through a hose that has very good

non-discoloring characteristics. If the product is not visually affected, then the hose is satisfactory. For some products, the discoloration may be objectionable from a visual standpoint. Also, the concentration of the particles causing the discoloration may be objectionable if they affect the final use of the product.

Some of the more common methods of checking discoloration are:

1. Allowing the fluid to remain in a sample piece of hose for a specific period and expected operating temperature, then inspecting visually for discoloration.
2. Testing fluid as in No.1 above and then passing it through filter paper to check foreign content.
3. A more refined test can be made with a spectrophotometer. This instrument measures light transmission through the fluid before and after immersion tests with rubber stocks. This gives a relative rating expressed in percent, the original fluid being rated at 100%.

If discoloration of the product becomes a serious problem for a specific application, contact Denver Product Application for a recommendation. Phone (303) 744-5070.

NOTE 5. Fluid permeation through the tube wall needs to be considered. A tube material may show no sign of degradation, however hose failure can occur if material permeates through the tube to degrade adhesive layers or reinforcement.

Hose Coupling Material — Gates recommends hose couplings made of six materials: Iron or Carbon Steel, 304SS, 316SS, Aluminum, Brass and Polypropylene. The Chemical Resistance Table includes columns showing the suitability of a specific coupling material for the chemicals listed. In most instances, at least one coupling material is rated for each chemical. For certain chemicals, other metallic alloys or plastics than those shown in the table are required. These are generally available from coupling manufacturers, but are not stocked by Gates.



Note: For Explanation of Ratings, Refer to Page 142

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Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers															Couplings / Adapters		
			Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.													Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro				
			T	K	L	S	P	C	D	D	A	H	V	M	J				Z	G
			Teflon™ Gatlon™ UHMWPE	Sanitron™ EPDM NBR	SBR NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE	Nylon	PVC								
Amyl Acetate (Banana or Pearl Oil)	Colorless Liquid	1 1 1	-	2	X	X	X	X	2	X	X	X	1	1	X	X	1	1	X	
Amyl Alcohol	Colorless Liquid	1 2 2	2	2	2	2	2	2	2	1	2	1	1	2	1	1	1	1	1	
Amyl Chloride (Chloropentane)	Colorless Liquid	1 - -	-	-	-	-	-	-	-	-	-	-	-	-	X	-	1	1	-	
Amyl Chlorides (mixed)	Straw to Purple Liquid	1 2 2	X	X	X	X	X	X	X	1	X	2	1	X	-	1	1	1	-	
Amyl Chloronaphthalene	-	1 1 2	X	X	X	X	X	X	X	1	X	X	1	-	-	-	1	1	-	
Amyl Naphthalene	-	1 1 -	-	X	X	X	X	X	X	1	X	X	-	-	-	-	1	1	-	
Amyl Phenol	Clear Straw Colored Liquid	1 2 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
Amylamine	Colorless Liquid	1 X -	-	X	2	-	X	X	X	X	X	-	-	-	-	-	-	-	-	
Amylbenzene (sec amylbenzene)	Clear Liquid	1 2 2	X	X	2	X	X	2	X	1	-	-	-	-	-	-	-	-	-	
Anethole (anise camphor)	White Crystals/Liquid > 73°F(23°C)	1 2 -	-	-	X	X	X	X	X	1	X	X	X	-	-	2	1	1	2	
Anhydrous Ammonia (R 717)	Gas or Liquid	NO HOSE AVAILABLE															-	-	-	
Aniline	Colorless Oily Liquid	1 2 X	1	2	X	X	X	X	2	1	X	2	X	-	-	2	1	1	2	
Aniline Dyes	-	1 1 -	1	2	X	X	X	X	2	2	X	2	-	-	-	X	1	1	-	
Aniline Hydrochloride	White Crystals	1 1 -	-	2	2	2	X	2	-	-	-	-	-	-	-	X	X	-		
Aniline Oil (Aniline)	Colorless Oily Liquid	1 2 X	1	2	X	X	X	X	2	1	X	2	X	-	-	2	1	1	2	
Animal Fat (Lard)	White Solid/Liquid > 108°F(42°C)	1 1 1	X	X	1	X	X	2	X	1	X	1	1	-	-	1	1	1	1	
Animal Gelatin	-	1 - 1	-	-	1	-	-	1	-	-	-	-	-	1	-	1	1	-		
Animal Grease, Inedible, Liquid	Liquid	1 - -	-	X	1	-	X	2	X	1	2	-	-	-	-	1	1	-		
Animal Oils	Solid to Liquid	1 - -	2	-	1	-	-	2	-	-	-	1	1	1	1	1	1	1		
Ant Oil (Furfural)	Colorless to Reddish Brown Liquid	1 1 -	2	X	X	X	X	2	X	2	2	1	-	X	-	2	1	1		
Antifreeze (Glycol Base)	Liquid	1 1 2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Antimony Chloride (50%)	White Powder	1 1 1	-	-	-	-	-	-	2	1	-	-	1	1	X	X	X			
Antimony Pentachloride	Reddish-yellow Liquid	1 1 1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-			
Antimony Salts	White Crystal	1 1 -	-	1	2	-	-	-	1	1	-	-	-	1	-	-	-			
Aqua Ammonia (Ammonium Hydroxide) (30%)	Colorless Liquid	1 1 1	1	1	2	2	2	2	2	2	1	1	X	X	2	1	1			
Aqua Regia (Nitrohydrochloric Acid)	Fuming Yellow Liquid	1 2 X	X	X	X	X	X	X	X	1	X	2	X	X	-	X	X			
Argon, Compressed	Colorless Gas	1 1 1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-			
Aromatic Hydrocarbons	Typically Colorless Liquids	1 2 2	X	X	2	X	X	X	X	1	X	X	1	X	1	1	1			
Arsenic Acid	In Water	1 1 1	2	2	-	X	X	-	2	1	-	1	-	-	2	-	2			
Arsenic Trioxide	In Acid	1 1 1	2	X	2	X	X	2	X	1	X	-	-	1	-	-	-			
Askarel (Transformer Oil)	Varies	1 2 2	X	X	X	X	X	X	X	1	X	1	1	X	1	1	1			
Asphalt	Varies	1 2 X	X	X	2	X	X	-	X	1	-	-	X	X	1	1	1			
Asphalt (Blown)	Black Solid	- - X	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-			
Asphalt (Cut Back)	Black Liquid	1 X X	X	X	2	X	X	2	X	1	X	X	2	X	1	1	1			
Asphalt Emulsion	Black Liquid	- - X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Asphalt Paint	Black Liquid	1 2 X	X	X	2	X	X	-	X	1	X	-	2	X	-	-	-			
Asphaltene	In Carbon Disulfide	1 2 X	X	X	2	X	X	2	X	1	X	X	1	-	-	-	-			
ASTM Oil No. 1	Brown Liquid	1 1 1	2	X	1	X	X	1	X	1	2	1	1	2	1	1	1			
ASTM Oil No. 2	Brown Liquid	1 1 1	X	X	1	X	X	2	X	1	2	1	1	X	1	1	1			
ASTM Oil No. 3	Brown Liquid	1 1 1	X	X	1	X	X	X	X	1	X	1	1	X	1	1	1			
ASTM Reference Fuel A	Liquid	1 1 1	2	X	1	X	X	1	X	1	1	1	1	2	1	1	1			
ASTM Reference Fuel B	Liquid	1 2 1	X	X	1	X	X	2	X	1	X	2	1	X	1	1	1			
ASTM Reference Fuel C	Liquid	1 2 2	X	X	2	X	X	X	X	1	X	2	1	X	1	1	1			
ATF (Automatic Transmission Oil)	Liquid	1 1 1	X	X	1	-	-	-	X	1	-	1	-	-	-	-	-			
B																				
Baltic Types 100, 150, 200, 300, 500	Liquid	1 1 -	-	X	1	-	-	-	X	-	-	-	-	2	-	-	2			
Barvel (Ag Spray, Concentrated)	Liquid	1 1 -	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-			
Bardol B	Dark colored Liquid	1 1 -	-	X	X	X	X	X	X	2	X	-	-	-	1	1	1			
Barite (Natural Barium Sulfate)	White to Yellowish Powder	- - -	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1			



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Industrial Hose

Chemical Resistance Table

Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers															Couplings / Adapters											
		Stallion®		Mustang® 45HW		Renegade™		Food & Bev. Mstr.																				
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G												
		Teflon™	Gatlon™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE	Nylon	PVC	Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro						
Barium Carbonate	White Powder	1	1	-	-	X	1	X	1	1	X	1	X	X	1	1	1	2	1	1	-	1	1					
Barium Chloride	Colorless Crystals	1	1	1	-	1	1	1	1	1	1	1	1	1	1	1	1	X	1	1	-	2	1					
Barium Hydroxide	White Powder	1	1	1	-	1	1	X	1	1	1	-	1	1	-	X	2	1	1	-	-	1						
Barium Sulfate	White to Yellowish Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	2	1					
Barium Sulfide	Yellowish Green to Gray Powder	1	1	1	-	-	-	-	1	-	-	-	1	-	-	X	1	1	1	-	-	X	1					
Basic Copper Arsenate	Blue to Green Powder	1	1	-	-	-	-	2	1	-	-	1	2	-	-	1	1	1	1	-	-	-	-					
BBP (Butyl Benzyl Phthalate)	Clear Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-	-	-	-	-	-	-	-					
Beer	Yellow Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Beet Sugar Liquors	Colorless Solution	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X	X	X	-	X	-					
Bellows 80-20 Hydraulic Oil	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	2	-	-	-	-	-	-	X					
Benzaldehyde (Benzoic Aldehyde)	Colorless to Yellow Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	2	X	1	-	-	1	-	1	-					
Benzene (Benzol)	Colorless to Yellow Liquid	1	2	X	X	X	X	X	X	X	X	1	X	X	1	X	1	1	1	1	1	1	X					
Benzenesulfonic Acid	Liquid above 151°F (66°C)	1	1	1	-	-	-	X	X	X	2	1	2	-	-	X	X	-	2	X	-	1	-					
Benzidine	Paste	1	2	-	-	X	2	X	1	X	X	-	-	-	-	X	1	1	1	1	1	1	X					
Benzoic Acid	White Crystals	1	1	1	1	2	X	X	X	X	2	1	2	1	-	X	-	-	-	-	-	-	-					
Benzoic Aldehyde (Benzaldehyde)	Colorless to Yellow Liquid	1	1	1	2	2	X	X	X	X	2	X	X	2	2	X	1	-	-	1	-	1	-					
Benzol (Benzene)	Colorless to Yellow Liquid	1	2	X	X	X	X	X	X	X	X	1	X	X	1	X	1	1	1	1	1	1	X					
Benzophenone	White Powder	1	1	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-					
Benzotrithloride	Colorless to Yellow Liquid	1	-	-	X	X	X	X	X	X	X	1	-	X	2	X	-	-	-	-	-	-	-					
Benzyl Acetate	Water White Liquid	1	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Benzyl Alcohol	Water White Liquid	1	1	1	1	2	X	X	X	X	1	1	X	1	X	1	-	-	-	-	-	-	-					
Benzyl Alcohol, Photo Inhibited	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	1					
Benzyl Benzoate	Water White Liquid	1	1	-	-	2	-	-	-	-	2	1	-	-	-	-	1	1	1	-	-	-	-					
Benzyl Chloride	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	-	X	2	X	1	-	-	-	-	-	-					
Bicarbonate Of Soda	White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Bismuth Carbonate	White Powder	1	-	-	-	-	-	-	1	X	-	-	-	-	-	-	1	1	1	-	-	-	1					
Bisphenol A	White Flakes	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Bitumastic	Liquid	1	-	X	-	X	2	X	X	2	X	2	X	2	-	-	1	1	1	-	1	-	-					
Black Liquor (RXN Product Pulpwood+NaOH)	Black Alkaline Liquid	1	1	1	1	2	2	X	X	2	2	1	2	2	-	1	1	1	-	-	-	-	1					
Black Sulfate Liquor (See "Black Liquor")	Black Alkaline Liquid	1	1	1	1	2	2	X	X	2	2	1	2	2	-	1	1	1	-	-	-	-	1					
Blast Furnace Gas (Cooled)	Gas	1	1	-	-	-	X	X	X	X	X	1	X	-	-	X	1	1	1	-	1	-	-					
Bleach (Chlorinated Lime)	White Powder (35-37% Cl)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Bleach Liquor (Calcium Hypochlorite/H ₂ O)	Clear Solution	1	1	1	1	2	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-					
Borax (Sodium Borate)	White Crystals	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	2	1	1	-	2	1	1					
Bordeaux Mixture (Slaked Lime & Copper Sulfate)	In Water	1	1	1	1	1	1	2	2	2	1	1	-	-	-	1	-	1	1	-	-	-	-					
Boric Acid	White Powder or Colorless Scale	1	1	1	1	1	1	1	1	1	1	1	1	1	X	1	X	2	1	1	X	1	1					
Boric Oxide	Colorless Powder	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Brake Fluid (Petroleum Base)	Liquid	1	1	-	X	X	1	X	X	2	X	1	X	1	1	2	1	1	1	-	1	1	X					
Brake Fluid (Synthetic Base)	Liquid	1	1	-	1	1	X	X	X	X	1	X	X	1	-	2	1	1	1	-	1	-	-					
Brine (Salt)	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	-	2	1	1					
Bromine	Dark Reddish Brown Liquid	1	-	-	X	X	X	-	-	X	-	1	-	-	X	X	1	1	1	1	1	1	-					
Bromobenzene	Colorless Liquid	1	-	-	X	X	-	X	X	-	X	1	-	-	X	-	-	-	-	-	-	-	-					
Bromochloroethane	Colorless Liquid	-	-	X	X	X	-	X	X	-	X	X	-	X	X	-	-	-	-	-	-	-	-					
Bromochloromethane (Chlorobromomethane)	Clear Liquid	1	2	X	X	X	X	X	X	X	X	X	X	X	X	1	1	1	-	1	1	X	-					
Bromotoluene	Clear Liquid	1	-	-	X	X	-	X	X	-	X	1	-	X	-	X	-	-	-	-	-	-	-					
Bubble Bath Compounds	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Bunker Oil	Liquid	1	2	2	X	X	1	X	X	2	X	1	X	-	1	X	1	1	1	1	1	1	-					
Butadiene (1,3)	Gas	1	1	-	X	X	2	X	X	X	X	1	X	-	1	X	-	1	1	-	1	1	1					
Butanal (Butyraldehyde)	Water White Liquid	1	2	-	-	X	X	X	X	X	X	X	X	2	-	-	-	-	-	-	-	-	-					
Butanediol (Butylene Glycol)	Colorless Oily Liquid	1	1	2	-	-	-	-	-	-	-	1	-	-	X	-	-	-	-	-	-	-	-					
Butane (Gas)	Colorless Gas	USE LPG HOSE ONLY															-	-	-	-	-	-	-	-	-	-	-	-



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Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers														Couplings / Adapters			
		Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.													Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro				
		T	K	L	S	P	C	D	D	A	H	V	M	J				Z	G
		Teflon™ Gatron™ UHMWPE™ Sanitron™ EPDM NBR SBR NR Neoprene Butyl Fluorocarbon Hypalon® CPE Nylon PVC																	
Butane (Liquid)	Liquid	USE LPG HOSE ONLY														-	-	-	
Butanol (Butyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1
Butter	Yellow to white semi-Solid to Liquid	-	-	-	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Butter Oil (Use FDA Hose)	Yellow to white Liquid	1	-	-	2	-	-	X	X	2	-	-	-	-	-	-	1	1	1
Butyric Acid	Colorless Liquid	1	1	1	1	2	-	2	2	X	2	1	X	1	X	-	-	-	-
Butyl Carbitol (Diethylene Glycol Butyl Ether)	Colorless Liquid	1	1	-	2	2	2	X	X	2	2	1	-	1	-	-	1	1	1
Butyl Cellosolve (EG Monobutyl Ether)	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-
Butyl "Oxitol"™ for EG Monobutyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-
Butyl Acetate	Colorless Liquid	1	2	2	1	X	X	X	X	X	2	X	X	2	1	1	2	1	1
Butyl Acrylate	Colorless Liquid	1	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Butyl Alcohol (Butanol)	Colorless Liquid	1	1	1	1	1	1	1	2	1	1	2	1	1	1	1	1	1	1
Butyl Aldehyde	Water White Liquid	1	-	-	-	2	X	-	-	X	-	X	X	-	-	-	-	-	-
Butyl Benzyl Phthalate (BBP)	Clear Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-	-	-	-
Butyl Chloride	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Butyl Ether	Colorless Liquid	1	1	-	-	-	2	X	X	2	X	X	-	1	-	-	1	1	1
Butyl Ethyl Ether (Ethyl-n-Butyl Ether)	Liquid	1	-	-	-	-	2	-	X	-	X	-	2	-	-	-	-	-	-
Butyl Formate	Colorless Liquid	1	-	-	-	-	X	-	X	X	-	-	-	-	-	-	-	-	-
Butyl Mercaptan (2-Methyl-2-Butanathiol)	Liquid	1	1	-	X	X	-	X	X	-	X	1	-	-	-	X	-	1	1
Butyl Methacrylate	Colorless Liquid	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyl Stearate	Colorless Liquid	1	1	-	-	X	2	X	X	X	X	1	-	2	-	1	1	1	1
Butylamine	Colorless Liquid	1	1	-	-	-	X	X	X	X	X	X	X	2	-	-	1	1	1
Butylene Glycol (Butandiol)	Colorless Oily Liquid	1	1	2	-	-	-	-	-	-	-	1	-	-	X	-	-	-	-
Butyraldehyde (Butanal)	Water White Liquid	1	2	-	-	X	X	X	X	X	X	X	X	2	-	-	-	-	1
Butyric Acid	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	X	1	1	1	X	1	1
Butyric Anhydride	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C																			
Cadmium Acetate (Soluble in H ₂ O & Alcohols)	In Water or Alcohol	1	-	-	-	-	X	-	X	-	1	X	-	-	-	-	-	-	-
Cake Alum (Aluminum Sulfate)	White Crystals	1	1	-	1	1	1	-	1	1	-	-	-	-	-	-	X	X	2
Cake Alum Solution (Al Sulphate up to 50%)	In Water	1	1	1	1	1	1	-	-	-	1	1	-	1	1	1	-	-	-
Calcine Liquor (Radioactive Waste)	In Water Solution	1	1	-	-	1	1	-	-	-	1	1	-	-	-	-	1	1	1
Calcium Acetate	Powder	1	1	-	-	1	X	2	2	X	1	X	X	1	-	-	1	1	1
Calcium Aluminate (Soluble in Acids)	In Acid	1	-	-	-	-	1	-	1	1	1	1	1	-	-	-	-	-	-
Calcium Aluminate (Tricalcium Aluminate)	Crystals or Powder	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Calcium Arsenate	In Dilute Acid	1	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
Calcium Bisulfide (Calcium Hydrosulfide)	In Alcohol or Water	1	1	-	-	-	1	2	2	1	1	1	1	1	-	2	-	2	1
Calcium Bisulfite (Calcium Hydrogen Sulfite)	Yellow Liquid	1	1	-	-	-	1	2	2	1	1	1	1	1	-	1	-	1	1
Calcium Bromide Solution	In Water or Alcohol	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Calcium Carbonate	Solid White Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium Carbonate Slurry	Solid in H ₂ O	1	-	-	-	1	1	1	1	1	1	1	1	-	-	-	-	-	-
Calcium Chlorate	In Water or Alcohol	1	1	-	-	2	1	2	2	1	2	-	1	-	-	1	-	2	1
Calcium Chloride, Dry	White solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	X	2	1
Calcium Chloride, Liquid (Not For Food)	In Water or Alcohol	1	1	-	1	1	1	1	1	1	1	1	1	1	X	1	-	-	-
Calcium Chloride, Liquid, Food Grade 33%	In Water	1	-	-	-	1	1	1	1	1	1	1	1	1	1	1	-	-	-
Calcium Hydrogen Sulfite (Calcium Bisulfite)	Yellow Liquid	1	1	-	-	1	-	2	2	1	1	1	1	1	-	1	-	1	1
Calcium Hydrosulfide (Calcium Bisulfide)	In Alcohol or Water	1	1	-	-	-	1	2	2	1	1	1	1	1	-	2	-	2	1
Calcium Hydroxide (Hydrated or Slaked Lime)	Solid White Powder	1	1	-	1	-	2	1	1	1	1	X	1	1	-	X	X	X	1
Calcium Hydroxide Solutions	In Glycerol or Acids	1	1	X	-	-	2	-	-	-	-	-	-	-	X	-	2	1	1
Calcium Hypochlorite	Solid White Crystals	1	2	X	-	-	-	X	X	X	2	-	2	1	X	2	-	-	-
Calcium Hypochlorite Solutions	In Water or Alcohol	1	1	X	-	-	-	X	X	X	2	-	2	1	-	1	-	X	2



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Industrial Hose

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		Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.																Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro		
			T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G			
		Chemical	Teflon® Gatron™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE	Nylon	PVC				
Calcium Metasilicate (Calcium Silicate)	White Powder	1	1	-	-	-	2	1	-	2	1	2	1	-	1	1	1	1	1	1
Calcium Nitrate Solutions	In Water, Alcohol, or Acetone	1	1	-	-	1	1	1	1	1	1	1	1	-	1	1	1	1	1	1
Calcium Oxide (Lime; quick, unslaked)	White to Gray Lumps	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-
Calcium Silicate (Calcium Metasilicate)	White Powder	1	1	-	-	-	2	2	1	-	2	1	2	1	-	1	1	1	1	1
Calcium Stearate	White Powder	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Calcium Sulfate	White Powder or Crystals	1	1	-	-	1	1	-	1	1	1	1	1	-	-	-	1	1	1	-
Calcium Sulfide	Yellow to Gray Powder	1	1	-	-	-	1	2	1	2	1	2	1	1	-	2	1	1	1	2
Calcium Sulfite (Soluble In Sulfurous Acid)	In Acid	1	1	1	1	1	-	-	-	-	X	1	-	1	-	-	-	-	-	-
Caliche Liquors (Sodium Nitrate)	In Water	1	1	-	-	-	1	2	2	-	1	-	1	-	-	-	-	1	1	-
Camphene (Liquid above 115°F (46°C))	Liquid above 115°F (46°C)	1	-	-	X	X	-	-	-	-	-	1	X	-	-	-	-	-	-	-
Cane Sugar Liquors	In Water	1	1	-	1	2	1	2	2	1	2	-	1	1	-	1	1	1	1	2
Caproic Acid	Colorless or Yellow Liquid	1	1	1	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Caprolactam	White Flakes	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Caprolactam, Molten (above 156°F (69°C))	Liquid	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-
Caprylic Acid (Octanoic Acid)	Colorless, Oily Liquid	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Carbamates	Crystals	1	1	-	-	X	X	X	X	X	X	2	X	-	-	-	-	-	-	-
Carbolic Acid	Liquid above 109°F (43°C)	1	2	2	2	2	X	X	X	X	2	1	X	1	X	X	X	1	1	2
Carbolic Acid (Phenol)	White or Pink Crystals	1	2	-	2	2	X	X	X	X	2	1	X	1	X	X	X	1	1	2
Carbolic Acid (Phenol, 82-95% in Creosols)	Liquid	1	2	-	-	2	X	X	X	X	2	2	X	1	X	X	X	1	1	2
Carbon Dioxide (Dry)	Gas	1	1	-	-	1	1	1	1	1	1	1	1	-	-	1	1	1	1	1
Carbon Dioxide (Wet)	Gas with Water Vapor	1	1	1	-	2	1	2	2	1	2	1	1	-	-	1	1	1	1	1
Carbon Disulfide	Clear to Faint Yellow Liquid	1	2	1	-	X	2	X	X	X	X	1	X	2	1	X	2	1	1	2
Carbon Monoxide	Gas	1	2	1	-	1	2	X	X	2	X	1	1	-	-	1	1	1	1	1
Carbon Tetrachloride (Pyrene)	Colorless Liquid	1	2	X	X	X	X	X	X	X	X	1	X	2	1	X	X	2	2	X
Carbonic Acid	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	-	X	X	1	1	2	
Carbonyl Chloride (Phosgene)	Gas/ Liquid	1	X	X	X	X	X	X	X	X	1	1	X	-	2	-	-	-	-	-
Casein (White amorphous solid)	In Concentrated Acid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-
Castor Oil	Pale Yellow or Colorless Liquid	1	1	-	-	-	1	X	X	1	2	1	1	1	-	1	1	1	1	1
Caustic Potash, Dry (Potassium Hydroxide)	White pellets or flakes	1	1	-	-	2	X	2	1	2	1	1	1	1	X	X	-	-	-	-
Caustic Potash, Liquid (up to 45%)	Solution in Water	1	1	1	1	2	2	2	2	-	1	2	-	1	1	1	-	-	-	-
Caustic Soda, Dry (Sodium Hydroxide)	White beads or pellets	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Caustic Soda, Liquid (up to 73%)	Solution in Water	1	2	-	1	2	X	1	1	2	2	X	1	1	2	X	-	-	-	-
Cellosolve Acetate (Eg Ethyl Ether Acetate)	Colorless Liquid	1	1	-	-	2	X	-	-	-	-	X	-	1	-	1	1	1	1	-
Cellosolve Butyl (Eg Butyl Ether)	Colorless Liquid	1	1	-	-	2	X	-	-	-	-	X	-	1	-	1	1	1	1	-
Cellulose	Solid, many forms	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-
Cement, Portland	Gray Powder	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
China-Wood Oil (Tung Oil)	Yellow Oil	1	2	-	X	X	2	X	X	X	X	1	2	-	-	2	1	1	1	1
Chlordane	Colorless Viscous Liquid	1	1	-	-	X	X	-	-	X	-	1	X	-	1	2	-	-	-	-
Chlorinated Naphthalene (Chloronaphthalene)	Oily Liquid to Solid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	-	-	-	-	-
Chlorinated Solvents (ie Tetrachloroethane)	Colorless Liquid	1	X	X	X	X	-	X	X	-	X	1	X	X	1	X	-	-	-	-
Chlorine	Gas	NO HOSE AVAILABLE														-	-	-	-	-
Chlorine Liquid (Liquid @ 210 PSIG @ 120°F (38°C))	Clear Amber Liquid	1	-	-	-	X	-	-	-	-	-	1	-	-	X	X	-	-	-	-
Chlorine Trifluoride	Pale Green Liquid	1	-	-	-	X	-	-	-	-	-	1	-	-	-	X	-	-	-	-
Chlorine Water (3% Chlorine)	Clear, yellowish Liquid	1	1	1	-	X	-	-	-	-	-	1	-	-	-	-	X	X	-	1
Chloroacetic Acid (Monochloroacetic Acid)	Powder or White Crystals	1	1	X	X	X	X	X	X	X	X	1	2	-	-	-	-	-	-	-
Chloroacetic Acid Under 100°F (38°C)	Solid	1	1	1	X	X	X	X	X	X	X	1	2	-	-	-	-	-	-	-
Chloroacetic Acid Solution	In Water, Alcohol, Ether	1	1	X	1	2	-	-	-	-	-	-	-	X	-	-	X	X	X	2
Chloroacetone	Colorless Liquid	-	-	-	-	1	-	-	-	-	-	X	-	-	-	-	-	-	-	-
Chloroacetyl Chloride	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Chloroaniline	Amber Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene (Phenyl Chloride) (Monochlorobenzene)	Clear Liquid	1	2	-	X	X	X	X	X	X	X	1	X	X	X	X	1	1	1	1



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																			Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro			
		Stallion®	Mustang® 45HW	Renegade™	Food & Bev. Mstr.				D	D	A	H			V			M							J	Z	G
		T	K	L	S	P	C	H				V	M	J	Z	G											
Chemical (Form at room temperature unless otherwise stated)		Teflon™	Gaion™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE	Nylon	PVC	Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro					
Cupric Chloride (Copper Chloride)		In Water	1	1	-	-	-	2	2	2	2	2	2	2	2	X	1	X	X	1	-	X	1				
Cupric Cyanide (Copper Cyanide)		In Dilute Acids or Alkalies	1	1	-	-	2	2	2	2	2	2	1	2	-	-	1	-	1	1	-	X	1				
Cupric Nitrate (Copper Nitrate)		In Water	1	1	-	-	1	1	2	2	1	1	1	1	1	-	1	X	1	1	-	X	1				
Cupric Sulfate (Copper Sulfate)		In Water	1	1	-	-	2	1	2	2	1	2	1	1	1	X	1	X	1	1	1	X	X	1			
Cutting Oil (Mineral Oil Base)		Liquid	1	2	-	-	X	1	X	X	2	X	1	X	-	-	-	1	1	1	1	-	1	X			
Cutting Oil, Sulfur Base		Liquid	2	-	-	-	-	1	-	-	X	-	-	-	-	-	-	1	1	1	-	-	1	1			
Cutting Oil, Water Soluble		Liquid	1	-	-	-	-	1	-	-	X	-	-	-	-	-	-	1	1	1	-	-	1	1			
Cyanide, Copper (Cupric Cyanide)		In Dilute Acids or Alkalies	1	1	-	-	2	2	2	2	2	2	1	2	-	-	1	-	1	1	-	X	1				
Cyanide, Mercuric		In Water	1	1	-	-	2	2	2	2	1	2	-	1	-	-	-	-	-	-	X	-	1				
Cyanide, Potassium		In Water	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-				
Cyanide, Silver		In Nitric Acid	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	1				
Cyanide, Sodium		In Water	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	2	1	1	X	X	-				
Cyclohexane		Colorless Liquid	1	2	1	-	X	2	X	X	X	X	1	X	1	-	X	1	1	1	-	1	X				
Cyclohexanol		Colorless, oily Liquid	1	2	-	-	X	2	X	X	2	X	1	2	1	-	X	-	-	-	-	-	1				
Cyclohexanone		Colorless to yellow Liquid	1	1	-	-	X	X	X	X	X	X	X	2	-	X	-	1	1	1	2	-	X				
Cyclohexylamine		Colorless Liquid	-	-	-	-	1	-	X	-	-	1	X	-	-	-	-	-	-	-	-	-	-				
Cyclopentane		Colorless Liquid	1	-	-	-	X	2	-	X	2	X	1	X	-	-	-	-	-	-	-	-	-				
Cyclopentanol		Colorless Liquid	1	-	-	-	2	-	X	-	X	2	X	-	-	-	-	-	-	-	-	-	-				
Cyclopentanone		Water white Liquid	-	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-	-				
Cymene		Colorless Liquids	1	2	-	-	X	X	X	X	X	2	X	2	-	X	-	1	1	1	1	1	-				
Cymene (Isopropyltoluene)		Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1	1	1	1	1	-				
D																											
Decalin (TM for decahydronaphthalene)		Colorless Liquid	1	2	2	X	X	2	X	X	-	X	1	X	2	1	-	-	-	-	1	1	-				
Decanal (Decyl Aldehyde)		Colorless to yellow Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-				
Decanol (Decyl Alcohol)		Colorless, water white Liquid	1	-	-	-	-	1	-	X	X	X	2	2	-	-	X	-	-	-	-	-	-				
Decyl Aldehyde (n-decanal)		Colorless to yellow Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-				
Deicing Fluid (ethylene or propylene glycol)		Orange Liquid	1	1	1	1	1	1	-	-	1	1	1	2	1	-	1	2	1	1	1	1	1				
Denatured Alcohol		Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-				
Detergent Sol. (Sodium dodcylbenzenesulfonate)		In Water	1	2	1	1	1	1	X	X	2	1	-	1	-	-	1	2	1	1	1	1	1				
Developing Solutions (Hypos)		Liquid	1	1	-	-	-	2	2	2	2	2	-	2	-	-	1	-	1	-	-	-	-				
Dextron		Brown Liquid	1	X	-	-	X	1	-	-	-	X	-	-	1	1	2	-	-	-	-	-	-				
Dextrin (Starch gum)		Yellow or White Powder	1	1	-	-	1	1	-	-	1	X	1	-	-	1	1	-	1	1	-	-	1				
Diacetone		Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	X	1	1	X	1	1	1	-	1	1				
Diacetone Alcohol		Colorless Liquid	1	1	-	-	X	2	2	-	2	X	2	1	-	X	-	1	1	1	1	1	1				
Diammonium Phosphate		In Water	1	1	-	-	1	1	1	1	1	1	-	1	-	-	-	X	2	1	X	-	1				
Diazinon		In Petroleum Solvents	1	-	-	-	1	1	-	-	-	1	-	-	-	-	2	-	-	-	-	-	2				
Dibenzyl Ether		Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	X	2	-	-	-	1	1	1	1	1				
Dibutyl Ether		Colorless Liquid	1	1	-	-	-	X	X	X	X	2	X	X	1	-	-	1	1	1	1	1	1				
Dibutyl Phthalate		Colorless Oily Liquid	1	1	-	-	1	X	X	X	X	2	2	X	2	-	1	1	1	1	1	1	2				
Dibutylamine		Colorless Liquid	1	-	-	X	X	X	X	X	X	X	X	X	X	-	X	-	-	-	-	-	-				
Dibutylsebacate		Clear Colorless Liquid	1	1	-	-	X	X	X	X	X	2	1	-	2	-	-	-	-	-	-	1	-				
Dichloroacetic Acid		Colorless Liquid	1	-	-	-	X	-	2	-	X	X	X	-	-	-	-	-	-	-	-	-	-				
Dichloroaniline		In Alcohol or Benzene	1	-	-	-	X	X	X	-	X	2	-	-	-	-	-	-	-	-	-	-	-				
Dichlorobenzene (ortho)		Colorless Liquid	1	2	-	X	X	X	X	X	X	1	X	X	1	X	-	1	1	1	-	1	-				
Dichlorobenzene (para)		White Crystals	1	2	-	-	X	X	X	X	X	1	X	X	1	X	-	1	1	-	1	-	-				
Dichlorobenzyl Chloride		Colorless Liquid	1	2	-	X	X	X	X	X	X	1	X	X	-	X	-	-	-	-	-	-	-				
Dichlorodifluoromethane (Freon 12)		Gas, Liquid @ 140 PSIG @ 100°F	SPECIAL HOSE REQUIRED																								
Dichloroethane (Ethylene Dichloride)		Colorless Oily Liquid	1	2	2	X	X	X	X	X	X	X	2	X	X	X	X	-	-	-	-	-	-				
Dichloroethyl Ether		Colorless Liquid	1	-	-	-	X	-	X	-	X	-	X	-	-	-	-	-	-	-	-	-	-				



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Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers															Couplings / Adapters						
		Stallion [®] Mustang [®] 45HW Renegade [™]		Food & Bev. Mstr.	S P C			D D A			H V M			J Z G			Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316	Aluminum Brass Polypro					
		T	K		L	S	P	C	D	D	A	H	V	M	J	Z			G				
Chemical	Teflon [®]	Gatron [™]	UHMWPE	Sanitron [™]	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon [®]	CPE	Nylon	PVC								
Dichloroethylene	Colorless Liquid	1	2	X	-	X	X	X	X	X	X	1	X	-	-	-	-	-	-	-	-	-	-
Dichloroethylene (Acetylene Dichloride)	Colorless Liquid	1	X	X	X	X	-	X	X	-	X	1	-	X	1	X	-	-	-	-	-	-	X
Dichloromethane (Methylene Chloride)	Colorless Liquid	1	1	2	X	X	X	X	X	X	X	2	X	X	X	X	1	1	1	-	1	-	-
Dichloropentane	Light Yellow Liquid	1	-	-	-	X	X	X	X	X	X	1	X	-	-	-	-	-	-	-	-	-	-
Dichloropropane (Propylene Dichloride)	Colorless Liquid	1	-	-	-	X	X	X	X	X	X	2	X	-	-	-	-	-	-	-	-	-	-
Dicyclohexylamine	Colorless Liquid	1	-	-	-	X	-	X	X	X	X	X	X	-	-	-	-	-	-	-	-	-	-
DIDA (Diisodecyl Adipate)	Light Colored Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-	-	-	-	-	-	-	-
Diesel Fuel	Liquid	1	1	1	X	X	1	X	X	2	X	-	X	-	1	-	1	1	1	1	1	2	-
Diethanolamine (20%)	In Water or Alcohol	1	-	-	1	2	2	2	2	X	1	-	2	1	-	2	1	1	1	1	X	-	-
Diethanolamine	Liquid above 83°F (29°C)	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	X	-
Diethyl Ether (Ethyl Ether)	Colorless Liquid	1	2	-	1	X	X	X	X	X	2	X	X	1	-	2	2	1	1	1	1	1	1
Diethyl Ketone	Colorless Liquid	1	-	-	-	2	X	-	X	X	2	X	X	-	-	X	-	-	-	-	-	-	-
Diethyl Oxalate	Colorless Oily Liquid	1	-	-	-	X	X	-	X	X	X	-	X	-	-	X	-	-	-	-	-	-	-
Diethyl Phthalate (Ethyl Phthalate)	Water White Liquid	1	1	-	-	-	X	X	X	-	2	-	-	2	-	-	-	-	-	1	1	-	1
Diethyl Sebacate	-	1	1	-	-	-	X	X	X	X	2	2	X	2	-	-	-	-	-	1	1	-	1
Diethyl Sulfate	Colorless Liquid	1	-	-	-	1	X	1	1	X	1	2	X	X	-	-	-	-	-	-	-	-	-
Diethyl Sulfide (Ethyl Sulfide)	Colorless Oily Liquid	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diethylacetaldehyde (Ethylbutyraldehyde)	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethylamine	Colorless Liquid	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1
Diethylbenzene	Colorless Liquid	1	1	-	-	X	-	X	X	-	X	1	-	2	-	-	-	-	-	-	-	-	-
Diethylene Dioxide (1,4 Dioxane)	Colorless Liquid	1	1	-	1	2	X	X	X	X	2	X	X	2	1	X	1	1	1	1	1	1	1
Diethylene Ether (Dioxane)	Colorless Liquid	1	1	-	1	2	X	X	X	X	2	X	X	2	1	X	1	1	1	1	1	1	1
Diethylene Glycol (Dihydroxydiethyl Ether)	Colorless Syrupy Liquid	1	1	-	1	1	1	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1
Diethylene Glycol Methyl Ether (Methyl Cellosolve)	Colorless Liquid	1	1	-	1	1	-	X	X	-	X	1	X	1	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monobutyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monobutyl Ether Acetate	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monoethyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monomethyl Ether	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diethylene Glycol Monomethyl Ether Acetate	Colorless Liquid	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethylenetriamine	Yellow Liquid	1	1	1	-	1	-	X	-	X	1	X	X	-	-	-	-	-	-	-	-	-	-
Dihydroxyacetone	In Water	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydroxydiethyl ether (Diethylene glycol)	Colorless Syrupy Liquid	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1	1	1	1	1	1	1	1
Diisobutyl Ketone	Colorless Liquid	1	1	-	1	1	X	X	X	X	2	X	X	2	1	-	-	-	-	1	1	-	1
Diisobutyl Phenol (Octyl Phenol)	White Flakes	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisobutyl Phthalate	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisobutylene	Colorless Liquids	1	1	-	X	X	2	X	X	X	X	1	X	1	-	-	-	-	-	1	1	-	1
Diisodecyl Adipate (DIDA)	Light Colored Oily Liquid	1	-	-	-	-	X	-	X	-	1	X	X	-	-	-	-	-	-	-	-	-	-
Diisooctyl Phthalate (DIOP)	Nearly Colorless Liquid	1	-	-	-	1	X	-	X	-	1	X	X	-	-	-	-	-	-	-	-	-	-
Diisopropanolamine	Liquid above 108°F (42°C)	1	-	-	-	2	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropyl Ketone	Colorless Liquid	1	1	-	1	1	X	X	X	X	2	X	X	-	1	-	-	-	-	1	1	-	1
Diisopropylamine	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diisopropylbenzene (meta)	Colorless Liquid	1	2	2	X	X	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Diisopropylidene Acetone (Phorone)	Yellow Liquid	1	1	-	-	2	X	X	X	X	2	X	X	-	-	-	-	-	1	1	1	-	1
Dilauryl Ether	Liquid above 92°F (33°C)	1	1	-	1	1	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Acetamide (DMAC)	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Aniline	Yellow/brown Oily Liquid	1	1	-	-	X	X	X	X	X	2	1	X	2	-	-	-	-	-	-	-	-	1
Dimethyl Ether	Liquid under Pressure	1	1	1	1	1	X	X	X	X	2	X	X	-	-	-	-	-	1	1	1	1	1
Dimethyl Formamide	Water White Liquid	1	1	-	1	2	-	-	-	-	-	X	-	-	-	-	-	-	1	1	1	-	1
Dimethyl Phthalate	Colorless Oily Liquid	1	1	-	1	2	X	X	X	X	2	1	X	1	-	-	-	-	-	-	-	-	1
Dimethyl Sulfate (Methyl Sulfate)	Colorless Liquid	1	1	-	-	X	X	X	X	X	2	X	X	-	1	1	-	-	-	-	-	-	-
Dimethyl Sulfide	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-



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Industrial Hose

Chemical Resistance Table

<p>Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070</p> <p>1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data</p> <p>NOTE: Ratings are for the affect on the <i>polymer only!</i></p>	<p>Form (at room temperature unless otherwise stated)</p>	Gates Hose / Polymers													Couplings / Adapters																			
		<p>Chemical</p>	Stallion®	<p>Mustang® 45HW Renegade™ Food & Bev. Mstr.</p>																														
			T																		K	L	S	P	C	D	D	A	H	V	M	J	Z	G
			Teflon™																		Gatlon™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE	Nylon	PVC
			Iron/Carbon Steel																		Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro									
Ethylene Glycol N-Butyl Ether	Colorless Liquid	1	1	-	1	1	X	-	-	-	-	-	-	-	-	-	1	1	-															
Ethylenediamine	Colorless Liquid	1	2	-	-	2	1	-	-	-	-	2	X	-	-	-	-	-	-	1	1													
Ethylenediaminetetraacetic acid (EDTA)	Colorless Crystals	1	1	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-													
Ethylhexaldehyde	Colorless Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
Ethylhexanediol	Colorless Liquid	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
Ethylhexanol (2-ethylhexyl alcohol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	-	1	1	-	1	1	1	-	-	-	-													
Ethylhexoic Acid	Liquid	1	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-													
Ethylhexyl Acetate	Water White Liquid	1	1	-	-	1	X	-	-	X	-	X	X	-	1	-	-	-	-	-	-													
Ethylhexyl Acrylate	Liquid	1	2	-	2	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-													
Ethylhexyl Alcohol (Ethylhexanol)	Colorless Liquid	1	1	1	1	1	1	1	1	1	-	1	1	-	1	1	1	-	-	-	-													
F																																		
Fatty Acid	Solid, Semisolid or Liquid	1	2	2	2	2	2	X	X	2	2	2	X	2	-	2	2	1	1	1	2	1												
Fatty Alcohol, Blend	C8-11 Liquids, >C11 Solids	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1	-	-	-	-	-													
Fatty Petroleum Alcohol	C11 or Less are Liquids	1	1	1	1	1	1	-	-	-	1	1	-	1	1	-	-	-	-	-	-													
Ferric Bromide	Red Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-													
Ferric Chloride	Black-Brown Solid	1	1	-	-	-	2	-	1	2	1	1	2	1	1	1	X	X	X	X	X	1												
Ferric Chloride solution	Liquid	1	1	-	-	-	2	-	1	2	1	1	2	1	1	1	X	X	X	X	X	1												
Ferric Nitrate	Violet Crystals	1	1	-	-	-	-	2	1	2	2	-	2	1	-	-	X	1	1	-	-	1												
Ferric Nitrate Solution	Liquid	1	-	-	-	1	1	-	1	1	1	1	1	-	1	-	X	1	1	-	-	1												
Ferric Sulfate	Yellow Crystals or Gray Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	X	1	1	X	X	1												
Ferric Sulfate Solution	Liquid	1	1	1	-	2	2	2	-	2	2	1	2	1	-	1	X	1	1	X	X	1												
Ferrous Acetate Solution	Liquid in H2O or Alcohol	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-													
Ferrous Chloride	Greenish-White Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	X	1	2	-	2	1												
Ferrous Chloride, Solution	Liquid	1	1	-	-	-	-	-	-	-	1	1	2	1	-	1	X	1	2	-	2	1												
Ferrous Nitrate	-	1	1	-	-	2	2	-	-	2	2	-	2	-	-	-	-	1	1	-	-	1												
Ferrous Sulfate Solution	Liquid	1	1	1	-	2	2	2	-	2	2	1	2	1	-	1	X	1	1	X	X	1												
Fertilizer (Liquid Manure)	Liquid	1	1	1	1	1	1	1	1	1	1	1	1	-	1	2	1	1	1	1	1	1												
Finishing Oil	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
Fire-Resistant Hydra-Fluid (Texaco)	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	-	1	1	1	1	1	-												
Firtec 290, MF	Liquid	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
Fish Oil	Liquid	1	-	1	X	X	1	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-												
Fixing Solution (Photo)	Liquid	1	1	-	-	-	-	2	2	2	2	-	2	-	1	1	-	1	1	-	-	1												
Flint	Gray, Brownish, Black	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-												
Floor Wax (Temperature Dependent)	Varies	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
Fluoboric Acid (48% Purity)	Colorless Liquid	1	1	1	1	2	-	2	2	2	-	-	2	1	-	X	-	1	1	-	-	1												
Fluoboric Acid (up to 48%)	Colorless Liquid	1	1	-	-	1	-	2	2	2	-	1	2	1	-	X	-	1	1	-	-	1												
Fluorine	Pale Yellow Gas	X	-	X	-	X	-	-	-	-	-	1	-	-	X	1	-	-	-	-	-	-												
Fluorine (Liquid)	Yellow Liquid	NO HOSE AVAILABLE															-	-	-	-	-	-												
Fluosilicic Acid (50%)	Colorless Liquid	1	1	1	1	2	X	-	-	2	X	-	2	1	X	X	-	-	1	1	-	1												
Formaldehyde	Gas	-	1	-	-	1	-	-	-	-	-	1	-	-	1	-	X	2	1	2	1	-												
Formaldehyde Solution (up to 50%)	Liquid	1	2	1	1	1	2	X	X	2	2	1	2	1	1	1	X	2	1	2	1	-												
Formalin (37-50% HCHO with 15% MeOH)	Liquid	1	1	-	1	1	2	X	X	2	2	1	2	1	1	1	-	-	-	-	-	-												
Formamide	Colorless Oily Liquid	1	1	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-												
Formic Acid	Colorless Liquid (bp 100°C)	1	1	1	1	2	-	X	X	1	2	X	2	1	X	X	X	2	1	-	2	1												
FR Fluid D	Liquid	1	1	-	-	X	1	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-												
FR Hydraulic Fluid	Brown Liquid	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
Freon 12 (Dichlorodifluoromethane)	Gas or Liquid	SPECIAL HOSE REQUIRED															-	-	-	-	-	-												
Freon 13	Gas or Liquid	SPECIAL HOSE REQUIRED															-	-	-	-	-	-												
Freon 134a (HFC 134a)	Gas or Liquid	SPECIAL HOSE REQUIRED															-	-	-	-	-	-												



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		Stallion® Mustang® 45HW Renegade™	Food & Bev. Mstr.												Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro		
		T	K	L	S	P	C	D	D	A	H	V	M	J							Z	G
		Teflon™	Gatlon™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE							Nylon	PVC
Freon 22 (Chlorodifluoromethane)	Gas or Liquid	SPECIAL HOSE REQUIRED																				
Freon 23	Clear Liquid	SPECIAL HOSE REQUIRED																				
Fruit Juices	Liquid	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Fuel Oil (ASTM 1-6)	Water White to Brown Liquids	1	2	1	X	X	1	X	X	2	X	1	X	1	1	X	2	2	2	1	1	-
Fumaric Acid	Colorless Crystals	1	1	1	1	2	-	2	2	-	-	1	-	-	-	X	-	1	1	-	-	-
Fumaric Acid Solution (Allomalaic Acid)	Liquid	1	1	-	-	2	1	2	2	-	-	1	-	-	-	X	-	1	1	-	-	-
Furan (Furfuran)	Colorless to Brown Liquid	1	1	1	-	X	X	X	X	X	X	-	-	1	-	X	1	1	1	1	1	-
Furfural (Ant Oil)	Colorless to Reddish Brown Liquid	1	1	-	2	X	X	X	X	2	X	2	2	1	-	X	2	1	1	1	1	2
Furfural Alcohol	Colorless to Brown Liquid	1	1	2	2	X	X	X	X	2	X	1	2	1	1	X	2	1	1	1	1	2
Furfuran (Furan)	Colorless to Brown Liquid	1	1	1	-	X	X	X	X	X	X	-	-	1	-	X	1	1	1	1	1	-
Furfuryl Alcohol	Colorless to Reddish Brown Liquid	1	1	-	2	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-
Fusel Oil (Amyl Alcohol, Grain Oil)	Colorless Liquid	1	1	1	1	2	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	-
Fyrguard 150, 200	-	1	1	-	-	1	1	-	-	-	1	-	-	-	-	-	1	1	1	1	1	-
Fyrquel 15R&O, 220R&O, 550R&O	-	1	1	-	-	1	X	-	-	-	1	-	-	-	-	-	1	-	-	1	-	-
Fyrquel 90, 150, 220, 300, 550, 1000	-	1	1	-	-	1	X	-	-	-	1	-	-	-	-	-	1	-	-	1	-	-
G																						
Gallic Acid (3,4,5 Trihydroxybenzoic Acid)	In Alcohol or Glycerol	1	1	1	1	1	X	2	2	X	2	1	-	1	X	X	X	1	1	-	-	1
Gallic Acid Solution	In Alcohol Solution	1	1	-	1	-	X	2	2	X	2	1	-	1	X	X	X	1	1	-	-	1
Gasohol (Gasoline blended with Ethanol) ¹	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	-	1	X	2	1	1	1	1	X
Gasoline (Oxygenated - Blended With MTBE) ¹	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	-	1	X	2	1	1	1	1	X
Gasoline (Unleaded Up to 50% Aromatics) ¹	Colorless Liquid	1	2	1	X	X	2	X	X	2	X	1	X	1	1	X	2	1	1	1	1	-
Gasoline (White) ¹	Colorless Liquid	1	2	-	X	X	2	X	X	2	X	1	X	-	1	X	2	1	1	1	1	-
Gelatin	Flakes or Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-
Glacial Acetic Acid	Clear Colorless Liquid	1	1	1	X	2	-	-	-	X	X	X	-	X	X	X	-	-	-	-	-	-
Glacial Methacrylic Acid (GMAA)	White Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glauber's Salt (Sodium Sulfate Decahydrate)	Crystals or Powder	1	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Gluconic Acid (Commercial 50% Aqueous)	Aqueous Solution	1	-	-	-	-	X	-	X	-	X	-	2	-	-	-	-	-	-	-	-	-
Glucose	Crystals to White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	1	1	-
Glucose Solution	Liquid	1	1	-	1	1	1	1	1	1	1	1	1	-	-	1	1	1	1	1	1	-
Glue	Varies	1	1	-	-	X	2	X	X	2	X	1	1	-	2	1	2	1	1	1	X	-
Glycerine (Glycerol)	Clear Viscous Liquid	1	1	-	1	1	1	1	1	1	1	1	1	1	-	1	2	1	1	1	1	-
Glycerol (Glycerine)	Clear Viscous Liquid	1	1	-	1	1	1	1	1	1	1	1	1	1	-	1	2	1	1	1	1	-
Glycerol Monolaurate	Liquid above 80°F (27°C)	1	1	1	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Glycol FR Fluids	Liquid	1	-	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Glycol Slurry	Watery suspension	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glycols (ie Ethylene Glycol)	Clear Colorless Liquid	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1	1	1	-
GMAA (Glacial Methacrylic Acid)	White Crystals	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Graphite	Powdered, Flake, Crystals	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Grease	Semi-Solid	1	1	2	2	X	1	X	X	2	X	1	2	-	-	1	1	1	1	1	1	-
Grease, Silicone Base	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	1	1	1	-
Green Liquor (Effluent Alkaline Pulping)	Liquid	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Green Sulfate Liquor	Liquid	1	1	1	-	1	2	1	1	1	1	-	1	2	-	-	1	1	1	-	-	-
H																						
Halowax (Chlorinated Hydrocarbons)	Oils to Waxy Solid	1	1	1	-	X	X	X	X	X	X	1	X	-	-	-	-	-	-	-	-	-
HEA (2-Hydroxyethyl Acrylate)	Liquid	1	1	1	1	X	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
HEA Acid (2-Hydroxyethyl Acrylate)	Liquid	1	1	1	1	X	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
Hematite (Iron Ore)	Black to Brick Red	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
HEP (2-Hydroxypropyl Acrylate)	Liquid	1	1	1	1	X	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-

¹ Petroleum hose only.



Note: For Explanation of Ratings, Refer to Page 142

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Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the <i>polymer only!</i>		Gates Hose / Polymers																	Couplings / Adapters	
		Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.																	Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro	
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G				
		Teflon™ Gatron™ UHMWPE		Sanitron™ EPDM NBR			SBR NR			Neoprene			Butyl Fluorocarbon		Hypalon® CPE Nylon PVC					
		Form (at room temperature unless otherwise stated)																		
Chemical																				
Isoamyl Acetate	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-	-	-		
Isoamyl Alcohol (Isobutyl Carbinol)	Colorless Liquid	1	-	-	-	2	2	-	2	2	2	2	2	-	-	-	-	-		
Isoamyl Bromide	-	1	-	-	-	X	X	-	X	X	X	2	X	-	-	-	-	-		
Isoamyl Butyrate	Water White Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-		
Isoamyl Chloride	Colorless to Yellow Liquid	1	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-		
Isoamyl Ether	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-		
Isoamyl Phthalate	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-	-	-		
Isobutane	Colorless Gas	USE LPG HOSE ONLY																		
Isobutane Liquid	Liquid @ 98 PSIG, 120°F (49°C)	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isobutanol (Isobutyl Alcohol)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	1	1		
Isobutene (Isobutylene)	Gas	1	-	-	-	X	1	X	X	-	2	X	-	-	-	-	-	-		
Isobutyl Acetate	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	X	X	-	-	-	-	-		
Isobutyl Alcohol (Isobutanol)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	1	2	1	1		
Isobutyl Aldehyde (Isobutyraldehyde)	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-	-	-		
Isobutyl Carbinol (Primary Isoamyl Alcohol)	Colorless Liquid	1	-	-	-	2	2	-	2	2	2	2	2	-	-	-	-	-		
Isobutylamine	Colorless Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-	-	-		
Isobutylene (Isobutene)	Gas	1	-	-	-	X	1	X	X	-	2	X	-	-	-	-	-	-		
Isobutylene Liquid (Isobutene Liquid)	Liquid @ 88 PSIG, 120°F (49°C)	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isobutyraldehyde (Isobutyl Aldehyde)	Colorless Liquid	1	-	-	-	2	X	-	X	X	X	X	X	-	-	-	-	-		
Isocyanate (Toluene Diisocyanate)	Water White to Yellow Liquid	1	2	-	X	X	X	X	X	X	X	1	-	-	-	-	1	1		
Isooctane	Colorless Liquid	1	2	-	X	X	1	X	X	1	X	1	1	2	1	X	1	1		
Isooctyl Adipate	Viscous Liquid	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isooctyl Alcohol	Clear Liquid	1	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-		
Isooctyl Thioglycolate	Water White Liquid	1	1	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-		
Isopentane	Colorless Liquid	1	2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isophorone	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Isophthaloyl Chloride	Liquid above 106°F (41°C)	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isopropanol (Isopropyl Alcohol)	Colorless Liquid	1	1	1	1	1	1	2	2	2	1	1	2	1	1	2	1	1		
Isopropanolamine (MIPA)	Liquid	1	2	-	-	-	2	-	2	-	1	X	X	-	-	-	-	-		
Isopropyl Acetate	Colorless Liquid	1	1	1	1	2	X	X	X	X	2	-	X	-	1	X	1	1		
Isopropyl Alcohol (Isopropanol)	Colorless Liquid	1	1	1	1	1	1	2	2	2	1	1	2	1	1	2	1	1		
Isopropyl Benzene (Cumene)	Colorless Liquid	1	2	-	X	-	-	-	-	-	1	-	2	-	-	-	-	-		
Isopropyl Chloride	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
Isopropyl Ether	Colorless Liquid	1	1	1	-	X	X	X	X	X	2	X	X	-	1	X	1	1		
Isopropylamine	Colorless Liquid	1	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-		
Isopropylbenzene (Cumene)	Colorless Liquid	1	2	-	X	-	-	-	-	-	1	-	2	-	-	-	-	-		
Isopropyltoluene (Cymene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	1		
J																				
Jet Fuel A and A1²	Liquid	1	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-		
Jet Fuel JP1²	Liquid	1	1	-	X	X	1	X	X	2	X	1	X	-	1	X	-	-		
Jet Fuel JP10 (Tetrahydrodicyclopentadiene)²	Liquid	1	-	-	X	X	X	X	X	X	X	1	X	-	1	X	-	-		
Jet Fuel JP4²	Liquid	1	1	-	X	X	1	X	X	2	X	1	X	-	1	X	2	1		
Jet Fuel JP5²	Liquid	1	1	-	X	X	1	X	X	X	X	1	X	-	1	X	2	1		
Jet Fuel JP8²	Liquid	1	1	-	X	X	1	X	X	X	X	1	X	-	1	X	2	1		
K																				
Kaolin Clay	White to Yellowish Powder	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
Karo Syrup	Yellow Liquid	-	-	-	1	-	-	-	-	-	-	-	-	1	1	-	1	1		
Kerosene	Water White Oily Liquid	1	1	-	X	X	1	X	X	X	X	1	X	1	1	2	1	1		

² Aircraft fueling hose only for fueling operations.



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Chemical Resistance Table

Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers														Couplings / Adapters						
		Stallion®	Mustang® 45HW	Renegade™	Food & Bev. Mstr.																	
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G	Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro
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Magnesite Magnesium Magnesium Acetate Magnesium Acetate Solution Magnesium Carbonate	White to Brown Crystalline Solid Powder Colorless Crystalline Aggregate In Water or Alcohol White Powder	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium Carbonate Solution (in Acid) Magnesium Chloride Magnesium Chloride Brine Magnesium Chloride, Hydrated (in H ₂ O or Alcohol) Magnesium Hydroxide	Liquid Solution Colorless to White Crystals Solution Solution White Powder	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-
Magnesium Hydroxide Solution (in Dilute Acid) Magnesium Nitrate Magnesium Nitrate Solution (in H ₂ O or Alcohol) Magnesium Oxide, Dry Magnesium Oxide, Slurry	Liquid Solution White Crystals Liquid Solution White Powder -	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	X
Magnesium Sulfate Solution Malathion (Ag Spray Dilute) Malathion (Ag Spray) Maleic Acid Maleic Acid Solution	Liquid Solution Clear to Amber Liquid Clear to Amber Liquid Liquid Solution	1	1	1	1	1	1	2	1	1	2	1	1	1	1	-	1	2	1	1	1	-
Maleic Anhydride Maleic Anhydride (Heated Liquid) Malic Acid (dl form) Malic Acid Solution (in H ₂ O or Alcohol) Malt Extract (Maltine)	Colorless Needles Liquid above 124°F (53°C) Colorless Crystals Solution Light Brown Viscous Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malt, Dry Maltine (Malt Extract) Manganese Salts Manganese Sulfate (Manganous Sulfate) Manganese Sulfate Solution	Yellow to Amber Grain Light Brown Viscous Liquid - Pale Red Solid Solution in Water	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-
Manganese Sulfide (Manganous Sulfide) Manganese Sulfite (Manganous Sulfite) MAPP Gas (Methylacetylene Propadiene) Maxmul (Penzoil Hydraulic Fluid) Mayonnaise	Green Crystals Black to Brownish Red Powder Liquid Liquid Semi-Liquid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
MBK (Methyl Butyl Ketone) MEA (Ethanalamine) MEK (Ethyl Methyl Ketone) Mercuric Chloride Mercuric Chloride Solution (in H ₂ O, or Alcohol)	Colorless Liquid Colorless Viscous Liquid Colorless Liquid White Powder Solution	1	1	-	-	2	X	X	X	X	2	X	X	2	-	X	1	1	1	1	1	-
Mercuric Cyanide Mercuric Cyanide Solution (in H ₂ O or Alcohol) Mercurous Nitrate Solution Mercury Mercury Vapor	Colorless Transparent Prisms Solution Solution Silver Liquid Gas	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Mesityl Oxide (Methyl Isobutenyl Ketone) Mesitylene (Trimethylbenzene) Metallic Soaps (Aluminium, Calcium, Zinc) Methallyl Alcohol (Methylallyl Alcohol) Methane Methanol (Methyl Alcohol)	Colorless Oily Liquid Liquid Solids @ Room Temperature Colorless Liquid Gas Colorless Liquid	1	1	1	-	2	X	X	X	X	2	X	X	2	-	X	1	1	1	1	1	-



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Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers													Couplings / Adapters								
		Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.													Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro								
		T	K	L	S	P	C	D	D	A	H	V	M	J				Z	G				
		Teflon® Gatlon™ UHMWPE Sanitron™ EPDM NBR SBR NR Neoprene Butyl Fluorocarbon Hypalon® CPE Nylon PVC																					
Chemical																							
Nickel Nitrate Solution (In Water or Alcohol)	Solution	1	1	-	-	2	2	2	2	2	2	2	1	2	1	-	2	-	-	2	X	-	-
Nickel Plating Solution	Liquid	1	1	-	-	-	2	2	-	-	-	2	-	-	X	-	-	-	-	1	1	-	-
Nickel Salts	-	1	1	-	-	1	1	1	1	1	1	1	1	1	1	2	-	-	-	-	-	-	-
Nickel Sulfate	Yellow Green to Blue Crystals	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	2	1	X	X
Nickel Sulfate Solution	Solution	1	1	-	-	2	2	2	2	2	2	2	1	2	1	-	1	-	-	2	1	X	X
Nicotine Salts (ie Nicotine Hydrochloride)	Colorless Oil	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	X	2	-
Niter Cake (Sodium Bisulfate)	Colorless Crystals to White Lumps	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X
Niter Cake Solution	Solution	1	1	1	1	2	-	X	X	-	2	1	1	1	1	-	-	-	-	-	-	-	-
Nitric Acid (25% or less)	Colorless Liquid	1	1	1	2	2	X	X	X	X	2	1	2	1	X	X	X	X	2	2	-	X	-
Nitric Acid (10%)	Transparent or Yellowish Liquid	1	1	1	1	1	X	X	X	X	2	1	2	1	X	X	X	X	2	2	-	X	-
Nitric Acid (25%)	Transparent or Yellowish Liquid	1	1	1	2	2	X	X	X	X	2	1	2	1	X	X	X	X	2	2	-	X	-
Nitric Acid (35% or less, 26 Degrees Baume)	Colorless Liquid	1	1	1	2	2	X	X	X	X	2	1	1	X	X	X	X	X	2	2	-	X	-
Nitric Acid (52% or less, 36 Degrees Baume)	Colorless to Yellow Liquid	1	2	X	2	X	X	X	X	X	1	2	X	X	X	X	X	X	2	2	-	X	-
Nitric Acid (61% or less, 40 Degrees Baume)	Colorless to Yellow Liquid	1	2	X	2	X	X	X	X	X	1	2	X	X	X	X	X	X	2	2	-	X	-
Nitric Acid (63.5% or less)	Transparent or Yellowish Liquid	1	X	X	X	X	X	X	X	X	1	X	X	X	X	X	X	X	2	2	-	X	-
Nitric Acid (67% or less, 42 Degrees Baume)	Colorless to Yellow Liquid	1	X	X	X	X	X	X	X	X	1	X	X	X	X	X	X	X	2	2	-	X	-
Nitric Acid (95% or less, 48.5 Degrees Baume)	Yellow Liquid	1	X	X	X	X	X	X	X	X	1	X	X	X	X	X	X	X	2	2	-	X	-
Nitric Acid (Red Fuming)	Red Liquid	1	X	X	X	X	X	X	X	X	1	X	X	X	X	X	X	X	-	-	-	-	-
Nitrobenzene	Yellow Liquid @ 43°F (6°C)	1	2	-	1	2	X	X	X	X	2	X	X	X	2	X	X	X	1	1	1	1	1
Nitroethane	Colorless Liquid	1	1	-	-	2	X	2	2	X	2	-	2	1	-	-	-	-	1	1	-	1	-
Nitrogen (Cryogenic Liquid)	Liquid	NO HOSE AVAILABLE															1	1	1	1	1	1	-
Nitrogen (Gas)	Colorless Gas	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-
Nitrogen Dioxide (Nitrogen Tetroxide)	Liquid @ 50 PSIG @ 120°F (49°C)	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Fertilizer (Ammonia, Urea)	Solutions in Water	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen Oxide (Nitrous Oxide)	Gas	1	1	-	1	2	X	X	X	X	1	1	1	1	X	X	X	1	1	1	-	X	-
Nitrogen Tetroxide (Nitrogen Dioxide)	Liquid @ 50 PSIG @ 120°F (49°C)	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Nitromethane	Colorless Liquid	1	-	-	-	2	X	-	2	X	2	X	X	-	1	X	-	-	1	1	-	1	-
Nitropropane	Colorless Liquid	1	1	-	-	2	X	X	X	X	2	X	-	-	1	-	-	-	-	1	1	-	1
Nitrosyl Chloride	Yellow-Red Liquid or Gas	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
Nitrous Acid (Up to 10%)	Light Blue Liquid	1	1	1	-	-	-	-	-	1	-	-	1	-	1	1	1	X	1	1	X	X	-
Nitrous Oxide (Nitrogen Oxide)	Gas	1	1	-	1	2	X	X	X	X	1	1	1	1	X	X	X	1	1	1	X	-	-
Nitrous Oxide, Compressed Liquid	Liquid @ 800 PSIG @ 68°F (20°C)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nonene (1-nonylene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Nonyl Alcohol (Octyl Carbinol)	Colorless Liquid	1	1	1	1	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Nonylene (Nonene)	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
O																							
Octadecanoic Acid (Stearic Acid)	Colorless Waxy Solid	1	1	1	1	2	2	2	2	2	2	1	2	1	1	1	X	2	1	X	X	-	-
Octanoic Acid (Caprylic Acid)	Colorless Oily Liquid	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Octanol (Octyl Alcohol)	Colorless Liquid	1	1	-	-	-	2	2	2	-	1	-	1	1	2	1	1	1	1	1	2	-	-
Octene	Colorless Liquid	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Octyl Acetate	Colorless Liquid	1	-	-	-	-	X	-	X	-	X	X	1	-	-	-	-	-	-	-	-	-	-
Octyl Alcohol (Octanol)	Colorless Liquid	1	1	-	-	-	2	2	2	-	1	-	1	1	2	1	1	1	1	1	2	-	-
Octyl Aldehyde	Colorless Liquid	1	-	-	-	X	-	X	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-
Octyl Carbinol (Nonyl Alcohol)	Colorless Liquid	1	1	1	1	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Octyl Phenol (Diisobutyl Phenol)	White Flakes	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octylamine	Water White Liquid	1	-	-	-	-	X	-	X	-	2	X	X	-	-	-	-	-	-	-	-	-	-
Oil (SAE Motor Oils)	Liquid	1	1	-	X	X	1	X	X	2	X	1	2	1	1	2	-	-	-	-	-	-	-
Oil of Turpentine	Liquid	1	2	-	X	1	X	X	2	X	1	X	-	1	1	1	-	-	-	-	-	-	-
Oils, Animal (High Fatty Acid Content)	Solid to Liquids	1	2	-	2	X	1	X	X	2	2	1	X	1	-	2	1	1	1	1	1	1	-



Note: For Explanation of Ratings, Refer to Page 142

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Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers													Couplings / Adapters												
		Stallion® Mustang® 45HW Renegade™	Food & Bev. Mstr.												Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro												
		T	K	L	S	P	C	D	D	A	H	V	M	J				Z	G								
		Teflon™	Gatron™	UHMWPE™	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE				Nylon	PVC								
Chemical																											
Phenothiazine	Greenish Powder or Flakes	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenyl Acetate	Water White Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenyl Chloride (Chlorobenzene)	Clear Volatile Liquid	1	2	-	X	X	X	X	X	X	X	1	X	X	X	X	1	1	1	1	1	1	1	1	1	1	X
Phenylenediamine (ortho)	Colorless to Red Solid Needles	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phorone (Diisopropylidene Acetone)	Yellow Liquid	1	1	-	-	2	X	X	X	X	2	X	X	-	-	-	-	-	-	1	1	1	-	-	-	-	1
Phosgene (Carbonyl Chloride)	Gas, Liquid 60 PSI @ 120°F (49°C)	1	X	X	X	X	X	X	X	X	2	1	X	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate Ester Hydraulic Fluid	Liquid	1	1	1	-	1	X	X	X	X	-	-	X	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate Rock	Solid	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphate, Trisodium	In Water	1	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphoric Acid (100%)	Crystals	1	2	X	2	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphoric Acid (35% or less)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	-	-	-	X	1	1	1	X	2	1	-	-	-
Phosphoric Acid (50%)	Colorless Liquid	1	1	1	1	1	2	2	2	2	2	1	1	1	X	X	X	1	1	1	X	2	1	-	-	-	-
Phosphoric Acid (75%)	Colorless Liquid	1	2	1	2	2	-	-	-	-	1	1	1	X	X	X	X	2	2	X	X	1	-	-	-	-	-
Phosphoric Acid (85%)	Syrupy Liquid	1	2	1	2	2	X	X	X	X	1	1	1	X	X	X	X	2	2	X	X	1	-	-	-	-	-
Phosphoric Acid (90%)	Syrupy Liquid	1	2	1	2	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphoric Acid, Spent	Liquid	1	1	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Developers	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Emulsions	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Fixing Solutions	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Phthalic Acid	Colorless Crystals	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phthalic Acid (50%)	Colorless Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phthalic Anhydride, Molten	White Crystalline Solid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Picric Acid (Solution)	In Water	1	2	2	2	2	-	-	-	-	1	-	-	-	-	-	-	X	1	1	1	X	X	1	-	-	-
Picric Acid (Trinitrophenol)	Yellow Crystals	1	2	2	2	2	2	2	2	2	2	1	2	-	X	1	-	-	-	-	-	-	-	-	-	-	-
Pine Oil	Colorless to Amber Liquid	1	1	-	-	X	2	X	X	-	X	2	X	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Pine Tar	Viscous Brown to Black Liquid	1	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pinene	Colorless Transparent Liquid	1	1	-	X	X	2	X	X	X	X	1	-	2	1	X	-	-	-	-	-	-	-	-	-	-	-
Piperazine Hydrochloride Solution (34%)	In Water	1	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pitch	In Aromatic Hydrocarbons	1	2	X	X	X	2	X	X	X	X	1	X	-	1	X	-	-	-	-	-	-	-	-	-	-	-
Plating Solution Chrome Under 120°F (49°C)	Liquid	1	1	-	-	2	-	-	-	-	2	2	-	-	X	X	-	X	X	-	X	X	-	-	-	-	1
Pluronic (Block Polymer with Hydroxyl by BASF)	Liquid	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyester Plastic	-	1	1	-	-	-	-	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Polyethylene Glycol	Colorless Liquid to glassy Solid	1	-	-	-	1	2	-	1	1	1	1	1	-	2	2	-	-	-	-	-	-	-	-	-	-	-
Polyethylene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polypropylene Glycol	Liquid	1	1	-	1	1	1	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polypropylene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polystyrene Plastic	Solid Beads	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyurethane Foam Under 125°F (52°C)	-	1	1	-	-	2	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polyvinyl Acetate - Emulsions	Emulsion	1	-	-	1	1	1	-	1	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potash (Potassium Carbonate) Aqueous Solution	Liquid	1	1	-	1	1	-	1	1	1	1	1	1	-	1	1	-	2	1	1	-	X	1	-	-	-	-
Potassium Acetate	White Powder	1	1	-	-	2	2	2	2	2	2	X	2	1	-	1	-	-	1	1	-	-	-	-	-	-	1
Potassium Bicarbonate	Colorless crystal or white Powder	1	1	-	-	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Bisulfate	Colorless crystal	1	1	-	-	1	1	1	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Bromate	White Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Potassium Bromide	White Crystals or Powder	1	1	-	-	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Carbonate	White granular Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1	-	-	-	-	-	-	-
Potassium Carbonate, Liquid	Colorless to Cloudy Liquid	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Chlorate	Colorless to white Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Chloride	Colorless to white Solid	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Chloride, Dry	White Solid	1	1	-	1	1	1	1	1	1	1	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Potassium Chromate	Yellow Crystal	1	2	-	-	2	X	X	X	2	2	1	2	1	2	1	-	-	-	-	-	-	-	-	-	-	1
Potassium Cuprocyanide	White Crystalline Solid	1	-	-	-	1	1	1	1	1	1	1	1	-	2	1	-	-	-	-	-	-	-	-	-	-	1





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Industrial Hose

Chemical Resistance Table

<p>Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070</p> <p>1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data</p> <p>NOTE: Ratings are for the affect on the <i>polymer only!</i></p> <p>Chemical</p>	<p>Form (at room temperature unless otherwise stated)</p>	Gates Hose / Polymers													Couplings / Adapters						
		Stallion®	Mustang® 45HW	Renegade™	Food & Bev. Mstr.										Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum Brass	Polypro		
		T	K	L	S	P	C	D	D	A	H	V	M	J						Z	G
		Teflon™	Gaatron™	UHMWPE	Sanitron™	EPDM	NBR	SBR	NR	Neoprene	Butyl	Fluorocarbon	Hypalon®	CPE						Nylon	PVC
		Potassium Cyanide	White Crystal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Dichromate	White Crystalline Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Potassium Ferrocyanide	Yellow Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Potassium Fluoride	White Crystalline Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Potassium Hydrate	White Solid	1	-	-	-	2	2	2	2	2	2	1	X	1	-	2	2	-	-		
Potassium Hydroxide (45% Caustic Potash)	Colorless to Cloudy Liquid	1	1	1	1	2	2	2	2	2	2	1	2	-	1	1	1	-	-		
Potassium Hydroxide, Liquid	Colorless to Cloudy Liquid	1	1	-	-	1	2	2	2	2	2	1	X	2	-	X	X	-	-		
Potassium Iodide	White Solid	1	-	-	-	1	1	-	-	1	-	1	1	-	-	1	-	-	2		
Potassium Nitrate	Colorless to white Solid	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-		
Potassium Permanganate	Dark purple Crystal	1	1	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-		
Potassium Persulfate	White Crystal	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-		
Potassium Phosphate	Colorless to white Crystal	1	-	-	-	1	-	-	1	-	1	1	-	-	-	-	-	-	-		
Potassium Silicate, Other Than Dry	-	1	1	-	-	1	1	2	-	1	-	1	-	-	-	-	-	-	-		
Potassium Sulfate	White Crystal or Powder	1	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-		
Potassium Sulfide	Red or yellow Crystal or Solid	1	1	-	-	1	1	-	-	1	1	1	2	-	-	-	-	-	-		
Potassium Sulfite	White Crystal or Powder	1	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-		
Potassium Thiosulfate	Colorless crystal	1	-	-	-	1	-	-	1	-	1	1	-	-	1	-	-	-	-		
Primatol A, S, P (Ag Spray)	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Propane Gas	Colorless Gas	CONTACT DENVER PRODUCT APPLICATION													-	-	-	-	-		
Propanediol	Colorless Liquid	1	1	-	-	1	1	-	-	X	1	1	2	-	-	-	-	-	-		
Propanol (Propyl Alcohol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	1	2	-	-	-		
Propionic Acid	Colorless Oily Liquid	1	1	1	1	2	X	2	2	X	2	1	2	-	-	-	1	1	-		
Propyl Acetate	Colorless Liquid	1	1	1	1	-	-	-	-	-	X	-	2	-	-	-	-	-	-		
Propyl Alcohol (Propanol)	Colorless Liquid	1	1	1	1	1	-	-	-	-	1	1	-	1	1	2	-	-	-		
Propyl Aldehyde	White-water Liquid	1	-	-	-	X	-	X	-	2	X	X	-	-	-	-	-	-	-		
Propyl Chloride	Colorless Liquid	1	-	-	-	X	-	X	-	X	2	X	-	-	-	-	-	-	-		
Propylene	Colorless Gas	1	-	-	-	X	X	X	X	X	1	X	-	-	-	-	-	-	-		
Propylene Diamine	Colorless Liquid	1	-	-	-	2	-	2	-	2	-	X	-	-	-	-	-	-	-		
Propylene Dichloride (Dichloropropane)	Colorless Liquid	1	-	-	-	X	X	X	X	X	2	X	-	-	-	-	-	-	-		
Propylene Glycol	Liquid	1	1	-	1	1	1	1	1	1	1	1	1	2	1	-	-	-	-		
Propylene Oxide	Colorless Liquid	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-		
Purina Insecticide	-	1	1	-	-	2	X	-	-	X	2	2	-	2	-	-	1	1	1		
Puropale RX Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2	1	1	1		
Pydraul 10E, 29E-LT, 30E, 60, 65E, 115SE	Liquid	1	1	-	-	2	X	-	-	-	2	-	-	2	-	X	1	1	1		
Pydraul 135	Liquid	1	1	-	-	-	X	-	-	-	2	1	-	2	2	-	1	1	1		
Pydraul 150	Liquid	1	1	-	-	2	X	X	X	X	2	1	X	2	2	X	1	1	1		
Pydraul 280	Liquid	1	1	-	-	2	X	X	X	X	2	2	X	2	2	X	1	1	1		
Pydraul 312	Liquid	1	1	-	-	2	X	X	X	X	X	1	-	2	1	X	1	1	1		
Pydraul 50E	Liquid	1	1	-	-	2	-	-	-	-	2	2	-	2	1	X	-	-	-		
Pydraul 540	Liquid	1	1	-	-	X	X	X	X	X	1	X	2	X	X	-	1	1	1		
Pydraul 625	Liquid	1	1	-	-	2	X	X	X	X	2	1	X	2	2	X	1	1	1		
Pydraul A-200	Liquid	1	1	-	-	X	X	X	X	X	1	X	2	2	X	-	1	1	1		
Pydraul F-9	Liquid	1	2	-	-	2	X	X	X	X	2	1	X	2	2	-	1	1	1		
Pyrene (Carbon Tetrachloride)	Colorless Liquid	1	2	X	X	X	X	X	X	X	1	X	2	1	X	X	2	2	X		
Pyrethrum	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-		
Pyridine (50%)	-	1	2	-	2	-	-	-	-	X	-	X	X	-	-	X	-	1	1		
Pyrogard 160, 230, 630	Liquid	1	1	-	-	-	-	-	-	-	-	2	-	-	-	-	1	1	1		
Pyrogard 51, 53, 55	Liquid	1	1	-	-	2	X	-	-	-	2	-	-	-	-	-	1	1	1		
Pyrogard C, D	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2	1	1	1		
Pyronal (Transformer Oil)	Liquid	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-		



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Industrial Hose

Chemical Resistance Table

Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers											Couplings / Adapters														
													Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro									
		Stallion [®]	Mustang [®] 45HW	Renegade [™]	Food & Bev. Mstr.														T	K	L	S	P	C	D	D	A
<p>Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070</p> <p>1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data</p> <p>NOTE: Ratings are for the affect on the polymer only!</p>																											
Q																											
Quenching Oil	Liquid	1	-	-	-	-	2	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quintolubric 822	Liquid	1	1	-	-	-	2	1	-	-	2	X	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
R																											
Ramrod (Ag Spray)	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Rando Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Rape Seed Oil	Brownish to yellow Liquid	1	1	-	2	2	-	-	-	-	2	-	X	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Red Oil (Commercial Oleic Acid) (MIL-5606)	Liquid	1	2	2	2	2	2	X	X	2	2	2	X	2	1	2	2	2	2	2	1	2	2	2	1	2	1
Refined Wax (Petroleum)	-	1	1	-	-	-	1	X	X	2	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Regal Oils R&O	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	1	2	1	1	1	1	1	1	1	1	1	1
Richfield "A" Weed Killer	-	1	1	-	-	X	2	X	X	X	X	2	X	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Road Paving Compound	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Road Tar	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rubilene Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-
S																											
Salicylic Acid	White Powder	1	1	1	1	2	X	2	2	-	2	2	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-
Salt Water (Sea Water)	Liquid	1	1	-	1	1	2	2	X	2	1	1	2	-	1	1	2	2	1	1	1	-	-	2	-	-	-
Sauerkraut	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Sea Water	Colorless Liquid	1	1	-	1	1	2	2	X	2	1	1	2	-	1	1	2	2	1	1	1	-	-	2	-	-	-
Sevin	-	1	2	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Sewage	Sludge	1	1	1	1	1	2	2	X	2	-	-	2	1	1	2	X	1	1	1	2	1	1	1	2	1	-
Shampoo	Liquid	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shellac	Orange to colorless flake	1	-	X	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Shortening	-	1	-	-	-	X	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silicate of Soda	Brownish or yellow Liquid	1	1	-	-	1	1	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silicone Greases	Liquid	1	2	-	-	-	2	-	-	2	-	2	2	-	1	2	1	1	1	1	-	1	1	1	-	1	-
Silicone Oils	Liquid	1	2	-	-	-	2	-	-	2	-	2	2	-	1	2	1	1	1	1	-	1	1	1	-	1	-
Silver Cyanide	White Powder	1	1	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Silver Nitrate	Colorless crystal	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	2	1	1	1	2
Skydrol 500A & 7000	Liquid	1	1	-	1	1	X	X	X	X	2	X	X	2	1	X	1	1	1	1	-	1	1	1	1	-	-
Soap Oil	Liquid	1	1	2	-	-	X	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Soap Solutions	Liquid	1	1	1	-	-	1	1	X	X	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Soap, Liquid	Liquid	1	1	-	-	1	1	2	2	1	2	1	1	-	2	2	1	1	1	1	-	-	-	-	-	-	-
Soda Ash (Sodium Carbonate)	Grayish Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	2
Soda Water	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Sodium Acetate	Colorless crystal	1	1	-	-	2	X	2	2	X	2	X	X	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Aluminate Solution	Colorless to cloudy Liquid	1	1	-	-	1	1	2	2	1	1	1	1	-	2	2	-	-	-	-	-	-	-	-	-	-	-
Sodium Benzoate	White Crystals or Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Sodium Bicarbonate	White Crystal or Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Sodium Bichromate Solution	Red to clear Liquid	1	1	-	-	1	2	2	2	2	1	1	2	-	2	2	-	-	-	-	-	-	-	-	-	-	-
Sodium Bisulfate (Niter Cake)	Colorless Crystals to White Lumps	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X	X
Sodium Bisulfite	White Crystals or Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-
Sodium Borate (Borax)	White Crystals	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1
Sodium Carbonate (Soda Ash)	Grayish Powder	1	1	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	X
Sodium Chlorate	Colorless Crystals	1	-	-	-	1	1	1	1	1	2	2	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-
Sodium Chloride	Colorless to white Crystals	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2



Note: For Explanation of Ratings, Refer to Page 142

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January 1, 2003

Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers												Couplings / Adapters												
			Stallion® Mustang® 45HW Renegade™	Food & Bev. Mstr.												Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro											
			T	K	L	S	P	C	D	D	A	H	V	M	J		Z	G									
			Teflon™ Gatron™ UHMWPE Sanitron™ EPDM NBR SBR NR Neoprene Butyl Fluorocarbon Hypalon® CPE Nylon PVC																								
Steam			USE STEAM HOSE ONLY																								
Stearic Acid (Octadecanoic Acid)			1	1	1	1	2	2	2	2	2	2	2	1	2	1	1	1	X	2	1	X	X	-			
Stearin			1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-			
Stoddard Solvent			1	2	-	2	X	2	X	X	-	X	1	-	1	1	2	-	-	-	2	1	1	-	1	-	
STPP (Sodium Tripolyphosphate)			1	2	-	-	2	-	-	2	2	-	2	X	-	-	-	-	-	-	2	1	1	-	X	X	-
Straight Synthetic Oils			1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	
Styrene (Monomer)			1	2	-	X	X	X	X	X	-	X	2	-	2	2	-	-	-	2	X	2	X	2	-	-	
Sucrose Solutions			1	1	-	1	-	1	1	1	1	1	-	1	-	-	-	-	1	1	1	-	-	-	-	-	
Sugar, Liquid, Blended			1	1	-	1	1	1	1	1	1	1	1	1	2	-	-	-	-	-	-	-	-	-	-	-	
Sugar, Syrup			1	1	-	1	1	1	1	1	1	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfamic Acid			1	1	1	1	2	X	X	X	-	2	1	2	1	X	X	-	-	-	-	-	-	-	-	-	
Sulfamic Acid 10% Under 170°F (77°C)			1	X	-	-	-	-	X	X	-	-	2	2	1	-	-	-	-	-	-	-	-	-	-	-	
Sulfate Liquors Under 150°F (66°C)			1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	
Sulfur (Under 200°F (93°C))			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfur Chloride			1	2	-	-	X	X	X	X	X	X	1	2	-	2	2	-	-	X	X	2	-	X	-	-	
Sulfur Dioxide			-	-	-	1	2	X	X	-	-	2	X	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfur Dioxide (Dry)			1	2	-	-	2	X	X	X	X	X	1	2	-	X	1	-	-	2	1	1	1	1	-	-	
Sulfur Dioxide (Liquid)			1	-	1	-	1	X	X	X	2	2	X	2	-	-	X	-	-	-	-	-	-	-	-	-	
Sulfur Dioxide (Moist)			1	-	1	-	1	X	X	X	2	1	2	2	-	-	X	-	-	-	-	-	-	-	-	-	
Sulfur Hexafluoride (Gas)			1	1	-	-	1	2	2	2	1	1	2	2	-	1	2	-	-	-	-	-	-	-	-	-	
Sulfur Trioxide (Dry)			1	2	-	-	2	X	X	X	X	X	1	X	X	-	1	-	2	2	2	2	-	-	-	-	
Sulfuric Acid (10%)			1	1	1	1	1	2	1	1	1	1	1	1	1	X	-	-	X	X	2	X	X	2	X	X	
Sulfuric Acid (100%)			1	X	X	X	X	X	X	X	X	X	2	X	X	X	-	-	2	X	2	X	X	-	-	-	
Sulfuric Acid (30%)			1	1	1	1	1	2	2	2	1	1	1	1	1	X	-	X	X	2	X	X	2	X	X	-	
Sulfuric Acid (50%)			1	1	1	1	1	X	X	X	2	1	1	1	1	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (60%) (48.5 deg Baume)			1	1	1	1	1	X	X	X	X	1	1	1	1	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (75%)			1	1	1	1	2	X	X	X	X	2	1	2	2	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (88%) (64.7 deg Baume)			1	2	1	2	X	X	X	X	X	X	1	X	X	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (93%)			1	X	1	2	X	X	X	X	X	X	1	X	X	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (96%)			1	X	1	2	X	X	X	X	X	X	1	X	X	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid (98%)			1	X	1	2	X	X	X	X	X	X	1	X	X	X	-	-	X	X	2	X	X	-	-	-	
Sulfuric Acid, Fuming (Oleum)			1	X	X	X	X	X	X	X	X	X	1	X	X	X	X	-	-	-	1	-	-	-	X	-	
Sulfurous Acid (10%)			1	1	1	1	1	X	X	X	-	2	1	1	1	-	1	-	-	X	2	1	X	X	-	-	
Sulfurous Acid (75%)			1	1	1	1	1	X	X	X	X	X	1	1	1	X	-	-	X	X	2	X	X	-	-	-	
Sun R&O Oils			1	1	-	-	X	1	-	-	-	X	1	-	-	1	2	-	-	1	1	1	1	1	-	-	
Suntac HP Oils			1	1	-	-	X	1	-	-	-	X	1	-	-	1	2	-	-	1	1	1	1	-	-	-	
Suntac WR Oils			1	1	-	-	X	1	-	-	-	X	1	-	-	1	2	-	-	1	-	1	-	-	-	-	
Sunvis Oils 700, 800, 900			1	1	-	X	X	1	-	-	-	X	1	-	-	1	2	-	-	1	1	1	-	-	-	-	
Synthetic Oil (Citgo)			1	1	-	-	X	-	-	-	-	X	-	-	-	1	2	-	-	1	1	1	-	-	-	-	
Syrup			1	1	-	1	-	-	1	1	2	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	
T																											
Tall Oil			1	2	-	X	X	1	X	X	X	X	2	X	-	-	X	-	-	X	2	-	-	-	-	-	
Tall Oil(Under 150°F (66°C))			1	1	-	2	X	2	X	X	2	X	1	X	-	-	-	-	-	X	2	-	-	-	-	-	
Tallow			1	1	-	2	2	2	-	-	2	2	-	-	-	1	2	-	-	2	2	2	1	2	-	-	
Tannic Acid			1	1	1	1	1	X	2	2	2	1	1	2	1	1	1	-	-	2	1	1	2	X	-	-	
Tannic Acid (10 %)			1	1	-	-	X	-	2	2	2	X	1	2	1	1	1	-	-	2	1	1	2	X	-	-	
Tar (Bituminous) Under 100°F (38°C)			1	1	2	X	X	2	X	X	2	X	1	-	X	-	-	-	-	1	1	1	1	2	-	-	
Tar Oil			1	-	-	X	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	
Tartaric Acid			1	1	1	1	1	2	2	2	2	1	1	1	1	-	-	-	-	2	2	2	2	-	-	-	



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Industrial Hose

Chemical Resistance Table

Chemical	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers																			Couplings / Adapters				
		Stallion®		Mustang® 45HW		Renegade™		Food & Bev. Mstr.												Iron/Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	Polypro
		T	K	L	S	P	C	D	D	A	H	V	M	J	Z	G									
Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070																									
1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data																									
NOTE: Ratings are for the affect on the <i>polymer only!</i>																									
TEA (Triethanolamine)	Colorless Viscous Liquid	1	1	-	-	1	2	2	2	2	2	2	X	2	1	-	2	2	-	1	1	1	-	1	-
TEL (Tetraethyl Lead)	Colorless Oily Liquid	1	2	-	-	X	2	X	X	X	X	1	X	-	2	1	-	-	-	-	-	-	-	-	-
Tellus Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2	1	1	1	1	1	1	1	-	
Tenol Oils	Liquid	1	1	-	-	X	1	-	-	-	X	1	-	-	1	2	1	1	1	1	-	-	-	-	
Tergitol (Ethoxylates and Ethoxysulfates of Alcohol)	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	
Terpineol	Colorless Liquid or Crystal	1	1	-	-	-	-	X	X	-	X	-	2	1	2	2	-	-	-	-	-	-	-	-	
Tertiary Butyl Alcohol	Colorless Liquid or Crystal	1	2	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachlorobenzene	White Crystal	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloroethane (Acetylene Tetrachloride)	Colorless Liquid	1	X	X	X	X	-	X	X	-	X	1	X	X	1	X	-	-	-	-	-	-	-	-	
Tetrachloroethylene	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloromethane	Colorless Liquid	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloronaphthalene	Oily Liquid to Crystalline Solid	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
Tetradecanol	White Solid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tetraethyl Lead (TEL)	Colorless Oily Liquid	1	2	-	-	X	2	X	X	X	X	1	X	-	2	1	-	-	-	-	-	-	-	-	
Tetraethylene Glycol	Colorless Liquid	1	2	-	-	-	2	-	2	-	1	2	2	-	-	-	-	-	-	-	-	-	-	-	
Tetrahydrofuran (THF)	Colorless Liquid	1	X	-	-	2	X	X	X	X	2	1	X	-	1	X	2	-	-	-	-	-	-	X	
Tetrahydroxydicyclopentadiene (JP 10) ²	-	-	-	-	X	X	X	X	X	X	X	1	X	-	1	X	-	-	-	-	-	-	-	-	
Tetralin	Colorless Liquid	1	-	-	X	X	X	X	X	X	X	1	X	-	2	-	-	-	-	-	-	-	-	X	
Theobromo Oil (Cocoa Butter)	Liquid above 95°F (35°C)	1	1	2	2	-	2	X	X	X	2	-	-	-	-	-	-	-	-	-	1	1	1	-	
THF (Tetrahydrofuran)	Colorless Liquid	1	X	-	-	2	X	X	X	X	2	1	X	-	1	X	2	-	-	-	-	-	-	X	
Thiopen	-	1	-	-	-	X	X	X	X	X	2	2	-	-	-	-	-	-	-	-	-	-	-	-	
Tin Tetrachloride	Colorless Liquid	1	-	-	-	-	2	-	2	X	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
Titanium Tetrachloride	Colorless Liquid	1	-	-	-	X	X	-	X	X	X	2	-	-	-	-	-	-	-	-	1	2	2	X	
Toluene (Toluol) (Methyl Benzene)	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	1	X	1	1	1	1	1	1	1	-	
Toluene Diisocyanate (Hylene)	Yellow Liquid	1	-	-	-	2	X	X	X	X	2	X	X	-	-	-	-	-	-	-	-	-	-	-	
Toluene Diisocyanate (Isocyanate)	Water White to Yellow Liquid	1	2	-	X	X	X	X	X	X	X	1	-	-	-	-	-	-	-	-	1	1	1	-	
Toluidine	Yellow Liquid or White Crystal	1	-	-	-	X	-	X	-	X	X	2	X	-	-	-	-	-	-	-	-	-	-	-	
Toluol (Toluene)	Colorless Liquid	1	2	2	X	X	X	X	X	X	X	1	X	X	1	X	1	1	1	1	1	1	1	-	
Transformer Oil (Askarel Types) ¹	Liquid	1	2	2	X	X	X	X	X	X	X	1	X	1	1	X	1	1	1	1	1	1	-		
Transformer Oil (Petroleum Type) ¹	Liquid	1	1	-	-	X	1	X	X	2	X	1	X	1	1	2	1	1	1	1	1	1	-		
Transmission Fluid (Type A)	Liquid	1	1	-	-	X	1	X	X	2	X	1	-	1	2	-	-	-	-	-	1	1	1	-	
Tributoxyethyl Phosphate	Yellow Liquid	1	1	X	-	2	X	X	X	-	2	-	X	X	2	-	-	-	-	-	1	-	-	X	
Tributyl Phosphate	Colorless Liquid	1	1	X	-	X	X	X	X	X	X	1	X	2	-	-	-	-	-	-	1	-	-	X	
Tricalcium Aluminate (Calcium Aluminate)	Crystals or Powder	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trichlorobenzene	White Crystal or colorless Liquid	1	2	-	-	-	X	X	X	X	X	2	X	-	-	-	-	-	-	-	-	-	-	-	
Trichloroethane 1,1,1 (Methyl Chloroform)	Colorless Liquid	1	X	X	X	X	X	X	X	X	X	1	X	X	X	X	-	-	-	-	-	-	-	-	
Trichloroethylene	Colorless Liquid	1	1	X	X	X	X	X	X	X	X	1	X	2	2	-	-	-	-	-	X	-	1	X	
Trichloropropane	Colorless Liquid	1	-	-	-	-	2	-	X	2	X	1	X	-	-	-	-	-	-	-	-	-	-	-	
Tricresyl Phosphate	Colorless Liquid	1	-	X	-	1	X	X	X	X	2	1	X	1	1	-	-	-	-	-	1	-	2	X	
Triethanolamine (TEA)	Colorless Viscous Liquid	1	1	-	-	1	2	2	2	2	2	X	2	1	-	2	-	-	-	-	-	1	1	-	
Triethylamine	Colorless Liquid	1	-	-	-	2	2	X	X	-	X	2	-	-	-	-	-	-	-	-	-	-	-	-	
Triethylene Glycol	Colorless Liquid	1	-	-	-	-	2	-	2	-	2	2	2	-	-	-	-	-	-	-	-	-	-	-	
Trihydroxybenzoic Acid (Gallic Acid)	In Alcohol or Glycerol	1	1	1	1	1	X	2	2	X	2	1	-	1	X	X	X	1	1	1	-	-	1	-	
Trimethyl Phosphite	Colorless Liquid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Trimethylbenzene (Mesitylene)	Liquid	1	-	-	X	X	X	X	X	X	X	1	-	-	1	X	-	-	-	-	-	-	-	-	
Trinitrophenol (Picric Acid)	Yellow Crystals	1	2	2	2	2	2	2	2	2	2	1	2	-	X	1	X	1	1	1	1	1	1	1	
Trioctyl Phosphate	Liquid	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Triphenyl Phosphate	Colorless Powder	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Tripolyphosphate (STPP), (Sodium)	White Powder	1	2	-	-	2	-	2	2	-	2	X	-	-	-	-	-	-	-	-	2	1	X		
Trisodium Phosphate (TSP)	Colorless crystal	1	-	-	-	1	2	2	X	2	2	1	X	-	-	-	-	-	-	-	-	-	-	-	
Tung Oil	Yellow drying oil	1	2	-	X	X	2	X	X	X	X	1	2	-	-	-	-	-	-	-	1	1	1	-	

¹ Petroleum hose only. ² Aircraft fueling hose only for fueling operations.



Note: For Explanation of Ratings, Refer to Page 142

39496-000
January 5, 2004
Supersedes 39496-000
January 1, 2003

Industrial Hose

Chemical Resistance Table

Contact Denver Product Application for recommendations for chemicals not listed. Phone (303) 744-5070 1 = Preferred - Constant Contact 2 = Acceptable - Intermittent Contact X = Not Recommended - = No Data NOTE: Ratings are for the affect on the polymer only!	Form (at room temperature unless otherwise stated)	Gates Hose / Polymers														Couplings / Adapters							
		Stallion® Mustang® 45HW Renegade™ Food & Bev. Mstr.													Iron/Carbon Steel Stainless Steel 304 Stainless Steel 316 Aluminum Brass Polypro	1	2	-					
		T	K	L	S	P	C	D	D	A	H	V	M	J					Z	G			
		Teflon® Gatron™ UHMWPE™ Sanitron™ EPDM NBR SBR NR Neoprene Butyl Fluorocarbon Hypalon® CPE Nylon PVC																					
Chemical																							
Turpentine	Liquid oil	1	X	1	X	X	2	X	X	X	X	1	X	2	1	1	-	1	1	1	1	1	-
U																							
Ucon Hydrolube Types 150CP, 200CP	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	1	2	1	1	1	1	1	1	-
Ucon Hydrolube Types 275CP, 300CP, 550CP	Liquid	1	-	-	-	-	1	X	X	-	X	1	-	-	2	2	-	-	-	-	-	-	-
Ucon M1	Liquid	1	1	-	-	1	1	-	-	-	1	-	-	-	1	2	1	1	1	1	1	1	-
Undecanol (Undecyl Alcohol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	-	2	2	-	-	-	-	-	-	-	-	-	-
Undecyl Alcohol (Undecanol)	Colorless Liquid	1	-	-	-	-	1	-	2	-	-	2	2	-	-	-	-	-	-	-	-	-	-
Union Hydraulic Tractor Fluid	Brown Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2	1	1	1	1	1	1	-
Urea Solution (100%)	Liquid	1	1	-	1	-	2	1	1	1	2	-	1	1	1	2	1	1	1	1	-	-	-
V																							
Varnish	-	1	2	-	X	X	X	X	X	X	X	2	X	-	1	-	2	1	1	1	-	2	-
Vegetable Oils	Liquids	1	-	1	2	2	-	X	X	2	X	-	1	1	1	2	1	1	1	1	1	-	-
Versilube F-50, F-44	Liquid	1	-	-	2	2	2	2	2	2	2	1	2	-	1	2	1	1	1	1	1	1	-
Vinegar	Brownish to colorless Liquid	1	1	-	1	-	2	2	2	2	2	1	X	2	-	1	X	2	1	X	X	-	-
Vinyl Acetate	Colorless Liquid	1	1	X	2	X	X	X	X	X	2	X	X	1	-	-	-	1	2	1	2	1	-
Vinyl Chloride (Monomer)	-	1	2	-	-	X	X	X	X	X	X	2	X	X	-	X	2	1	1	1	1	X	-
Vinyl Fluoride	Colorless Gas	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Vinyl Trichloride (Trichloroethane)	Colorless Liquid	1	-	-	X	X	X	X	X	X	X	1	X	X	X	X	-	-	-	-	-	-	-
Vitrea Oils	Liquid	1	1	-	-	X	1	-	-	-	X	-	-	-	1	2	1	1	1	1	-	-	-
VM&P Naptha (Mineral Spirits)	Colorless Liquid	1	1	-	X	X	1	X	X	-	X	1	X	-	1	-	1	1	1	1	2	1	-
W																							
Waste Paint	Liquid to semi-Solid paste	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Water	Liquid	1	1	1	1	1	1	1	1	1	1	-	1	1	1	1	2	1	1	1	1	1	-
Water (Brine)	Liquid	1	1	-	1	1	2	1	1	2	1	1	1	-	1	1	-	-	-	-	-	-	1
Water (Deionized)	Liquid	1	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Water (Distilled)	Liquid	1	1	1	1	1	1	1	1	2	1	-	1	-	1	1	-	-	-	-	-	-	1
Water (Potable)	Liquid	USE FDA HOSE ONLY														-	-	-	-	-	-	1	
Water Glycols	Liquid	1	1	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Water in Oil Emulsions	Liquid	1	1	1	2	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
White & Bagley No. 2190 Cutting Oil	Liquid	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wines	Liquid	1	2	-	1	X	X	X	X	X	X	1	X	1	1	-	2	2	2	1	-	-	-
Wood Oil	Liquid	1	1	-	-	X	1	X	X	2	X	1	2	1	1	1	-	-	-	-	-	-	-
X																							
Xylene (Dimethylbenzene)	Colorless Liquid	1	2	X	X	X	X	X	X	X	X	1	X	X	X	X	-	-	-	-	-	-	-
Xylenol (Dimethylphenol)	White solid, liquid @ 68°F (20°C)	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Z																							
Zeric	-	1	1	-	-	X	1	-	-	-	X	-	-	-	2	2	-	-	-	-	-	-	-
Zinc Acetate	White Crystal	1	1	-	-	2	X	2	2	X	2	X	X	-	X	1	1	1	1	1	1	1	-
Zinc Chloride Solutions	Colorless to cloudy Liquid	1	1	-	1	-	1	2	2	1	2	1	1	1	1	2	X	2	1	X	X	-	-
Zinc Chromate	Yellow Solid	1	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-
Zinc Hydrate	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Zinc Oxide	White or gray Powder	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Zinc Sulfate Solutions	Colorless to cloudy Liquid	1	1	-	-	2	2	X	X	2	2	-	2	1	2	2	X	2	1	X	X	-	-