

Chemical Guides

G4 ARGON Ar

G3 OXYGEN O₂

G5 HYDROGEN H₂

Media Compatibility

Description	Page No.
Chemical Guides Introduction	183
Hose and Chemical Table	186
Metal/Coupling Corrosion Resistance Table	213
Names and General Properties of Hose Materials	184
PVC Temperature / Pressure Chart	212
Refined Fuel / Hose Compatibility Table	185
Silicone Hose and Chemical Table	215

A complete listing of industry standards is available in the Introduction section. See the pages immediately following the Table of Contents for a complete index by series, and by product application and name.

Due to continual product improvements, Parker reserves the right to alter specifications without prior notice.

Chemical Guides Introduction

The Chemical Guides in this section are offered as a general indication of the compatibility of the various compounds incorporated in Parker hose with the chemicals, fluids and media listed. The basis for the ratings includes actual service experience, the advice of various polymer suppliers, and the considered opinion of our chemists. When in doubt, a sample of the compound should always be tested with the particular chemical and temperature it is to handle.

Some of the variables that affect the resistance of a compound to a chemical attack are:

- 1. Temperature of the Media Transmitted:** Higher temperatures increase the affect of chemicals on compounds. The amount of increase depends upon the polymer and the chemical. A compound quite suitable at room temperature might fail very quickly at higher temperatures. Working pressures in this catalog are recommended in accordance with ARPM design safety factors at ambient temperatures. Do not operate outside hose temperature limits. Even within hose temperature limits, end fittings and hose size can affect performance at higher temperatures.
- 2. Service Conditions:** A rubber compound usually swells when exposed to a chemical. Within a given percent of swell, a hose tube may function satisfactorily if the hose is in a static condition, but may fail quickly if the hose is subject to flexing.
- 3. The Grade or Blend of the Rubber Compound:** Basic polymers are sometimes mixed or blended to enhance a particular property for a specific service. As an example, the nitrile used as the tube material for Parker aircraft fueling hose varies in its makeup from the nitrile used in the tube of Day-Flo® Special Purpose hose. Consequently, the reaction to a particular chemical may therefore be somewhat different. When in doubt, a sample of the compound should always be tested with the particular chemical it is going to handle.

Names and General Properties of Hose Materials

Refer to the guides on the following pages for specific applications.

Common Name	ASTM Designation D1418-64	Composition	General Properties	Primary Hose Elements
Butyl / Chlorobutyl	IIR	Isobutene-Isoprene	Very good weathering resistance, low permeability to air. Good physical properties. Poor resistance to petroleum based fluids.	Tube / Cover
Chlorinated Polyethylene (CPE)	CM	Chloropolyethylene	Good long term resistance to UV and weathering. Good oil and chemical resistance. Excellent flame resistance. Good low temperature impact resistance.	Tube
Cross Linked Polyethylene (XLPE)	XPE	Cross Linked Polyethylene	Excellent resistance to most solvents, oils and chemicals. Do not confuse with chemical properties of standard polyethylene.	Tube
EPDM	EPDM	Ethylene Propylene Diene	Good general purpose polymer. Excellent heat ozone, and weather resistance. Not oil resistant.	Tube / Cover
Epichlorohydrin	ECO	Ethylene Oxide Chloromethyl	Excellent oil and ozone resistance. Fair flame resistance and low permeability to gases. Good low temperature properties.	Tube / Cover
Ethyl Vinyl Acetate (EVA)		Ethylene Vinyl Acetate	Good abrasion and chemical resistance. Lightweight.	Tube / Cover
FKM	FKM	Fluorocarbon Rubber	Excellent high temperature resistance, particularly in air or oil. Very good chemical resistance.	Tube / Cover
Fluorinated Ethylene Propylene / Polytetra-Fluoroethylene	FEP / PTFE	Fluorinated Ethylene Propylene / Polytetra-Fluoroethylene	Excellent chemical, solvent, and heat resistance, inert to most materials. Smooth anti-adhesive surface – easily cleaned.	Tube
Modified XLPE (MXLPE)		Proprietary	Excellent chemical resistance with good heat properties.	Tube
Natural Rubber	NR	Isoprene	Excellent physical properties, including abrasion resistance. Not oil resistant.	Tube
Neoprene	CR	Chloroprene	Excellent weathering resistance. Good oil resistance. Good physical properties.	Tube / Cover
Nitrile / Buna-N	NBR	Nitrile-Butadiene	Excellent oil resistance. Good physical properties.	Tube / Cover
Nylon		Nylon	Excellent chemical resistance. Good temperature resistance.	Tube
Poly Vinyl Chloride (PVC)		Poly Vinyl Chloride	Good abrasion, chemical and weathering resistance. Lightweight. Poor oil and temperature resistance.	Tube / Cover, Tubing
Poly Vinyl Chloride / Polyurethane (PVC/PU)		Poly Vinyl Chloride / Polyurethane Blend	Good abrasion, chemical and weathering resistance.	Tube / Cover
Polyurethane (PU)	AU	Polyurethane	Good abrasion, chemical and weathering resistance.	Tube / Cover
SBR	SBR	Styrene-Butadiene	Good physical properties, including abrasion resistance. Not oil resistant. Poor weathering and ozone resistance.	Tube / Cover
TPV		Thermoplastic Vulcanizate	Excellent chemical and ozone resistance. Good flexibility. Lightweight.	Tube, Tubing
Ultra-High Molecular Weight Polyethylene (UHMWPE)	UHMW	Ultra-High Molecular Weight Polyethylene	Excellent chemical and heat resistance.	Tube

Refined Fuel / Hose Compatibility Table

LEGEND

A: Acceptable for use with the designated fuel, and can be interchanged/used with other “A” media in the same row.

D: Acceptable for use with the designated fuel, but only for DEDICATED service with that designated fuel.

Not interchangeable/for use with any other fuel—prior to or subsequent to—use with the dedicated fuel.

X: Not acceptable for use with the designated fuel in any application.

NOTES: “A” or “D” ratings do not imply compliance with government or industry regulations or specifications in any application.

Series	Tube	Av Gas	Non-Regulated Gasoline Service	Ethanol			Diesel Fuel	Biodiesel	
				To E100	To E15	To E85		To B20	To B100
389	Nitrile	D	A	D	A	A	A	A	X
395	Nitrile	D	A	D	A	A	A	A	X
397	Nitrile	D	A	D	A	A	A	A	A
7094/7095	Nitrile	X	X	X	X	X	X	X	X
7102	Nitrile	D	A	D	A	A	A	D	X
7107	Nitrile	X	X	X	X	X	X	X	X
7107 (2" only)	Nitrile	D	A	D	A	A	A	D	X
7114	Nitrile	D	A	D	A	A	A	D	X
7124	Nitrile	D	D	D	A	A	A	D	X
7134/7187	Nitrile	X	X	X	X	X	X	X	X
7137	Nitrile	X	X	X	X	X	X	X	X
7165	Nylon	D	A	A	A	A	A	A	A
7174	Nitrile	D	D	D	A	A	A	D	X
7175	Nitrile	D	D	D	A	A	A	D	X
7204	Nitrile	D	A	A	A	A	A	A	X
7208E	Nitrile/SBR	X	X	X	X	X	X	X	X
7212	Nitrile	X	A	X	A	D	A	D	X
7213E	Nitrile/SBR	X	X	X	X	X	X	X	X
7216/7217	Nitrile	D	A	D	A	A	A	D	X
7216E	Nitrile	D	A	D	A	A	A	D	X
7219	Nitrile	D	A	A	A	A	A	A	X
7234	Chloroprene	X	X	D	X	X	X	X	X
7280	Nitrile	D	D	D	A	A	A	D	X
7282	Nitrile/THV Barrier	D	D	D	A	A	A	D	X
7301	Chloroprene	X	X	D	X	X	X	X	X
7311N/7311NXT	Nitrile	D	A	D	A	A	A	D	X
7331/7331XT	Nitrile	D	A	D	A	A	A	D	X
7396/7397	Nitrile	D	A	D	A	A	A	D	X
7705	Nitrile	A	A	A	A	A	A	A	A
7775	Nitrile	D	A	D	A	A	A	D	D
7776	Nitrile	D	A	D	A	A	A	D	D
7776CT	Nitrile	D	A	D	A	A	A	D	D
7777	Nitrile	D	A	D	A	A	A	D	D
SS107/SS107R	Nitrile	D	A	D	A	A	A	D	D
SS269	Nitrile/SBR	X	X	X	X	X	X	X	X
SWC325	Nitrile	D	A	D	A	A	A	D	D
SW387	Nitrile	D	A	D	A	A	A	D	D
SW569	Nitrile	D	D	D	D	D	D	D	D
SWC316/SWC316R	Nitrile	D	A	D	A	A	A	D	D
SWC609/SWC609R	Nitrile	D	A	D	A	A	A	D	D

Some biodiesel, diesel fuel and gasoline hoses must also meet industry or government standards for regulated applications, such as SAE engine fuel lines or UL gasoline dispenser service. The user is solely responsible for making the final determination if an industry or government (local, state or federal) standard or regulation applies to the application. Contact Parker for more information.

Hose and Chemical Table

Refer to "Names and General Properties of Hose Materials" table.

⚠️ WARNING! The following data is based on tests and believed to be reliable; however, the tabulation should be used as a guide **ONLY**, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc., that may be encountered in actual use. All critical applications should be tested. Refer to the Safety & Technical Information section of this catalog for safety, handling and use information.

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

Thermoplastic hose and tubing achieve their optimum physical properties at room temperature, 68°F (20°C). As thermoplastic materials are exposed to increased ambient temperatures, they soften and their physical properties change. For hose and tubing, heat sharply reduces the available working pressure and coupling retention. In all cases, test the product in a controlled, secure and safe environment, and consider all operating conditions prior to use.

- NOTES:**
- Data for PVC/thermoplastic materials based on 68°F unless otherwise noted.
 - Data for other materials based on 70°F unless otherwise noted.

Key: E = Excellent • G = Good • C = Conditional • Blank = No Data • X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Acetal		C	G	C	G		E	X	G	C	X					C		E	E
Acetaldehyde		X	E	X	E	G	E	X		X	X	E	X	X	X	X	G	G	E
Acetamide		G	E	G	E		E	G	E	C	E					X		E	E
Acetate Solvents		X	C	X	E	C	E	X	G	C	X		C	X	X	X		E	E
Acetic Acid, 10%	E	E	E	G	E	E	E	E		G	G	X	X	E	G	G	E	E	E
Acetic Acid, 30%		G	G	C	E	E	E	C	G	X	X		G	G	G	X		E	E
Acetic Acid, 50%	E	E	G	C	E	C	E	G		X	C	X	X	G	G	G	C	E	G
Acetic Acid, 80%						C							X	C	C				
Acetic Acid, Glacial	E	C	G	C	G	X	E	X		X	X	X	X	C	C	C	G	E	E
Acetic Acid, Vapors						G							X	G	G				
Acetic Anhydride	E	E	G	G	G	C	E	X		C	X	X	X	X	X	X	E	G	E
Acetic Ester		X	G	X	E		E	X	G	X	X					X		E	E
Acetic Ether		C	G	X	E		E	X	G	X	X					X		E	E
Acetic Oxide		E	G	X	E		E	X		X	X		G				G		E
Acetone	G	X	E	X	E	C	E	X		X	X	E	X	X	X	C	G	E	C
Acetone Cyanohydrin		C	E	G	E		E	X		C	X		X			E	E	G	E
Acetonitrile		G	E	E	E		E	X		G	X	E					X		
Acetophenone		X	G	X	E		E	X		X	X		X			X	G	X	X
Acetyl Acetone	G	X	E	X	E		E	X		X	X		X			X	G	E	E
Acetyl Chloride	E	X	X	X	C		E	G		X	X	X	X			X	G	G	G
Acetyl Oxide	E	E	G	G	G		E	X		C	X		X			X	E	E	E
Acetylene	G	C	E	E	E	X	E	E		G	E	E	G	C	C	C	C	E	E
Acetylene Dichloride		X	C	X	C		E	G		X	X	E						X	
Acetylene Tetrachloride		X	X	X	X		E	E		X	X		X			X	X		
Acrolein		G	E	C	E		E	X		G	C		X			C	C	X	E
Acrylic Acid	E	G	X	X	X		E	X		X	X		X			X			X
Acrylonitrile	E	C	X	X	E		E	X		C	X	E	X	C	C	C	G	C	C
Di(2Ethylhexyl) Adipate		X	E	X	G		E	C		X	X								
Adipic Acid		G	X	E	E	E	E	E		E	E		E	G	G	E	G		E
Air		E	E	E	E		E	E	E	E	E					E		E	E
Air, +300°F	G	G	G	G	G		E	E		X	G		G			X	E	X	
Alcohol, Aliphatic		E	E	E	E		G	C	E	E	E					G		E	E
Alcohol, Aromatic		X	X	C	X		E	E	G	C	C					X		E	E
Alk-Tri		X	X	X	X		E	E		X	X		X			X	X		E
Allyl Alcohol		E	E	E	E	E	E	G		E	E	C	X	X	X	G	G	E	E
Allyl Bromide		X	X	X	X		E	G		X	X					X		G	G
Allyl Chloride	G	X	X	X	X	C	E	G		X	G	G	X	X	X	G		E	G
Alum	E	E	E	E	E	E	E	E	E	E	E	G	G	E	E	G	E	E	E
Alum, Papermakers							E	E										G	
Aluminum Acetate	E	G	E	C	E		E	E	E	C	C		X			G	E	E	E
Aluminum Chloride	C	E	E	E	E	G	E	E	E	E	E	X	G	E	E	E		E	E
Aluminum Fluoride	X	E	E	E	E	G	E	E		G	E	G	C	G	G	E	E	E	E
Aluminum Formate		X	G	E	E		E	X		X	X		X			E		E	
Aluminum Hydroxide		E	E	E	E	G	E	E		E	E	G	G	E	E	G	E	E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Aluminum Nitrate						E							C	E	E				
Aluminum Nitrate (AQ)	E	E	E	E	E		E	E		E	E		C			E	E	E	E
Aluminum Oxychloride						G								E	E				
Aluminum Phosphate		E	E	E	E		E	E	E	E	E					E		E	E
Aluminum Sulfate	E	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E	E	E
Alums, NH3-CR-K	G	E	E	E	E		E	E		E	E	X	G			E	E	E	E
Amines, Mixed		X	G	G	G			X		G	X		X			C		E	
Amino Xylene	X	X	G	X	E		E	X		X	X		X			X	G		
Aminobenzene	G	X	G	X	G		E	E		X	X	C	X			X	G		
1-Aminobutane		C	X	X	C		E	X		X	C		X			X			
Aminodimethylbenzene	C	C	G	X	X		E	X		X	X					X			
Aminoethane		C	G	X	E		E	X		C	X		X			C			
2-Aminoethanol		G	E	G	G		E	X		G	X		C			X			
1-Aminopentane	C	X	G	E	E		E	X		G	C		C			G	C		
O-Aminotoluene	G																		
Ammonia (AQ)						E						E	X	C	C			E	C
Ammonia Anhydrous												G						E	E
Ammonia Gas												C						E	
Ammonia Gas, Dry						E							X	C	C				
Ammonia Liquid		E	E	E	E	E	E	E	E	G	G		X	X	X	G		E	E
Ammonia Water		G	G	G	E		E	G	E	G	C					G		E	E
Ammonium Carbonate		E	E	E	E	E	E	E	E	E	C	G	E	E	E	E		E	E
Ammonium Chloride	G	E	E	E	E	E	E	E	E	E	E		G	E	E	E	E	E	E
Ammonium Fluoride, 25%						G							C	X	X				
Ammonium Hydroxide	E	E	E	E	E		E	E		G	E	G	X				E	E	E
Ammonium Hydroxide, 28%						E							C	C	C				
Ammonium Metaphosphate		E	E	E	E	E	E	E	E	E	E		G	E	E	E		E	E
Ammonium Nitrate	G	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E	E	E	E
Ammonium Persulfate		E	E	E	G	E	E	E	E	E	X		G	E	E	X		E	E
Ammonium Phosphate		E	E	E	E	E	E	E	E	E	E		G	G	G	E		E	E
Ammonium Phosphate, Dibasic	E	E	E	E	E		E	E		E	E	C				E	E	E	E
Ammonium Phosphate, Neutral						E							G	E	E				
Ammonium Sulfate	E	E	E	E	E	E	E	E	E	E	E	G	E	E	E	G		E	E
Ammonium Sulfide		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Ammonium Sulphite		E	E	E	E	E	E	E	E	E	E		X			E		E	E
Ammonium Thiocyanate		E	E	E	E	E	E	E	E	E	E		G	E	E	E		E	E
Ammonium Thiosulphate		E	E	E	E		E	E		E	E	E	X			E	E	E	E
Amyl Acetate	X	X	C	X	E	X	E	X		X	X	G	X	X	X	X	G	E	C
Amyl Acetone		X	G	X	G		E	X		X	X					X			E
Amyl Alcohol	E	E	E	E	E	G	E	E		E	E	E	X	C	C	G	E	E	E
Amyl Amine		C	G	C	C		E	X		C	C					G			
Amyl Borate		C	E	E	E		E	E	C	E	E					E		E	E
Amyl Bromide		X	X	X	C		E	G		X	X								
Amyl Chloride	C	X	X	X	X	X	E	E		X	X	E	C	X	X	X	X	X	X
Amyl Chloronaphthalene		E	E	E	E		E	E	C	E	E					E		E	E
Amyl Ether		C	X	X	X		E			X	X								
Amyl Napthalene		E	E	E	E		E	E	C	E	E					E		E	E
Amyl Oleate		E	G	E	G		E	C	G	E	E					E		E	E
Amyl Phenol		E	E	E	E		E	E	C	E	E					E		E	E
Anethol	X	X	X	X	X		E	G		X	X	G				X		G	G
Aniline	X	X	E	X	G	X	E	G		X	X	C	X	X	X	X	G	E	E
Aniline Chlorohydrate						X							X	X	X				
Aniline Dyes	X	G	G	C	G		E	G		G	X	X	X	X	X	G	G	E	E
Aniline Hydrochloride		X	G	X	G	X	E	G	E	G	G		X	X	X	C		E	E
Aniline Oil	G	X	G	X	C		E	C		X	X		X			X			
Animal Fats		C	C	C	G		E	E		X	E	E	C			X	C	E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Animal Grease		X	X	C	C		E	E	E	X	E		G	C	C	X		E	E
Animal Oils		X	C	X	C	C	E	E	E	X	E		G	C	C	X		E	E
Ansul Ether		X	X	X	C		E	X	G	X	X					X		E	E
Anthraquinone						E								E	E				
Anthraquinonesulfonic Acid						E							X	E	E				
Antifreeze		E	E	E	E		E	E	E	E	E					E		E	E
Antimony Chlorides		G	E	X	E		E	E			G	C	E						E
Antimony Pentachloride		X	X	X	X		E	E	E	X	G					X		G	G
Antimony Trichloride						E							E	E	E				
Apple Juice or Sauce													E	E					
Aqua Regia	G	X	X	X	C	X	E	E		X	X	X	X	C	C	X	X	G	X
Argon		X	G	G	E		E	E		X	E	E	E			E		E	E
Aromatic Hydrocarbons		X	X	X	X		E	E		X	X			X		X			
Arquad		E	E	E	E		E	E	E	E	E					E		E	E
Arsenic Acid	E	E	E	E	E		E	E		E	E	E	X			E	E	E	E
Arsenic Acid, 80%						G							X	E	E				
Arsenic Chloride		X	X	E	X		E	X		X	C					X		X	X
Arsenic Trichloride		X	X	E	X		E	X		X	E					X		X	X
Arylsulfonic Acid													X	C	C				
Asphalt	G	X	X	C	X	X	E	E		X	G	E	G	C	C	X	G	E	X
ASTM Fuel A	E	G	X	G	X		E	E		X	E	E	G	C	C	X	X	G	G
ASTM Fuel B	G	G	X	X	X		E	E		X	X	E	G	X	X	X	X	G	G
ASTM Fuel C	C	X	X	X	X		E	E		X	G	E	X	X	X	X	X	G	G
ASTM Oil #1		G	X	E	X		E	E		X	E	E	E	C	C	X	X	E	E
ASTM Oil #2		C	X	E	X		E	E		X	E					X			
ASTM Oil #3		C	X	G	X		E	E		X	E		X	C	C	X			
ASTM Oil #4		X	X	X	X			E		X	G		X			X		E	E
Automatic Transmission Fluid		C	X	G	X		E	E		X	E	G	G			X	X	E	E
Aviation Gasoline		X	X	X	X		E	E		X	E		X			X		E	E
Banana Oil	X	C	X	X	E		E	X		X	X	G	X			X	G	E	X
Barium Carbonate		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Barium Chloride	G	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E		E	E
Barium Hydroxide	G	E	E	E	E	E	E	E	E	E	E	G	E	E	E	E		E	E
Barium Sulfate		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Barium Sulfide		E	E	E	E	E	E	E	E	E	E		E	E	E	G		E	E
Beer		E	E	G	E		E	E		E	E	E	G	E		E	E	E	X
Beet Sugar Liquors	G	E	E	G	E	E	E	E		E	E	E	X	E		E	E	E	E
Benzal Chloride			G				E				X		E					E	E
Benzaldehyde	C	X	G	X	E	C	E	X		X	X	E	X	X	X	X	X	E	E
Benzene	C	X	X	X	X	X	E	G		X	X	G	X	X	C	X	X	G	E
Benzene Carboxylic Acid	G	X	E	E	X		E	E		X	X		X			X	E		
Benzene Sulphonic Acid		G	X	G	X		E	E	E	X	X					X		E	E
Benzine		X	X	G	X		E	E		X	E	G	C			X	G		E
Benzine Solvent		C	X	X	X		E	E		X	E					X			
Benzoic Acid		X	X	G	X	G	E	E	G	X	X	E	X	G	G	X	E	E	E
Benzoic Aldehyde		X	G	X	E		E	X	E	X	X					X		E	E
Benzol	C	X	X	X	X	X	E	G		X	X	G	X	X	C	X	X	G	E
Benzotrichloride		X	X	X	E		G	E		X	X					X		G	G
Benzyl Acetate		G	E	E	E		E	X		X	X		X			E		E	E
Benzyl Alcohol	E	G	G	G	G		E	E		X	X	C	X			X	X	E	E
Benzyl Chloride	X	X	X	X	X		E	E		X	X		X			X	X	E	E
Benzyl Ether		X	G	X	C		E	X		X	X		G			X			
Bismuth Carbonate						E							E	E	E				
Black Liquor						E													
Black Sulfate Liquor	C	G	G	G	G		E	E		G	G	C	X			G	E	E	E
Blast Furnace Gas		C	C	E	C		E	E	E	C	C					C		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Bleach Solutions		G	G	X	G		E	G	E	X	X	C	X			X		G	G
Bleach, 12.5% Active CL						G							C	G	G				
Borax Solution	C	E	E	E	E		E	E		E	E	G	E			E	E	E	E
Bordeaux Mixture		E	E	E	E		E	E	E	G	E					G	E	E	E
Boric Acid	X	E	E	E	E	E	E	E		E	E	G	E	E	E	E	E	E	E
Boron Trifluoride						E							E	E	E				
Brake Fluid DOT #3	E	G	E	C	E		E	X		X	X	E	X	X	X	E	G		
Brine	G	E	E	E	E	E	E	E		E	E	G	G	E	E	E	E	E	E
Bromacil					E														
Bromic Acid						G							X	E	E				
Bromine		C	X	X	X	X	E	E	G	X	X					X		X	G
Bromine Water		E	C	G	C	X	E	E		X	C		X	X	X	X		E	E
Bromine, Liquid						X							X	X	X				
Bromobenzene	X	X	X	X	X		E	E		X	X		X			X		C	C
1-Bromobutane		X	X				E	G		X	X								
Bromochloromethane	X	X	X	X	G		E	C		X	X								
Bromoethane		X	X	X	X		E	E		C	G		X			X			
3-Bromopropene		X	X	X			E	G		X	X								
Bromotoluene	X	X	X				E	G		X						X			X
Bugdioxane																			E
Bunker Oil		X	X	X	X		E	E		X	E		G			X		E	E
Butadiene		X	X	X	X	X	E	G		X	X		X	C	C	X		E	E
N-Butanal		C	G	C	G		E	X		X	X		C						
Butane		X	X	C	X	X	E	E		X	E	E	X	C	C	X		E	E
Butanoic Acid		C			G		E	G											
Butanol (Butyl Alcohol)	G	E	G	E	G		E	E		E	E	G	X			E	G	E	E
Butanol, Primary						G							C	X	X				
Butanol, Secondary						G							C	X	X				
Butanone	G	X	E		E		G				X	G	X				X	E	E
Butoxyethanol		X	E	X	E		E			X	C		E						
Butter		E	E	G	E			E		C	E			C		C			
Butyl Acetate	C	X	X	X	X	X	X	X		X	X	G	X	X	C	X		E	E
Butyl Acrylate		X	X	X	X		E	X		X	X							G	G
Butyl Alcohol (Butanol)	G	E	G	E	G	E	E	E		E	E	G	C	C	C	E	G	E	E
Butyl Aldehyde		C	G	C	G		E	X					C				G	E	E
Butyl Amine		C	C	X	C		E	X	E	G	C					C		E	E
N-Butylamine		X	X	X	C		E	X		X	X		X			X			
T-Butyl Amine		X			G														
Butyl Benzene		X	X	X	X			E		X	X					X		E	E
N-Butylbenzene		X					E	E		X	X								E
Butyl Benzyl Phthalate		X	E				E	C		X						X		E	E
Butyl Bromide		X	X	X	X			G		X	X					X		G	G
N-Butylbromide		X	X				E	G		X	X								G
Butyl Butyrate		X	C	X	G			C		X	X					X		G	G
N-Butylbutyrate		X	E	X	E		E	E		X	X					X			
N-Butylcarbinol	E	E	E	E	E		E	E		E	G	E	X			E	E		
Butyl Carbitol		C	E	C	E		E	G		X	C					X		E	G
Butyl Cellosolve		X	E	X	G		E	X		X	C			X	X	X	E	E	E
Butyl Chloride		X	C				E	E		X								C	G
Butyl Ether		X	X	X	X		E	X		X	X		G			X		E	E
Butyl Ether Acetaldehyde		X	G				E	X		X		X						E	E
Butyl Ethyl Acetaldehyde		X	C	X	X			X		X	X					X		E	E
Butyl Ethyl Ether		X	X				E			X	G							E	E
Butyl Oleate		X	G	X	G		E	E		X	X					X			
Butyl Phenol						X								C	C				
Butyl Phthalate		X	G		E		E	C		X						X			E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Butyl Stearate		X	X	X	X		E	E		X	G		G			X		E	E
Butylene		X	X	C	X		E	E		X	E	G	C	C	C	X		E	E
Butyraldehyde		X	G	X	C		E	X	G	X	X		X			X		E	E
Butyric Acid		C	G	X	G		E	G		X	X		G			X		E	E
Butyric Acid, 20%						X							C	C	C				
Butyric Anhydride		G	C				E			C	C								E
Butyraldehyde							E	X	G									E	E
Cadmium Acetate		E	E				E			X								E	E
Calcium Acetate		C	E	G			E	X		E	G		X			X		E	E
Calcium Aluminate		E	E				E	E		E	E							E	E
Calcium Bichromate		C	E				E												G
Calcium Bisulfate		E	G	E	G		E	E	E	C	E					C		E	E
Calcium Bisulfide				C	X		E	E			E	G	C			G			
Calcium Bisulfite		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Calcium Carbonate		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Calcium Chlorate						E							G	E	E				
Calcium Chloride	G	E	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Calcium Hydroxide	G	G	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Calcium Hypochlorite	G	E	E	C	E	G	E	E		X	X	X	X	E	E	X		C	C
Calcium Nitrate		E	E	E	E	E	E	E		E	E	E	X	E	E	E		E	E
Calcium Sulfate		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Calcium Sulfide	X	E	E	E	E		E	E		X	E	E	E			X		E	E
Calcium Sulfite		E	E	E	E		E	E	E	E	E					E		E	E
Caliche Liquor		E	E	E	E		E	E	E	E	E					E		E	E
Cane Sugar Liquors		E	E	E	E	G	E	E	E	E	E			E		E		E	E
Caprylic Acid		G	C				E			C	C							E	E
Carbamide		E	G	G			E			E	G								
Carbitol		G	E	C	G		E	G		X	G	E	X			G		E	E
Carbitol Acetate		X	G	X	G			X		X	X					X		E	E
Carbolic Acid	G	X	G	X	X		E	E		X	X	X	X			X	X	E	E
Carbon Bisulfide		X	X	X	X	X	E	E		X	X			X	X	X			
Carbon Dioxide		G	G	G	G		E	G		G	E	E	E			G		E	E
Carbon Dioxide (AQ)						E							E	E	E				
Carbon Dioxide Gas, Wet						E							E	E	E				
Carbon Disulfide		X	X	X	X		E	X		X	X	X	X			X		E	C
Carbon Monoxide	G	E	E	E	E	G	E	E		C	E	E	G	E	E	G	E	E	E
Carbon Tetrachloride	C	X	X	X	X	X	E	E		X	C	X	X	X	C	X	X	G	E
Carbon Tetrafluoride		X	X	X	X		E			X	C					X		C	C
Carbonic Acid	X	E	E	G	E	G	E	G		E	G	G	E	C	G	G	X		E
Casein						E							E	E	E				
Castor Oil	G	E	G	E	G	C	E	E		E	E	G	G	E	E	E	C	E	E
Catsup													E	E	E				
Caustic Potash		E	E	G	E	C	E	C	E	E	E		C	E	E	G		E	E
Caustic Soda			E	E	E	G	E	G				G	C	E	E		E		
Cellosolve		G	E	X	E	C	E	C	E	G	X		G	C	G			E	E
Cellosolve Acetate		X	G	X	G		E	X		X	X	G	X			X		E	E
Celluguard		X	E	E	E		E	E		E	E	G	E			E			
Cellulube		X	G	X	E			C		C	X					X		E	E
Cetylic Acid	G	C	G	G	G		E	E		E	E	C	E			G	E		
China Wood Oil	C	E	X	E	X		E	E		X	E	G	C			X			
Chloracetic Acid						X							X	E	E				
Chloral Hydrate						C							G	E	E				
Chlordane		C	X	C	X			E		X	G	G	C			X			
Chloric Acid, 20%													X	E	E				
Chlorinated Hydrocarbons		X	X	X	X	X	E	E		X	X		X	X	X	X			
Chlorinated Solvents	X	X	X	X	X		E	E		X	X	X	X			X		X	G

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Chlorine Dioxide		C	X	X	X			E		X	X					X		G	G
Chlorine Gas		X	X	X	X			E		X	X					X			
Chlorine Gas, Dry						X							X	G	G				
Chlorine Gas, Moist						X							X	G	C				
Chlorine Water Solutions		X	X	X	X		E	C	E	X	X					X		G	E
Chlorine Water, 2%						G							C	G	G				
Chlorine Water, Saturated						E							C	C	C				
Chloroacetic Acid		G	G	X	G		E	G		X	X	X	X			X	X	E	E
Chloroacetone		X	X	C	E		E	X		X	X		X			X		E	E
Chlorobenzene						X	E	E	G				X	X	X			G	G
Chlorobenzene, Mono, Di, Tri		X	X	X	X		E	E	G	X	X	E	X			X	X	C	E
Chlorobutadiene		X	X	X	X			E		X	X					X		G	G
Chlorobutane		X	C				E	E		X	X		C					G	G
Chloroethylbenzene	X	X	X		X		E	E		X			G			X		E	E
Chloroform	X	X	X	X	X	X	E	G		X	X	X	X	X	X	X	X	E	C
Chloropentane		X	C				E	E		X						X		E	E
Chlorophenol		X	X	C	X		E	E	G	X	X					X		E	E
2-Chlorophenol	G	X	X	X	X		E	E		X	X	X	X			X	X		G
2-Chloropropane		X	X	X	X		E	E		X	X	X	X			X	X		E
Chloropropanone		X	C	X	C		E	X		X	X					X			
3-Chloropropene		X	C	X	X		E	G		X	G					E			
Chlorosulfonic Acid	X	X	X	X	X		E	X		X	X	X	X			X	X	X	X
Chlorothene		X	X	X	X		E	E	E	X	X					X		G	G
Chlorotoluene		X	X	X	X		E	E		X	X	E	X			X		G	G
Chlorox		G	G	G	G		E	E		X	G	X	X			X		E	G
Chlorsulfonic Acid						X							X	C	C				
Chrome Alum						E							E	E	E				
Chrome Plating Solutions		X	X	X	X					X	X					X			
Chromic Acid	X	X	G	X	X		E	E		X	X	X	X			X	X	X	E
Chromic Acid, 50%						C							X	C	C				
Chromium Trioxide	X	X	G	X	X		E	E		X	X	X	X			X	X		
Cider						E								E					
Cinnamene		X	X	X	X		E	G		X	X		C			X			
Citric Acid	X	E	E	E	E	E	E	C		E	E	G	E	E	E	E	E	E	E
Coal Oil		C	X	G	X		E	E		X	E	E	C				X	E	C
Coal Tar		X	X	C	X	X	E	E		X	G		C	X	X	X	X	E	E
Coal Tar Naphtha		X	X		X		E	E		X	X		X			X			E
Cobalt Chloride		E	E	E	E		E	E		E	E					E		E	E
Coconut Oil		C	G	C	G	C	E	E		X	E		C	G	E	X		E	E
Cod Liver Oil		G	E	G	E		E	E	E	X	E					X		E	E
Coke Oven Gas		X	X	X	X		C	E		X	X	C	X			X			E
Coolanol		G	X	G	X		E	E		X	E		X			X			
Copper Arsenate		E	E	E	E		E	E	E	E	E					E		E	E
Copper Chloride	X	G	E	G	E	E	E	E		G	E	X	G	E	E	E		E	E
Copper Cyanide		G	E	E	E	E	E	E		E	E	X	E	E	E	E		E	E
Copper Fluoride, 2%						E							E	E	E				
Copper Hydrate		G	E				E	C		C	G							E	
Copper Hydroxide		G	E				E	C		C	G					G			E
Copper Nitrate		E	E	E	E					E	E					E			
Copper Nitrate						E	E	E	E				E	E	E			E	E
Copper Sulfate	X	E	E	E	E	E	E	E		G	E	G	G	E	E	G		E	E
Copper Sulfide		E	E	E	E		E	E		C	E					E		E	E
Corn Oil		G	G	C	X		E	E		X	E	G	E	E		X	E	E	E
Cottonseed Oil	G	G	C	C	C	E	E	E		X	G	E	E	G	E	X		E	E
Creosote (Coal Tar)		X	X	X	X		E	E		X	G	X	C			X		E	E
Creosote (Wood)		C	X	G	X		E	E		X	E					X		E	

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Cresols		X	X	X	X	X	E	E		X	X	X	X	X	X	X	X	E	G
Cresote						X									X				
Cresylic Acid		X	X	X	X		E	G		X	X	X	X	X		X		E	G
Cresylic Acid, 50%						X							X	X	C				
Crotonaldehyde		X	E	X	E		E	X		X	X		X			C		E	E
Crude Oil, Sour						X							E	C	C				
Crude Oil, Sweet						X							E	C	C				
Cumene		X	X	X	X		E	E		X	X		X			X		E	E
Cupric Carbonate		E	E	E			E	E		C	E							E	E
Cupric Chloride		E	E	G	E		E	E	E	C	E					C		E	E
Cupric Hydroxide		G	E				E	C		C	G								
Cupric Nitrate		E	E	E	E		E	E	E	G	E					C		E	E
Cupric Sulfate		E	E	E	E		E	E		G	E	G	X			E		E	E
Cutting Oil		G	X	G	X		E	E		X	E		E			X			
Cyclohexane		X	X	X	X	C	E	E		X	G	E	G	X	X	X	X	E	E
Cyclohexanol		G	X	G	X	E	E	E		X	G	E	C	X	X	X	X	E	E
Cyclohexanone		X	X	X	C	E	E	X		X	X	E	X	X	X	X	X	E	X
Cyclopentane		X	X	E	X		E	E		X	G							E	E
Cyclopentanol		X	X					G		X	G					X		E	E
Cyclopentanone		X	X				E	X		X	X								E
Cyclopentyl Alcohol		X	X					G		X	G					X		E	E
P-Cymene	X	X	X	X	X		E	E		X	X		X			X		E	E
DDT In Deionized Kerosene		X	X	C	X		E	E	G	X	E	E	G			X		E	E
Decahydronaphthalene		X	X	X	X		E	E		X	X	E	X			X	X		
Decahydroxynaphthalene	C																		
Decalin		X	X	X	X		E	E	X	X	X	G	X			X	X	X	E
Decane		X	X	X	X			A		X	G					X		E	E
1-Decanol		E	X	X	X		E	G		X	E		E			X			E
Decyl Alcohol		E	X	X			E	G		X	E							E	E
Decyl Aldehyde		X	C				E	X		X								E	E
Decyl Butyl Phthalate		X	E				E	C		X	X							E	E
Decyl Carbinol		E	E				E	G		E	E								
Developing Fluid, Photo		E	G	E	G		E	E		E	E	E				G		E	E
Dextrin						E							E	E	E				
Dextron		X	X	G	X			E		X	E		G			X			
Dextrose						E							E	E					
Diacetone Alcohol		X	E	X	E		E	X		X	X		X			X		E	C
Diacetylmethane	G	X	E	X	E		E	X		X	X		X			X	E		
Diallylphthalate	G																		
Diammonium Phosphate	E	E	E	E	E		E	E		E	E	E				E			
Diamyl Napthalene		X	E				E	C		X									E
Diamyl Phenol		X	X				E	E		X	X					X			E
Diamylamine		C	E		E		E	X		G	G		X			X			
Diamylene		X	X	X			E	E		X	C	G							E
Diazo Salts						E								E	E				
Dibenzyl Ether		X	G	X	C		E	X		X	X		G			X		E	E
Dibenzylsebacate		X	G	X	G		E	G	E	C	X					X		E	E
Dibromobenzene		X	X				E	E		X								G	E
Dibromomethane		X	X	X	C		E	G		X	X						X		
Dibutyl Ether		X	X	X	X		E	X		X	X		X			X		E	E
Dibutyl Phthalate		X	C	X	E		E	C		X	X	E	X			X		E	E
Dibutyl Sebacate		X	G	X	G		E	E		X	X		X			X		E	E
Dibutylamine		X	X	X	X		E	X		X	X		X			X		E	
Dicalcium Phosphate		E	E				E	E		E	E								E
Dichloro Difluoro Methane	C	E	X	G	C		E	G		X	C	G	E			E	X		
Dichloro Ethylene		X	C	X	X		E	G				C	C				X		

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Dichloroacetic Acid		X	C			X	E	X		G			C		X	X		E	E
Dichlorobenzene																			
Ortho-Dichlorobenzene		X	X	X	X		E	E		X	X	E	X			X	X		
P-Dichlorobenzene		X	X	X	X		E	E	G	X	X					X		X	X
Para-Dichlorobenzene		X	X	X	X		E	E		X	X		X			X			G
Ortho-Dichlorobenzol		X	X	X	X		E	E		X	X	E	X			X	X		X
Dichlorobutane		X	X	X	C		E	E		X	G		X			X		E	G
Dichloroethane	X	X	C	X	X		E	G		X	X	C	X			X	X		E
Dichloroethyl Ether		X	X				E			X	X					X			E
Dichloroethylene		X	X	X	X		E	E	X	X	X					X		C	C
Dichlorohexane		X	X				E	E		X								E	E
Dichloroisopropyl Ether		X	C	X	C			C		X	X					X		E	E
Dichloromethane		X	X	G	C		E	G		X	X	C				X	X	E	E
Dichloropentane		X	X	X			E	E		X	X		X			X		E	E
Dichloropropane		X	X	X			E	E		X	X							E	E
Dichloropropene							E	E										E	E
Dichlorotoluene	X																		
Diesel Oil	E	C	X	C	X		E	E		X	E	E	C	C	C	X	X	E	G
Diethanolamine		C	E		E		E			G		G				X		E	E
Diethyl Benzene		X	X	X	X		E	E	G	X	X					X		E	E
Diethyl Ether		X	X	X	X	X	E	X		X	X	E	E	X	X	X	E	G	
Diethyl Ketone		X	G	X	E		E	X		X									G
Diethyl Oxalate		X	X	X	X		E			X	X								E
Diethyl Phthalate		X	E				E	C		X								E	E
Diethyl Sebacate		C	G	X	G		E	G		X	X		X			X	E		
Diethyl Sulfate		X	G	E	E		E	X		X	X		X			E			
Diethyl Triamine		C	E				E			G	G								
Diethylamine		X	G	G	G					G	C					G			
Diethylamine		C	G	G	G		E	X		G	C		C			G		E	C
Diethylbenzene		X	X	X	X		E	E		X	X		X			X		E	E
Diethylene Dioxide		X	G	X	G		E	X	E	X	X					X		E	E
Diethylene Glycol		E	E	E	E	G	E	E		E	E	E	X	G	G	E		E	E
Diethylene Oxide			X		E		E												
Diethylene Triamine		C	E		E		E			G			X			X	E	E	
Diglycolic Acid						E								E	E				
Dihydroxy Diethyl Ether		E	E	E	E		E	E	E	E	E					E		E	E
Dihydroxy Succinic Acid		E	G	C	G		E	E		E	G		E						
Diisobutyl Ketone		X	G	X	E		E	X		X	X		X			X		E	E
Diisobutylene		X	X	C	X		E	E		X	E		X			X		E	E
Diisodectyl Phthalate		X	E		E		E	C		X						X		E	E
Diisodecyl Phthalate		X	E	X	E		E	C		X	X			X				E	E
Diisooctyl Adipate		X	E	X	E		E	C		X	X					X		E	E
Diisooctyl Phthalate		X	E		G		E	C		X								E	E
Diisopropanolamine		C	E				E			G	G								
Diisopropyl Benzene		X	X	X	X		E	E	G	X	X					X		E	E
Diisopropyl Ether		C	X	X	X		E	X		X	G		G			X		E	E
Diisopropyl Ketone		X	E	X	E		E	X		X	X		X			X			E
Dilauryl Ether		C	D	X	X		E	C	G	X	C					X		E	E
Dimethyl Phenols (DMP)		X	X	X	X		E	X	E	X	X					X		C	C
Dimethyl Phthalate		X	G	X	G		E	G	E	X	X		X			X	G	E	E
Dimethyl Sulfate		X	G	X	X		E	X	X	X	X					X		E	X
Dimethyl Sulfide		X	C	X	X		E	C	E	X	X					X		G	G
Dimethylamine		X	G	X	X	X	E	X				E	X	X	X			E	X
Dimethylaniline	C	X	X	X	G		E	X				X	X			X		E	G
Dimethylbenzene	C	X	X	X	X		X	E				G	X			X	X	E	
Dimethylbutane	G																		

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Dimethylcarbinol		E	E	E	G		E	E		E	G							E	
Dimethylformamide (DMF)		C	C	C	C		E	X	E	C	X					C		E	E
Dimethylketone	G	X	E	X	E		E	X			X	E	X			C	E	E	E
Dinitrobenzene		X	C	C	C		E	E	G	X	X					X		E	E
Dinitrotoluene		X	X	X	X		E	G	E	X	X					X		E	E
Diocetyl Adipate (DOA)		X	E	X	G		E	C		X	X							E	E
Diocetyl Phthalate (DOP)		X	G	X	G	G	E	G		X	X	E	X	X	X			E	E
Diocetyl Sebacate (DOS)		X	G	X	G		E	G	E	X	X					X		E	E
Dioxalanes		X	X	X	G		E	X	G	X	X		X			X		E	E
Dioxane		X	G	X	G		E	X		X	X	E	X			X		E	E
1,4 Dioxane		X	G	X	G		E	X		X	X	E	X			X	X		E
Dipentene		X	X	X	X		E	E		X	G		X			X			
Dipentylamine		C	E		E		E	X		G	G		X			X			
Diphenyl		X	X	X	X			A		X	X					X		E	E
Diphenyl Oxide		C	X	X	X			A		X	X					X		E	E
Di-P-Mentha-1,8-Diene		X	X	X	X		E	E		X	G		X			X			
Dipropyl Ketone		X	G	X	G		E	X	E	X	X					X		E	E
Dipropylamine		C	E				E			G	G								
Dipropylene Glycol		E	E				E	E		E	E								
Disodium Phosphate		E	E		E	E	E	E		E	E		E	E	E			E	E
Divinyl Benzene		X	X				E	E		X						X		E	E
Dodecyl Benzene		X	X	X	X		E	E	G	X	X					X		E	E
Dodecyl Toluene		X	X	X	X		E	E	G	X	X					X		E	E
Dowell Inhibitor	G																		
Dowfax 2A1 Solvent	E																		
Dowfax 2A1 TA	E																		
Dowfax 6A1 Solvent	G																		
Dowfax 6A1 Ta	E																		
Dowfume W 40, 100%		C	D	C	C			C		X	X					X		G	G
Dow-Per		X	X	X	X		E	E	E	X	C					X		E	E
Dowtherm A & E	X	X	X	X	X		E	E	E	X	X	X	X			X		E	E
Dowtherm S.R.I.		E	E	E	E		E	E	E	E	E					E		E	E
Dry Cleaning Fluids		X	X	X	X		E	E			C	E	X			X		G	X
Ducgkirioebaane			X																
Duro AW16, 31					X		E				E	E							
Duro FR-HD					X		E				E	E							
Epichlorohydrin		C	C	X	G		E	X	G	X	X					X		G	G
Ethanoic Acid	E	C	G	G	E		E	X		X	C	X	X			G	C	E	E
Ethanolamine		X	G	G	G		E	X		G	G	E	C			X		E	E
Ethanol (Ethyl Alcohol)	G	E	E	E	E		E	C		E	E	G	X			E	E	E	E
2 (2Aminoethylamino) Ethanol		G	E							G	G								
2 (2Ethoxyethoxy) Ethanol		X	G	X	G		E	X		X	X	E	X			X	X		
2-Ethoxyethanol		X	G	X	G		E	X		X	X		X			X	X		
Ethers	G	X	X	X	C	X	E	X		X	X	E	X	X	C	X		C	
Bis (2-Chloroethyl) Ether		X	X				E			X	X					X			
Ethyl Acetate	G	X	G	X	E	C	E	X		X	X	E	X	X	C	X	E	E	G
2-Ethoxyethyl Acetate	X	X	G	X	G		E	X		X	X	G	X			X	X		
2 (2Ethoxyethoxy) Ethyl Acetate	X	X	G	X	X		E	X		X	X		X			X	X		
Ethyl Acetoacetate		X	G	X	G		E	X		C	X					C		E	E
Ethyl Acetone		X	G	X	G		E	X		X	X					X			
Ethyl Acrylate		X	G	X	G		E	X		X	X		X	X	X	X		E	G
Ethyl Alcohol (Ethanol)	G	E	E	E	E		E	E		E	E	G	X			E	E	E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Refer to *Names and General Properties of Hose Materials* table.

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Ethyl Alcohol, 1%-50%						C								G	G				
Ethyl Alcohol, 50%-98%						G								C	C				
Ethyl Aldehyde	E	C	G	X	E		E	C		X	X	G	X			E	E	E	E
Ethyl Aluminum Dichloride		X	X				E	G		X	X								G
Ethyl Benzene		X	X	X	X		E	E		X	X		X			X		E	X
Ethyl Benzoate		C	G	C	G			C		X	G					X		E	E
Ethyl Bromide		X	X	X	X		E	E		C	G		X			X			X
Ethyl Butanol		E	E	E	E		E	G	E	E	E							E	E
Ethyl Butyl Acetate		G	E				E	X		X	X							E	E
Ethyl Butyl Ketone		X	G				E	X		X	X								E
2-Ethyl (Butyraldehyde)		X	G				E	X		X	X								E
Ethyl Cellulose		G	G	G	G		E	X		G	G	C	G			G		E	E
Ethyl Chloride	X	C	E	X	E	X	E	E		C	E	E	C	X	X	G	X	G	C
Ethyl Dichloride		X	X	X	X		E	G	G	X	X		X			X		G	G
Ethyl Diisobutylthio-Carbamate										E						E		E	
Ethyl Ether	G	X	X	X	X	X	E	X		X	X	G	C	X	X	X		C	C
Ethyl Formate		G	G	G	G		E	E		X	X					X		E	E
Ethyl Hexanol		E	E	E	E		E	G	E	E	E					E		E	E
2-Ethyl-1-Hexanol		E	G	E	E		E	E		G	E		X			E	E		E
2-Ethylhexanoic Acid		G	C				E			C	C								
2-Ethylhexyl Acetate		G	E				E	X		X	X								
Ethyl Iodide		X	C	X	C		E	G		X	X							G	E
Ethyl Methyl Ketone		X	G	X	G		E	X	E	C	X					X		E	E
Ethyl Oxalate		X	X	X	C		E	E		C	X		E			X		E	E
Ethyl Phthalate		X	E				E			X	X							E	
Ethyl Propyl Ether		X	X	X	X			C	E	X	X					X		E	E
Ethyl Propyl Ketone		X	G	X	G		E	X	G	X	X					X		E	E
Ethyl Silicate		G	E	E	E		E	E		G	E		X			G		E	E
Ethyl Sulfate		X	G	D	G		E	X	E	X	X					X		E	E
Ethylamine		C	G	X	E		E	X		C	X	E	X			C		E	E
Ethylene		C	X	G	X		E	E		X	E					X		E	E
Ethylene Bromide		X	X	X	X	X	E	E	G	X	X		X	E	X	X		G	G
Ethylene Chloride	X	C	C	X	X	X	E	G	G	X	X	G	X	X	X	X	X	C	X
Ethylene Chlorohydrin		C	G	G	G		E	E		C	X	E						E	E
Ethylene Diamine		G	E	E	E		E	X		G	G	E	X			G		E	E
Ethylene Dibromide		X	X	X	C		E	G		X	X		X			X		G	G
Ethylene G Monobutyl Ether		C	E	C	E		E	X		X	C		X			X			E
Ethylene G Monoethyl Acetate		X	E	X	E		E	E		C	C		X						
Ethylene G Monohexyl Ether																			E
Ethylene G Monomethyl Ether		G	E	E	G		E	X		X	C								E
Ethylene Glycol	G	E	E	E	E	E	E	E		E	E	E	G	E	E	E	E	E	E
Ethylene Oxide	X	X	X	X	C	X	E	X		X	X	E	X	X	X	X		E	G
Ethylene Trichloride		X	X	X	X		E	E	G	X	C					X		G	G
Fatty Acids		C	X	G	X	C	E	E		X	E	E	C	E	E	X	X	E	E
Ferric Bromide		E	E				E	E		E	E							E	
Ferric Chloride	X	E	E	E	E	E	E	E		E	E	X	E	E	E	E		E	E
Ferric Nitrate		E	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Ferric Sulfate	X	E	E	E	E	E				E	E		E	E	E	E			
Ferrous Acetate		E	E				E	X		X	X								E
Ferrous Ammonium Sulfate		E	E	E	E			A		E	E					E		E	E
Ferrous Chloride		G	G	G	E	E	E	E		E	E	E	G	E	E			E	E
Ferrous Hydroxide		G	E	E	E		E	C	E	G	G					C		E	E
Ferrous Sulfate		E	E	E	E	E	E	E		E	E	G	E	E	E	E		E	E
Fish Oil		E	E	E	X		E	E		X	E					X		E	E
Fish Solubles						E							E	E	E				
Fluoboric Acid		E	G	E	E		E	E		E	E		X			E		C	C

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Fluorine		X	X	X	E		G	E		X	X	X	X	X				C	X
Fluorine Gas, Dry						X							X	X	X				
Fluorine Gas, Wet						E							E	E	E				
Fluoroboric Acid						E							E	E	E				
Fluorosilic Acid		E	E	E	E	G	E	C	E	E	E		X	E	E	G	C	C	G
Foric Acid						E							X	E	E				
Formaldehyde	G	G	E	G	E		E	E			C	G	X			C	E	E	E
Formaldehyde (40% AQ)						E							X	X	G				
Formalin	G	G	E	G	E		E	E			C	G	X			C	E	E	E
Formamide		E	E	E	E		E	X	E	E	E					E	E	E	E
Formic Acid	X	E	E	E	E	E	E	X		C	C	X	X			E	E	E	E
Freon 11		E	X	G	X			E		G	E					X		E	E
Freon 12	C	E	C	E	C	G	E	G		C	E	E	E	C	G	E	X		E
Freon 13		E	E	E	E			E		E	E					E		E	E
Freon 21		X	X	G	X			X		X	X					X		E	E
Freon 22	C	E	X	E	E		E	C		C	X	G	X			E	X		
Freon 31		G	E	E	E			X		G	X					G		E	E
Freon 32		E	E	E	E			C		E	E					E		E	E
Freon 112		G	X	G	X			E		X	G					X		E	E
Freon 113		E	X	E	X		E	G		X	E	E	G			G	X	E	
Freon 114		E	E	E	E			G		E	E					E		E	E
Freon 114B2		E	X	E	X			G		X	G					C		E	E
Freon 115		E	E	E	E			G		E	E					E		E	E
Freon 13B1		E	E	E	E			E		E	E					E		E	E
Freon 142B		E	E	E	E			X		E	E					E		E	E
Freon 152A		C	E	E	E			X		E	E					E		E	E
Freon 218		E	E	E	E			E		E	E					E		E	E
Freon 502			E	E	E			G		E	G	E				E			
Freon BF		G	X	G	X			E		X	G					X		E	E
Freon C316		E	E	E	E			E		E	E					E		E	E
Freon C318		E	E	E	E			E		E	E					E		E	E
Freon MF		B	X	C	X			E		X	E					G		E	E
Freon TA		E	E	E	E			C		E	E					E		E	E
Freon TC		E	E	E	G			E		X	E					G		E	E
Freon TF		E	E	E	E			E		C	E					G		E	E
Freon TMC		G	G	G	G			E		G	G					C		E	E
Freon T-P35		E	E	E	E			E		E	E					E		E	E
Freon T-WD 602		G	E	G	G			E		C	E					G		E	E
Fructose						E							E	E					
Fruit Juices & Pulps						E							E	E					
Fuel Oil	E	C	X	G	X	X	E	E	E	X	E	G	C	G	G	X		E	E
Fumaric Acid		G	X	G	X		E	E	E	E	E					E		E	E
Furaldehyde	E	C	E	C	G		E	X		X	X	C	X			X	E		
Furan		X	X	X	X		E	C		X	X		X			X			
Furfural	E	C	E	C	G	X	E	X		X	X	E	X	X	X	E	E	E	E
Furfuryl Alcohol		X	G	X	G	X	E	C		X	X	G	X	X	X	X	E	E	C
Gallic Acid		G	G	G	G	E	E	E		E	G	G	X	E	E	G		E	C
Gallotannic Acid		E	G	E	E		E	E		E	E	E	E					E	E
Gas, 100 Octane		X	X	C	X					X	E					X			
Gas, Coal				E	E			E			X	E	G						
Gas, Coke Oven													G	G	G				
Gas, Natural, Dry						X							C	C	C				
Gas, Natural, Wet						X							C	C	C				
Gasoline	E	X	X	X	X	X	E	G	G	X	E	G	C	X	X	X		G	G
Gasoline, 100 Octane							E	E				G	C				X	C	
Gasoline, Sour						X							E	C	G				

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Gelatin		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Gelatine						E													
Glacial Acrylic Acid										X	C								E
Gluconic Acid		G	C				E			X	C							E	
Glucose		E	E	G	E	E	E	E		E	E	E	C	E	E	E		E	E
Glue		E	G	E	E		E	C	E	G	E					G		E	E
Glycerine	E	E	E	E	E	E	E	E		E	E	E	C	E	E	E	X	E	E
Glycerol	E	E	E	E	E		E	E		E	E	E	C			E	X	E	E
Glycogenic Acid		G	C				E			X	C								
Glycolic Acid, 30%						E							X	E	E				
Glycols		E	E	E	E	E	E	E	E	E	E	E	X	E	E	E	G	E	E
Glyconic Acid		G	C				E			X	C							E	
Glycyl Alcohol	E	E	E	E	E		E	E		E	E	G	C			E	X		
Grease													E	E	E				
Grease, Petroleum Base	E	X	X	C	X		E	E		X	E	E	E			X	X	E	G
Green Liquor						E													
Green Sulfate Liquor		G	E	G	E		E	E		G	G	X	E			G		E	E
Halon 1211				E							E								
Halowax Oil		X	X	X	X		E	E	E	X	X					X		E	E
Helium		E	E	E	E		E	E		E	E	E	E			E			
1-Hendaconal	E																		
Heptachlor In Petroleum Solvents		X	X	G	X		E	E	G	X	G					X		E	E
Heptachlor In Petroleum Solvents, Water Spray		X	X	G	X			E		X	G					X		E	E
Heptaldehyde		X	X				E	X		X	E								
Heptanal		X	X				E	X		X	E							E	E
Heptane	E	G	X	G	X	X	E	E		X	E	E	G	C	G	X		E	G
Heptane Carboxylic Acid		G	C				E			X	C								
Heptanoic Acid	E																		
Heptanone	C																		
Hexadecanoic Acid	G	C	G	G	G		E	E		E	E	C	E			G	E		
Hexadecanol						X													
Hexaldehyde		C	G	E	E		E	X		X	X		G			X		E	E
Hexane		E	X	E	X		E	E		X	E	E	G	C	C	X	E	E	G
Hexanol		G	C	G	G		E	E		E	G	E	X			E		E	E
Hexanol, Tertiary						C							G	C	C				
Hexene		G	X	G	X		E	E		X	G		G			X			E
Hexyl Alcohol		G	C	G	G		E	G		E	G	E	X			E		E	E
Hexyl Methyl Ketone		X	G				E	X		X	X								E
Hexylamine		C	G				E	X		C	C								
Hexylene		X	X	G	C		E	E		X	E					X		G	G
Hexylene Glycol		E	E	E	C		E	E		E	E								
Histowax	E																		
Hydraulic Fluid, Petroleum	E	G	X	G	X		E	E	E	X	E	E				X	X	E	E
Hydraulic Fluid, Phosphate Ester Base		X	E	X	E		E	X	E	X	X					X		E	E
Hydraulic Fluid, Poly Alkylene Glycol Base		E	E	E	E			E		G	E					G		E	E
Hydrazine		G	E	G	E		E	E		X	G	X				G			E
Hydrobromic Acid	X	E	E	X	E		E	E		E	X	X	X			X		E	E
Hydrobromic Acid, 20%						G							X	E	E				
Hydrochloric Acid	X	C	E	C	C		E	C	E	C	C	X	C			X	E	E	E
Hydrochloric Acid, 10%						E							X	E	E				
Hydrochloric Acid, 48%						G							X	E	E				
Hydrocyanic Acid	X	E	G	G	E		E	E		G	G	G	X			G	E	E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Hydrofluoric Acid	X	E	G	C	C		E	G		C	C	X	X			C	X	E	E
Hydrofluoric Acid, 60%						E						X	X	G	G				
Hydrofluosilicic Acid	X	E	E	G	E		E	E		E	G	X	C	G	G	G		G	E
Hydrogen						C							C	C	C				
Hydrogen Bromide, Dry						E													
Hydrogen Chloride, Anhydrous	E											X						E	E
Hydrogen Chloride, Dry						E													
Hydrogen Cyanide						C							X	C	C				
Hydrogen Dioxide, 10%		G	C	X	G		E	E		G	C	X						E	E
Hydrogen Gas	C	E	E	E	E		E	E		G	E	E	E			G		E	E
Hydrogen Peroxide, 3%		C	C	C	E		E	E	E	X	C					X		E	E
Hydrogen Peroxide, 10%		E	G	X	G	G	E	E		G	C	C	G	E	E	C		G	G
Hydrogen Peroxide, 30%	X	X	X	X	C	G	E	E	E	X	X	X	C	E	E	X		E	E
Hydrogen Peroxide, 50%						X							C	E	E				
Hydrogen Peroxide, 90%	X	X	X	X	C	X	E	G		X	X	X	C	X	X	X		G	G
Hydrogen Phosphide						E								E	E				
Hydrogen Sulfide (AQ)						E								E	E				
Hydrogen Sulfide, Dry						E								E	E				
Hydrogen Sulfide, Wet	X	E	E	E	E		E	C		X	C	C	C	E	E	X		E	E
Hydroquinone		C	G	X	G	E	E	X	E	G	X		E	E	E	G		E	E
Hydroxy Benzene		C	G	X	C		E	E		X	X		C						
2-Chloro-1-Hydroxy-Benzene	C																		
Hydroxyisobutyronitrile	E																		
Hydroxytoluene	E																		
Hypochlorous Acid		E	G	G	G	C		E		G	X		C	E	E	G		E	E
Hyvar XI					E														
Iminodi-2-Propanol	E																		
Iminodiethanol	E																		
Ink Oil, Linseed Oil Base		G	G	G	G		E	E	G	X	G					X		E	E
Inks						E													
Insulating Oil		X	X	G	X		E	E	E	X	E					X		E	E
Iodine		G	G	X	G		E	E		X	G	X	X			G		E	X
Iodine in Alcohol						X							X	X	X				
Iodine Pentafluoride		X	X	X	X		E	X		X	X		X	X		X		C	C
Iodoform				X	X					X	E					X			
IRM-902	E	X	X	G	X		E	E		X	E	E	G			X	X	E	E
IRM-903		G	X	C	X		E	E		X	E	E	E			X	X	E	E
Iron Acetate		X	E	X	G		E	X	E	X	X					X		E	E
Iron Hydroxide		G	E	E	G		E	C	E	C	G					C		E	E
Iron Salts		E	E	E	E		E	E	E	E	E					E		E	E
Iron Sulfate		E	E	E	E		E	E	E	E	E					E		E	E
Iron Sulfide		E	E	E	E		E	E	E	E	E					E		E	E
Isobutane	G	E	E	E	E		E	G		E	G					E		E	E
Isobutyl Acetate		X	E	X	G		E	X	G	X	X					X		E	E
Isobutyl Aldehyde		X	G	X	G		E	X		C	X					X		E	E
Isobutyl Chloride		X	X	X	X		E	G	G	X	X					X		G	G
Isobutyl Ether		X	X	X	X		E	X		X	X					X		E	E
Isobutylamine		C	E				E	X		C	X								
Isobutylbromide		X	X				E	G		X	X								
Isobutylcarbinol		E	E	E	E		E	E		E	E		C						
Isobutylene		X	X	X	X		E	E	G	X	E					X		E	E
Isocyanates								G			G	G						E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Isomyl Acetate		X	E	X	G		E	X	G	X	X					X		E	E
Isomyl Alcohol		E	E	E	E		E	E	E	E	E					E		G	E
Isomyl Bromide		X	X	X	X		E	G		X	X					X		G	G
Isomyl Butyrate		X	C	X	C		E	X	G	X	X					X		G	G
Isomyl Chloride		X	C	X	X		E	G	G	X	X					X		G	G
Isomyl Ether		X	X	X	X		E	X		X	X					X		E	E
Isomyl Phthalate		X	E	X	G		E	C		X	X					X		E	E
Isooctane	E	G	X	G	X		E	E		X	E	E	G	C	C	X	X	E	E
Isopentane		X	X	E	X		E	E	G	X	E					X		G	G
Isopropyl Acetate		X	G	X	G		E	X		X	X	G	X	X		X		E	E
Isopropyl Alcohol (Isopropanol)		E	E	G	E	E	E	E		E	E	E	X	E	E	E		E	E
Isopropyl Amine		C	E	E	G		E	X	G	G	G					C		E	E
Isopropyl Benzene		X	X	X	X		E	E	G	X	X					X		E	E
Isopropyl Chloride		X	X	X	X		E	G		X	X					X		G	G
Isopropyl Ether		C	X	X	X		E	X		X	G	E	G			X		E	E
Isopropyl Toluene		X	X	X	X		E	E		X	X					X		E	E
Jelly														E					
Jet Fuels (JP1-JP6)		X	X	X	X		E	E		X	E	C	C	X	X	X	X	E	E
JP-4 Oil		X	X	X	X		E	E		X	E	C	C			X	X		
Kerosene	G	X	X	C	X	X	E	E		X	E	E	G	X	C	X	X	E	E
Ketones	G	C	G	X	E	C	E	X		C	X	E	X	X	X	G	X	C	X
Kraft Liquor						G								E	E				
Lacquer Solvents	C	X	X	X	X	C	E	X		X	X	E	X	X	X	X		G	G
Lacquers		X	C	X	X		E	X	E	X	X					X		G	G
Lactic Acid, 28%						E							C	E	E				
Lactic Acid, Cold	X	E	E	E	E		E	E		E	E	E	G			E		E	E
Lactic Acid, Hot		C		X	X		E	E		X	X	X				X			
Lard		G	C	G	G	G	E	E		X	E	E	C	E	E	X	E	E	E
Lauric Acid													C	E	E				
Lauryl Alcohol		E	E	E	E		E	G	E	E	E					E		E	E
Lauryl Chloride						C							E	E	E				
Lauryl Sulfate						X								E	E				
Lavender Oil		X	X	X	X		E	E		X	G		X			X		G	G
Lead Acetate		C	E	G	E	E	E	E		E	G	G	C	E	E	X		E	E
Lead Arsenate						E								E	E				
Lead Nitrate		C	E	E	E	E	E	E		E	E			E	E	E		E	
Lead Sulfamate		G	E	E	E		E	E		G	G					G		E	E
Lead Sulfate		E	E	G	E		E	E		E	E	G						E	E
Lead Tetra-ethyl						E								E	E				
Lemon Juice														E	E				
Ligroin		X	X	E	X		E	E	G	X	E					X		E	E
Lime		E	E	E	E		E	E		E	E	E	G						E
Lime Bleach		G	E	G	E		E	E		E	E	G				E			
Lime Sulfur						G								E	E				
Lime Sulfur, Wet		G	E	E	C		E	E		C	E	G						E	E
Lime Water		E	E	E	E					X	C					X		E	
Limonene		X	X	X	X		E	E		X	X								
Lindol		G	E	X	E					X	X					X		E	E
Linoleic Acid		X	X	C	X		E	G		X	G		C	E	E	X		E	E
Linseed Oil	G	G	G	E	C	C	E	E		X	E	E	G	E	E	X		E	C
Liquid Soap		E	E	E	E		E	E	E	E	E					E		E	E
Liquors, Chemical						E								E	E				
Lubricating Oils, SAE	G	X	X	C	X	X	E	E		X	E	E	E	G	G	X	X	E	X
Lye		E	E	E	E			X		E	G					G		E	E
Lye Solutions	C	E	E	E	E		E	G		E	C	G	G			G	C	E	E
Magnesium Acetate		E	E	X	E		E	X		X	X		X			X			E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Magnesium Carbonate		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E
Magnesium Chloride	G	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E
Magnesium Hydrate		E	E	G	E		E	G		E	G		E					E	
Magnesium Hydroxide	G	E	E	E	E	E	E	E		E	E	E	C	E	E	G		E	E
Magnesium Nitrate		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Magnesium Sulfate	G	E	E	E	E	E	E	E		G	E	E	C	E	E	G		E	E
Magnesium Sulfite		E	E	E	E			E		G	E					G			
Malathion 50 In Aromatic Solvents		X	X	C	X		E	E	E	X	C					X		E	E
Maleic Acid		X	X	X	E		E	E		X	C	X	C			X		E	C
Maleic Acid (25% AQ)						E							C	E	E				
Maleic Anhydride		X	X	X	X		E	E		X	X					X			E
Malic Acid		G	X	G	X	G	E	E		E	E	X	C	E	E	G		E	E
Manganese Sulfate		E	G	E	E		E	E		G	E		E					E	E
Manganese Sulfide		E	E	G	G		E	E	E	C	E					E		E	E
Manganese Sulfite		E	E	G	G		E	E	E	C	E					E		E	E
MAPP				E	G						E					G			
Mayonnaise														E					
Mercuric Chloride		E	E	C	E	G	E	E	E	G	G		G	G	G	G		E	E
Mercuric Cyanide						G								X	X				
Mercurous Nitrate						G							G	G	G				
Mercury	G	E	E	E	E	G	E	E		E	E	E	E	G	G	E		E	E
Mercury Vapors		E	E	C	E		E	E		C	E					E			
Mesityl Oxide		X	C	X	G		E	X		X	X		X			X		E	E
Methacrylic Acid		C	G	G	G			X		X	X					X		E	E
Methallyl Alcohol		E	E				E	G		E	E	X						E	E
Methallyl Chloride	C											E						G	X
Methane		G	X	G	X		E	E		X	E					X		E	E
Methanoic Acid	X	E	E	E	E		E	X		C	C	X	X			E	E		
Methanol (Methyl Alcohol)	G	E	E	E	E		E	C		E	E	G	X			E	E	E	C
Methoxy Ethanol	E																		
Methoxyethoxy Ethanol	E																		
Methyl Acetate		C	G	C	G	X	E	X		X	X	E	X	X	X	X		E	E
Methyl Acetoacetate		X	G	X	G		E	X		X	X		X						E
Methyl Acetone		X	G	X	E		E	X		C	X							E	
Methyl Acetylene Propadiene				E	G						E					G			
Methyl Acrylate		X	G	C	G		E	X	E	C	X					X		E	E
Methyl Allyl Alcohol		E	E				E	G		E	E								
Methyl Allyl Chloride	C	X	X					X		X						X			G
Methyl Amyl Carbinol		E	E				E	G		E	E								E
Methyl Benzene	C	X	X	X	X		E	E		X	X	E	X		X	X	X	E	X
Methyl Bromide		X	C	X	C	X	E	E		X	G	E	X	X	X	X	X	G	X
Methyl Butane		X	X	X	X		E	E			E		G						
1-Bromo-3 Methyl Butane		X	X	X	X		E	G		X	X								
1-Chloro-3-Methyl Butane		X	C	X	X		E	E		X	X	E							
Methyl Butanol	E	E	E	E	E		E	E		E	E	E	X			G	E	G	E
Methyl-2-Butanol	E	E	E					F		E						E		E	E
Methyl-2-Butanone	X	X	G	X	C		E	X		X	X	E	X			X			E
Methyl Butyl Ketone		X	E	X	E		E	X		X	X	E	X			X		E	
Methyl Carbitol		E	E				E			X	C								E
Methyl Cellosolve		C	G	G	G		E	X		X	C	E	X			X		E	E
Methyl Chloride	C	X	X	X	X	X	E	E		X	X	C	X	X	X	X	X	E	X
Methyl Cyanide		G	E	E	E		E	X		G	C	E							
Methyl Cyclohexane		X	X	X	X		E	G		X	X					X		G	G
Methyl Ethyl Ketone (MEK)	G	X	E	X	E	C	E	X		X	X	G	X	X	X	X	C	X	G
Methyl Formate		C	G	G	G		E	C	E	C	X					C		G	G
Methyl Hexanol		E	E				E	G		E	E							E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Methyl-2-Hexanone	C	X	G					X		X						X			E
Methyl Isoamyl Ketone	C					C								X	X				
Methyl-4-Isopropyl Benzene	C																		
Methyl Methacrylate		X	C	X	X		E	X		X	X	C	X			X	C	G	G
Methyl Normal Amyl Ketone		X	G				E	X		X	X								E
Methyl-2-Pentanol		E	E	E	E		E	C		G	G								
Methyl-2-Pentanone	X	X	C	X	G		E	X		X	X	G	X			X	X		
Methyl-3-Penten-1-One	C																		
Methyl 1-2,4-Pentanediol	E																		
Methyl-1-Propanol		E	E	E	E		E	E		E	G		X			E			
1-Bromo-2 Methyl Propane		X	X	X			E	G		X	X								
1-Chloro-2-Methyl Propane		X	X				E	G		X	X								
3-Chloro-2-Methyl Propane	G																		
Methyl-2-Propen-1-Ol		E	E	E	E		E	C		G	G								
Methyl Propyl Ether		G	X				E			X	X								E
Methyl Salicylate			G	X	C		E	G		X	X								
Methyl Styrene	C																		
Methyl Sulfate													E	E	E				
Methyl Sulfide		X	C				E			X	X								
Methyl Sulfuric Acid						E							X	E	E				
Methyl Tertiary Butyl Ether (MTBE)	X		G	X			G	X			X					X		G	
Methylallyl Acetate		G	E				E	X		X	X								E
Methylamyl Alcohol		E	E	E	E		E	C		G	G								E
Methylated Spirit						E													
Methylene Bromide		X	X	X	X		E	C		X	X							G	
Methylene Chloride		X	X	X	C	X	E	G		X	X	C	X	X	C	X	X	E	C
Methylhexyl Ketone		X	G				E	X		X	X								E
Methylisobutyl Carbinol		E	E	E	E		E	C		G	G								C
Methylisobutyl Ketone	X	X	C	X	G		E	X		X	X	G	X			X	X	E	E
Methylisopropyl Ketone	X	X	G	X	C		E	X		X	X	E	X			X			E
Methylacetonitrile		C	E	G			E	X		C	X		X				E		
Methylphenol		C	X	X	X		E	E		X	X		X						
Methylpropyl Carbinol		E	E				E	G		E	E								
Methylpropyl Ketone		X	G	X	G		E	X		X	X					X			E
Mil-A-6091		E	E	E	E		E			E	G		X			E			
Mil-E-9500		E	E	E	E		E			E	E		X			E			
Mil-F-16884		C	X	C	X					X	E		C			X			
Mil-F-17111		X	X	G	X					X	E		C			X			
Mil-F-25558B		G	X	G	X					X	E		G			X			
Mil-F-25576C		C	X	C	X					X	E		C			X			
Mil-F-7024A		X	X	X	X					X	E		G			X			
Mil-G-10924B		G	X	X	X					X	E		G			X			
Mil-G-25013D		G	X	G	X					X	E		C			X			
Mil-G-25537A		G	X	G	X					X	E		G			X			
Mil-G-4343B		G	C	G	C					C	G		E			C			
Mil-G-5572		X	X	X	X					X	E		G			X			
Mil-G-7711A		X	X	X	X					X	E		E			X			
Mil-H-13910B		G	G	G	E					G	G		X			E			
Mil-H-19457B		X	E	X	E					C	X		X			X			
Mil-H-22251		G	E	G	E					E	G					G			
Mil-H-27601A		C	X	G	X					E	G		C			X			
Mil-H-5606B		G	X	G	C					E	X		G			X			
Mil-H-6083C		G	X	G	X					E	C		E			X			
Mil-H-8446B		C	X	G	X					E	X		G			X			
Mil-J-5161F		X	X	X	X					E	X		G			X			
Mil-J-5624G (JP-3, JP-4, JP-5)		X	X	X	X					E	X		E			X			

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Mil-L-15016		G	X	G	X			E		X	E		E			X			
Mil-L-17331D		G	X	G	X			E		X	E		E			X			
Mil-L-2104B		C	X	G	X			E		X	E		E			X			
Mil-L-21260		G	X	G	X			E		X	E		E			X			
Mil-L-23699A		C	X	C	X			E		X	G		C			X			
Mil-L-25681C		G	E	G	E			E		G	G		C			G			
Mil-L-3150A		G	X	G	X			E		X	E		G			X			
Mil-L-3545B		C	X	G	X			E		C	G		C			X			
Mil-L-4339C		X	X	X	X					X	E					X			
Mil-L-6082C		G	X	G	X			E		X	E		E			X			
Mil-L-6085A		X	X	X	X			E		X	G		C			X			
Mil-L-7870A		X	X	G	X			E		X	E		X			X			
Mil-L-9000F		C	X	G	X			E		X	E		C			X			
Mil-L-9236B		X	X	X	X			E		X	G		X			X			
Mil-O-5606								E			E								
Mil-O-7808		X	X	X	X		E	E		X	G		X			X			
Mil-P-27402		G	E	G	E						G					G			
Mil-S-3136B Type 1 Fuel		G	X	G	X			E		X	E		G			X			
Mil-S-3136B Type 2 Fuel		X	X	X	X			E		X	C		G			X			
Mil-S-3136B Type 3 Fuel		X	X	X	X			E		X	C		G			X			
Mil-S-3136B Type 4 Oil, low swell		E	X	E	X			E		X	E		E			X			
Mil-S-3136B Type 5 Oil, med swell		G	X	G	X			E		X	E		G			X			
Mil-S-3136B Type 6 Oil, high swell		X	X	X	X			E		X	E		G			X			
Mil-S-81087		E	E	E	E			E		E	E		E			E			
Milk						G								E					
Mineral Oil	G	E	X	E	X	C	E	E		X	E	E	E	G	E	X	X	E	E
Mineral Spirits		G	X	X	X		E	E		X	E	E	G			X		E	E
Mobile HFA					X		E				E	E							
Molasses						E							E	E	E				
Molten Sulfur		E	G	E	E		E	E		G	G		G					X	X
Monobutyl Ether		X	X	C	X		E	X		X	C		X			X			E
Mono-Chloroacetic Acid	X	X	G	E	C		E	G		C	X	X	X			X	X		E
Monochlorobenzene		X	X	X	X		E	E		X	X	G	X	X	X	X	X	G	X
Monochlorodifluoromethane	C	E	X	E	E		E	X		C	X	C				E	X		C
Monoethanol Amine		C	G	G	G		E	X		G	G	E	X			G		E	E
Monoethyl Amine		C	G	X	E		E	X		C	X	G	X			C			C
Monomethylamine		C	C	C	E		E	C		C	G	E							E
Monomethylether		C	E	E	E			C		G	E					G		E	E
Monovinyl Acetate		C	G	X	C			E		X	X					X		E	E
Morpholine				X	X		E				X	E							
Motor Oil		G		G	X		E	E			E	G	G					E	E
MTBE	X		G	X			G	X			X					X		G	
Muriatic Acid	X	C	C	C	C		E	C	E	C	C	X	C			X	E	E	E
Na-K					X		X				X								
Naphtha	E	X	X	X	X	X	E	E		X	E	E	C	X	C	G	X	E	E
Naphthalene	C	X	X	X	X	X	E	E		X	X	E	G	X	X	X	C	E	X
Naphthenic Acids	E	X		X	X		E	E		X	G					X			
Neatsfoot Oil		G	G	G	G		E	E	E	X	E					X		E	E
Neohexane		X	X				E	E		X	E								E
Neon Gas		E	E	E	E		E	E		E	E	E	E			E	E		
Nickel Acetate		X	E	G	E	E	E	X		E	G		X	E	E	X		E	E
Nickel Chloride	X	E	E	G	E	E	E	E		E	E	X	C	E	E	E		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Refer to *Names and General Properties of Hose Materials* table.

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Nickel Nitrate		E	E	E	E	E	E	E		E	E	G	E	E	E			E	E
Nickel Plating Solution		G	G	C	G					E	G					X			
Nickel Sulfate	X	E	E	E	E	E	E	E		G	E	G	C	E	E	G		E	E
Nicotine						E							C	E	E				
Nicotine Acid						E							C	E	E				
Nietylene										E									
Niter Cake		E	E	E	E		E	E	E	E	E					E		E	E
Nitric Acid, 1-10%	X	G	E	G	E	G	E	X		X	X	C	X	E	G	X	E	E	E
Nitric Acid, 10%-25%	X	G	G	X	E		E	X		X	X	X	X			X		E	E
Nitric Acid, 25%-40%	X	C	C	X	G	C	E	C		X	X	X	X	G	G	X		G	G
Nitric Acid, 40%-60%	X	X	X	X	X	C	E	C		X	X	X	X	G	G	X		C	C
Nitric Acid, 70%						X							X	X	X				
Nitric Acid, Anhydrous						X							X	X	X				
Nitric Acid, Conc (16N)	X	X	X	X	X		E	E		X	X	X	X			X	X	E	G
Nitric Acid, Red Fuming	X	X	C	X	X		E	C		X	X	X	X			X	X	X	X
Nitrioltriethanol		E	G	X	E		E	X		G	C	X				G			
Nitrobenzene	C	X	G	X	X	X	E	C		X	X	C	X	X	X	X		E	X
Nitroethane		C	G	C	G		E	X		G	X		X			G	E	E	E
Nitrogen		E	E	E	E		E	E	E	E	E	E				E		E	E
Nitrogen Tetraoxide		X	X	X	X		E	X		X	X					X		X	X
Nitromethane		C	G	X	G		E	X		G	X	E	X			C		E	E
Nitropropane		C	E	C	G		E	X	E	C	X					C		E	E
Nitrous Oxide Gas		E	E	G	E		E	E	E	E	E	C	G			E		E	E
N-Nonyl Alcohol		E	E				E	G		E	E								
Nonanoic Acid		X	E				E			X	E								
N-Serv							E	E				E							C
Nuto H					X		E				E	E							
Nyvac Light					E		E				X	E							
Octadecanoic Acid		X	G	G	C		E	C	E	X	E					X		E	E
Cis-9-Octadecenoic Acid	X	G	X	C	C		E	E		X	E	E	G			X		E	E
Octane		X	X	G	X		E	E	G	X	E					X		G	G
N-Octane		X	X	C	X		E	E		X	E		X			X		G	E
Octanoic Acid		G	C				E			C	C								
2-Octanone		X	G	X	G		E	X		X	X		X			X			
Octyl Acetate		E	E				E	X		X	X							E	
Octyl Alcohol		G	G	G	G		E	G		G	G		X			G		E	E
Octyl Aldehyde		X	C				E	X		X	X								E
Octyl Amine		C	E				E	X		C	C								C
Octyl Carbinol		E	E				E	G		E	E								E
Octylene Glycol		E	E	E	E		E	E	E	E	E							E	C
Oil, Petroleum	G	G	X	G	X	G	E	E		X	E	G	G	E	E	X	C	E	E
Oils & Fats						G							E	E	E				
Oleic Acid	X	G	X	C	C	X	E	E		X	E	E	G	G	G	X		E	E
Oleum	X	X	X	X	X	X	E	G		X	X	X	X	X	X	X		X	X
Olive Oil		G	G	G	G		E	E	E	X	E	E	E			X		G	C
Orange Juice														E					
Orthoxylene	C	X	X	X	C		E	E		X	X	G	X			X	X		X
Oxalic Acid	X	E	E	G	E	G	E	E		C	G	E	C	E	E	G	E	C	C
Oxydiethanol	E											X							E
Oxygen						G							E	E	E				
Oxygen, Cold		G	E	E	E		E	E	E	G	C					C		E	E
Oxygen, Hot		X	E	E	E		E	E	E	G	C					C		E	E
Ozone		E	G	C	E	X	E	E		X	X	C	E	C	C	X		G	C
Paint Thinner		X	X	X	X		E	G	G	X	X	G	X			X		E	E
Palm Oil		G	E	G	G		E	E	E	X	E					X		E	E
Palmitic Acid	G	C	G	G	G		E	E		E	E	C	E			G	E	E	G

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Palmitic Acid, 10%						E							X	E	E				
Palmitic Acid, 70%						C							X	C	C				
Papermakers Alum		E	E	E						E	E								
Para Methoxypropenyl Benzene	X	X	X				E	G		X		G							
Paraffin		X	X	E	X	C	E	E	E	X	E		E	E	E	X		X	X
Paraffin Wax		X	X	G	X		E	E		X	E	E	G	E	E	E		E	X
Paraformaldehyde		G	G	G	G		E	C		D	G					X		E	E
Paraldehyde		X	E	C	E		E	X		C	C							E	E
Paraxylene		X	X	X	X		E	E		X	C	E	C						X
Peanut Oil		G	C	G	X		E	E	E	X	E					X		E	E
Pelargonic Alcohol		E	E				E	G		E	E								E
Pentachloroethane		X	X	X			E	E		X	X								E
Pentadione	G																		
Pentamethylene		X	X	E	X		E	E		X	G								
Pentane		C	X	C	X		E	E		X	E	G	C	C	C	X		G	G
Pentanol		E	E	E	E		E	G		E	E		C						
Pentanone		X	G	X	G		E	X		X	X								E
4-Hydroxy-4-Methyl-2-Pentanone		C	E	C	E		E	X		C	X	G	X			C			E
Pentanol		E	E	E	E		E	G		E	G		X			G			E
Pentyl Acetate		X	G	X	E		E	E		X	X	G	X			X	X		
Pentyl Alcohol	E	E	E	E	E		E	E		E	G	E	X			E	E		
Pentyl Bromide							E	G											
Pentyl Chloride	C	X	X	X	X		E	E		X		E	C			X			G
Pentyl Ether		C					E				C								
Pentylamine		C	G	X	X		E	X		C	C								
2,4-Di-Sec-Pentylphenol	E																		
Peracetic Acid, 40%													X	X	X				
Perchloroethylene													X	X	X				
Perchloric Acid		E	G	E	G		E	E	B	G	X					X		E	E
Perchloric Acid, 10%						G							X	G	G				
Perchloric Acid, 70%						G							X	C	C				
Perchloroethylene	C	X	X	X	X		E	E		X	C	E	X			X	X	G	X
Perchloromethane			X	X			E			X	X								
Petrol						X								X	X				
Petrolatum		C	X	E	X		E	E		X	E					X		E	E
Petroleum Crude		G	X	G	X		E	E		X	E	G	E			X		E	G
Petroleum Ether		X	X	C	X	X	E	E		X	E	E	G	C	C	X		E	C
Petroleum Oils	G	G	X	G	X		E	E		X	E	G	G			X	C	E	C
Phenbo													X						E
Phenol		X	G	X		X	E	E		X	X	X	X	X	X	X	X	E	C
Phenolsulfonic Acid		X	C				E	X		X	X		G					G	G
Phenylamine		X	E	X	G		E	E		X	X		C						
Phenylbromide		X	X	X	X		E	G		X	X		X						
Phenylbutane	C																		
Phenylchloride		X	X	X	X		E	E		X	X		X						E
Phenylethylene		X	X	X	X		E	G		X	X		C			X			
Phenylhydrazine		C	G	X	C			E		C	X			X	X	X		E	E
Phenylhydrazine Hydrochloride													C	C					
Phenylmethane		X	X	X	X		E	E		X	X		X						
Phenylmethanol		G	G	X	G		E	E		X	X	C	X			X	X	E	E
Phenylmethyl Acetate		G	E				E	X		X								E	E
Phorone		X	E	X	G		E	C	E	X	X					X		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Refer to *Names and General Properties of Hose Materials* table.

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Phosgene, Gas						C								C	C				
Phosgene, Liquid														X					
Phosphaite Esters	G	X	E	X	E	E	E	C		X	X	E	X			X	E		
Phosphoric Acid, 10%	X	E	G	E	E	E					E		X	E	E	G			
Phosphoric Acid, 10%-85%	X	E	G	E	E	E	E	E		G	X	X	X			G		E	E
Phosphorous Pentoxide						G								C	C				
Phosphorous Trichloride		X	E	X	E	C	E	E		X	X			X	X	X		E	E
Phosphorus, Yellow						X								G	G				
Photographic Developers						E							C	C	C				
Photographic Emulsions						E								C	C				
Photographic Fixers						E								C	C				
Di(2Ethylhexyl) Phthalate		X	G	X	G		E	G		X	X	E	X			X			
Pickling Solution		C	C	C	C		E	G	G	C	C					C		E	E
Picric Acid						G							X	X	X				
Picric Acid, H2O Solution	X	E	C	C	C					C	C					G			
Picric Acid, H2O Solution							C	E				X	G				X		E
Picric Acid, Molten		G	C	C	C		E	C	G	C	C					C		X	X
Pine Oil		X	X	X	X		E	E		X	G		E			X		E	X
Pinene		X	X	X	X		E	E		X	G		G			X		E	E
Piperidine		X	X	X	X		E	X	C	X	X					X		G	G
Pitch		C	X	G	X		E	C	G	X	G			G	G	X		E	E
Plating Solution, Brass						C							E	E	E				
Plating Solution, Cadmium						C							E	E	E				
Plating Solution, Chrome		C	E	G	E		E	G	E	X	G					X		E	E
Plating Solution, Chromium						X							G	G	G				
Plating Solution, Copper						C							E	E	E				
Plating Solution, Gold						C							E	E	E				
Plating Solution, Iridium						C							E	E	E				
Plating Solution, Lead						C							E	E	E				
Plating Solution, Nickel						C							E	E	E				
Plating Solution, Rhodium						C							E	E	E				
Plating Solution, Silver						C							E	E	E				
Plating Solution, Tin						C							E	E	E				
Plating Solution, Zinc						C							E	E	E				
Poly Chlorinated Biphenol							E	E											
Polyethylene Glycol	E	E	E	E	E		E	E	E	E	E					E		E	E
Polyol Ester				G								G	X						
Polypropylene Glycol		E	E				E	E		E	E								
Polyvinyl Acetate Emulsion (PVA)		G	E	G	E		E	C		C	C					C		E	E
Potassium Acetate		C	E	G	E		E	C		E	G	G	X			X		E	E
Potassium Acid Sulfate						G							E	E	E				
Potassium Antimonate						E							E	E	E				
Potassium Bichromate						E							E	E	E				
Potassium Bisulfate		E	E	E	E		E	E		E	E	G				G		E	E
Potassium Bisulfite		E	E	E	E		E	E		E	E	G				G		E	E
Potassium Bisulphate						E								G					
Potassium Borate, 1%						E							E	E	E				
Potassium Bromate, 10%						E							E	E	E				
Potassium Bromide						E							E	E	E				
Potassium Carbonate		E	E	E	E	E	E	E	E	E	E	E	C	E	E	E		E	E
Potassium Chlorate						E							G	E	E				
Potassium Chloride	G	E	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Potassium Chromate		C	G	E	E		E	E		G	E	G	G			G		E	E
Potassium Chromate, 40%						E							G	E	E				
Potassium Cuprocyanide						E								E	E				
Potassium Cyanide	G	E	E	G	E	C	E	E		E	E	E	E	C	C	E		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Potassium Dichromate	X	E	E	E	E		E	E		C	E	G	G			G		G	G
Potassium Dichromate, 49%						E							G	E	E				
Potassium Ferricyanide						E							E	E	E				
Potassium Fluoride						E							E	E	E				
Potassium Hydrate		E	E	G	G		E	C		G	G	G	G			G		E	E
Potassium Hydroxide	X	E	G	G	E		E	G		G	G	G	C			G	G	E	E
Potassium Hydroxide, 10%						E							C	E	E				
Potassium Hydroxide, 20%						E							X	E	E				
Potassium Hydroxide, 35%						G							X	E	E				
Potassium Hypochlorite						E							X	G	G				
Potassium Nitrate		E	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Potassium Perborate						E							E	E	E				
Potassium Perchlorite						G							G	E	E				
Potassium Permanganate		X	E	X	E		E	E	E	X	X					X		E	E
Potassium Permanganate, 10%						X							G	G	E				
Potassium Permanganate, 5%		G	E	E	E		E	E		E	C	X	X			G		E	G
Potassium Persulfate						E							E	E	E				
Potassium Phosphate						E													
Potassium Silicate		E	E	E	E		E	E		E	E	G	E			E		E	E
Potassium Sulfate		E	E	E	E	E	E	E		E	E	E	E	E	E	G		E	E
Potassium Sulfide		E	E	E	E	E	E	E		G	E	E	E	E	E	G		E	E
Potassium Sulfite		E	E	E	E	E	E	E		G	E	E	E	E	E	G		E	E
Potassium Thiosulfate						E							E	E	E				
Power Steering Fluid													E	E	E				
Prestone Antifreeze							E	E				G	X				E	E	E
Producer Gas		G	X	G	X		E	E		X	E		E			X			
Propane						X							C	C	C				
Propanediol		E	C	C	E		E	E		E	E		G			E			
Propanetriol	E	E	E	E	E	E	E	E		E	E	G	C			E	X	E	E
Propanol (Propyl Alcohol)						E	E	E				E	X	E	E	E	E	E	E
1-Amino-2-Propanol		C	E				E	X		G	G								
Propanolamine	E																		
Propanone	G	X	E	X	E		E	X		C	X	E	X			C	E	E	C
Chloro-2-Propanone		X	X	C	E		E	X		X	X		X			X			
Propargyl Alcohol						E								E	E				
Propen-1-ol							E	G										E	E
Propenediamene	E																		
Propenenitrile			X	X			E			G	X								
Propenyl Alcohol		E	E	E	E		E	G		E	E							E	E
Propenylanisole		X	X				E	G		X	X								
Propionic Acid		G	E	C	E		E	X		E	C		X			X			E
Propionitrile			E	G	E		E	X		E	X						X		
Propyl Acetate		X	G	X	E		E	X		X	X		X			X		E	E
Propyl Alcohol (Propanol)		E	E	E	E	E	E	E		E	E	E	X	E	E	E	E	E	E
Propyl Aldehyde		X	G				E	X		C	X							E	E
Propyl Benzene	C																		
Propyl Chloride		X	C				E	G		X	X							E	E
Propyl Ether	E																		
Propyl Nitrate		X	G	X	G		E	X		X	X		X			X			
Propylene		X	X	X	X		E	E		X	X		X			X			
Propylene Diamine		C	E				E			G	G								
Propylene Dichloride		X	X	X	X	X	E	G		X	X		X	X	X	X		G	G
Propylene Glycol	E	E	E	E	E	E	E	E		E	E	G	X			E	X	E	E
Prune Juice														E					
Pydraul Hydraulic Fluids		D	G	D	G		E	C	E	X	X	G	X			X		G	G
Pyranol		X	X	X	X			E		X	C					X		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Pyridine		X	G	X	G		E	X	G	X	X					X		E	E
Pyrolygneous Acid		G	G	G	G			E		C	C					C		E	E
Pyrrrole		X	G	X	C					C	X					G		E	E
Quintolubric 822 Series			X	X	X				G	X	G								
Rape Seed Oil		G	E	G	G		E	E	E	X	G					X		G	G
Red Oil	X	G	X	C	C		E	E		X	E	E	G			X		E	C
Resorcinol				X	G		E	E				X	X			G	X		E
Rosin Oil		G	X	E	X			E		X	E					X		E	E
Rotenone And Water		E	E	E	E			E		E	E					E		E	E
SAE Oil #10	G	X	X	C	X		E	E		X	E	E	E			X	X		C
Salicylic Acid		E	E	X	E	E	E	E	E	E	X					G		E	E
Sea Water		E	E	G	E	E	E	E	E	E	E	E	C	E	E	E	E	E	E
Selenic Acid						G							X	E	E				
Sewage		E	G	G	E		E	E		G	E	G	X			G	G	X	E
Shortening G						E								G					
Silicate Esters		G	C	E	X		E	E		X	G	G	E			X		C	
Silicate of Soda		E	E	E	E		E	E		E	E	E						E	E
Silicic Acid						E							X	E	E				
Silicone Fluids						E													
Silicone Grease		E	E	E	E		E	E		E	E	E	E			E		G	E
Silicone Oil		E	E	E	E		E	E		C	E	E	E			E		E	E
Silver Cyanide						E							E	E	E				
Silver Nitrate		E	E	E	E	E	E	E		E	G	E	E	E	E	E		E	E
Silver Plating Solutions						E							E	E	E				
Skelly Solvent		C	X	G	X			E		X	E					X		E	E
Skydrol Hydraulic Fluids		X	E	X	E		E	X	E	X	X					X		E	E
Soap Solutions	G	E	G	G	E	G	E	E		G	E	E	E	E	E	G	E	E	E
Soda Ash	G	E	E	E	E		E	E		E	E	G	G			E		E	E
Soda Lime		G	E	G	E		E	G		E	G		C					E	E
Soda, Caustic	C	E	E	E	E		E	X		G	C	G	G			E	C	E	E
Sodium Acetate		C	E	G	E	E	E			E	G	G	X			X		E	E
Sodium Acid Sulfate						E							E	E	E				
Sodium Aluminate		E	E	E	E		E	E		G	E	G				G		E	E
Sodium Antimonate						E							E	E	E				
Sodium Arsenite						E							E	E	E				
Sodium Benzoate						E							E	E	E				
Sodium Bicarbonate		E	E	E	E	E	E	E		E	E	E	E	E	E	E		E	E
Sodium Bisulfate	X	E	E	E	E	E	E	E		E	G	C	E	E	E	G		E	E
Sodium Bisulfite		E	E	E	E	E	E	E		E	E	E	E	E	E	G		E	E
Sodium Borate		E	E	E	E		E	E		E	E	E	G			E		E	E
Sodium Bromide						E							E	E	E				
Sodium Carbonate	G	E	E	E	E	E	E	E	E	E	E	G	G	E	E	E		E	E
Sodium Chlorate						E							G	G	G				
Sodium Chloride	G	E	G	E	E	E	E	E		E	E	E	E	E	E	E	C	E	E
Sodium Chromate		C	E	C	G		E	C		X	X					X		G	G
Sodium Cyanide	G	E	E	E	E	E	E	E		E	E	E	G	E	E	E		E	E
Sodium Dichromate		G	E	G	C	E	E	E		C	E	G	G	E	E	G		E	E
Sodium Ferrocyanide						E							E	E	E				
Sodium Fluoride		E	E	E	E	E	E	E	E	E	E		E	E	E	E		E	E
Sodium Hydrate		G	E	G	E		E	G		E	G	G	C			G			E
Sodium Hydrochlorite		E	G	C	G		E	E		C	C	G	C			G			E
Sodium Hydroxide	C	E	E	G	E		E	C		E	C	G	C			G	C	E	E
Sodium Hydroxide, 10%						E							G	E	E				
Sodium Hydroxide, 35%						E							C	E	E				
Sodium Hydroxide, 50%														G					
Sodium Hypochlorite	X	G	G	C	G	E	E	C		X	X	X	C	E	E	C	C	E	G

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Sodium Metaphosphate		G	G	G	E	E	E	E		E	E	E	G	E	E	E		G	E
Sodium Nitrate	G	E	E	G	E	E	E	E		G	G	E	G	E	E	G		E	E
Sodium Nitrite		E	E	E	E	E	E	E	E	E	E	E	E	E	E	E		E	E
Sodium Perborate	X	G	E	G	E	E	E	E		G	G	G	G			G		E	E
Sodium Peroxide	X	G	E	G	E		E	E		G	G	X	X			G		E	E
Sodium Phosphate		E	E	C	E		E	E		E	E	E	E			E		E	E
Sodium Phosphate, Acid						E							U	G	G				
Sodium Silicate	G	E	E	E	E	E	E	E		E	E	E	G	E	E	E		E	E
Sodium Sulfate	G	E	E	E	E	E	E	E		G	E	E	E	E	E	G		E	E
Sodium Sulfide	G	E	E	E	E	E	E	E		G	E	E	E	E	E	G		E	E
Sodium Sulfite		E	E	E	E	E	E	E		G	E	E	E	E	E	G		E	E
Sodium Thiosulfate		E	E	E	E	E	E	E		E	E	G	E	E	E	G		E	E
Soft Drinks						G								E	E				
Soya Oil														E	E				
Soybean Oil	G	E	C	E	X		E	E		X	E	E	G	G		X		E	E
Stannic Chloride	X	C	G	C	E	E	E	E		G	E	C	G	E	E	E		E	E
Stannic Sulfide		E	E				E	E		E	E								E
Stannous Chloride		E	G	E	C	E	E	E		E	E	G	C	E	E	E		E	
Stannous Sulfide		E	E				E			E	E								E
Starch						E													
Stearic Acid	G	C	G	G	G	E	E	E		C	E	E	E	C	C	G	E	E	E
Stoddard Solvent	G	X	X	C	X	C	E	E		X	E	E	G	C	G	X	X	E	E
Styrene Monomer		X	X	X	X		E	G		X	X	E	C			X		G	E
Sugar Solutions		E	E	E	E	E	E	E	E	E	E					E		E	E
Sulfamic Acid		E	E	G	X		E	E		G	C		X						C
Sulfite Liquors		E	E	G	G		E	E		G	G					G		E	E
Sulfonic Acid		C	X	C	X		E	X		X	X					X		G	G
Sulfur		F	F	X	F		E	G		X	X			G	G	X		E	X
Sulfur, Molten		E	E	E	E					G	G					G			
Sulfur Chloride	G	C	X	C	X		E	E		X	C	C	C			X		E	E
Sulfur Dioxide		C	G	X	E		E	E		C	X	X				C		G	C
Sulfur Dioxide Gas, Dry						E								E	E				
Sulfur Dioxide Gas, Wet						E								C	C				
Sulfur Dioxide, Liquid						X								C	C				
Sulfur Hexafluoride		E	E	E	E		E	E	E	E	E					E		E	E
Sulfur Trioxide		B	C	C	C		E	E	G	X	C					C		D	G
Sulfur Trioxide, Dry		C	G	X	G		E	E		C	X	X	G			X		X	G
Sulfur, Molten							E	E										E	C
Sulfuric Acid, 1%-60%						G								E	E				
Sulfuric Acid, 70%						C								E	E				
Sulfuric Acid, 95%						X								X	X				
Sulfuric Acid, 95% Fuming						X								C	C				
Sulfuric Acid, 25%	X	E	G	E	E		E	E		G	E	X	X			G	E	E	E
Sulfuric Acid, 25%-50%	X	G	G	E	E		E	E		G	E	X	X			G		E	E
Sulfuric Acid, 50%-96%	X	C	X	C	G		E	E		X	C	X	X			X		E	E
Sulfuric Acid, 60% (200°F)	X		X	X	X			C			X	X				X		X	X
Sulfuric Acid, Conc. 96%-98%	X	X	X	X	X		E	G		X	X	X	X			X		E	C
Sulfuric Acid, Fuming	X	X	X	X	X		E	G		X	X	X	X			X		X	X
Sulfurous Acid, 10%	X	E	E	G	E	E	E	E		G	C	X				G		E	E
Sulfurous Acid, 10%-85%	X	E	E	C	G		E	G		G	C	X	X			C		X	E
Sulfurous Acid, 30%						X													
Sulphur Trioxide						X								E	E				
Sutan							E	F											E
Tall Oil		C	X	C	X		E	E		X	E		E			X		E	G
Tallow		C	G	G	E	E	E	E		C	E	E	E			X		E	E
Tannic Acid	X	E	E	E	E	E	E	E		E	E	G	E	E	E	G	E	E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Tanning Extracts						E													
Tanning Liquors						C								E	E				
Tar, Bituminous	G	C	X	C	X		E	E	E	C	G	G	G			X		E	E
Tar, Camphor	C	X	X	X	X		E	E	E	X	X	E	G			X	C	E	X
Tartaric Acid	X	E	G	E	C	E	E	E		E	E	E	E	E	E	G	E	E	E
Tea, Brewed						G								E	E				
Telone 2																			E
Terpinol	E	X	C	X	C		E	E	E	X	G	G	G			X		G	G
Tertiary Butyl Alcohol		G	G	G	G		E	E		G	G		X			G		E	E
Tertiary Butyl Amine		X			G														
Tertiary Butyl Mercaptan		X	X	X	X		E	E		X	X		X			X			
Tetrachlorobenzene		X	X				E	G		X	X		G						G
Tetrachloroethane		X	X	X	X		E	E		X	X		X			X	C	C	
Tetrachloroethylene		X	X	X	X		E	E		X	C	E	X			X		G	X
Tetrachloromethane		X	X	X	X		E	E		X	X	E	C					C	X
Tetrachloronaphthalene		X	X				E	G		X	X								G
Tetraethyl Lead		X	X	C	X		E	E	G	X	G		G	G	G	X		E	E
Tetraethylene Glycol		E	E				E	E		E	E								
Tetraethylorthosilicate			E	X			E			X	X								
Tetrahydrofuran (THF)		X	G	X	X		E	X		X	X	G	X			X	X	C	X
Tetrahydrofurane						X							X	X	X				
Thionyl Chloride		X	X	X	X	X	E	G		X	X		X	X	X	X		E	
Tin Chlorides		E	G	C	E		E	E		E	E	C	G	E	E			E	E
Tin Tetrachloride		E	E	E	E		E	E	E	E	E					E		E	E
Titanium Tetrachloride		X	X	X	X		E	E		X	C		X	E	E	X		G	X
Titanium Trichloride						X													
Toluene	C	X	X	X	X	X	E	E		X	X	E	X	X	C	X	X	E	X
Toluene Diisocyanate (TDI)		X	E	X	E		E	G		C	C					C		E	E
Toluidine		X	X				E	G		X	X								
Tomato Juice						C								E					
Toxaphene		X	X	G	X			E		X	G					X		E	E
Transformer Oils, Chlorinated Phenyl Base Askerels		X	X	X	X		E	E	G	X	X					X		G	G
Transformer Oils, Petroleum Base		G	X	G	X		E	E	E	X	E		E			X		E	E
Transmission Fluid													E	E	E				
Transmission Fluids, A		X	X	C	X		E	E	E	X	G	G				X		A	A
Transmission Fluids, B		X	X	X	X			E		X	C					X		A	A
Tri (2-Hydroxyethyl) Amine		E	G	X	E		E	X		G	C		X			G			
Tributyl Amine		C	E				E			G	G								
Tributyl Phosphate		X	G	X	E		E	X		C	X	G	X	X	X	X		E	E
Tricetin		G	E	G	E			X		E	G					G		E	E
Trichloroacetic Acid		C	G	X	G		E	X		C	C	X	X			X		E	E
Trichlorobenzene		X	X	X		X	E	G		X	X		X	X	X	X			
Trichloroethane		X	X	X	X		E	E		X	X	E	X			X			
Trichloroethylene	C	X	X	X	X	X	E	E		X	X	G	X	X	C	X	X	C	X
Trichloromethane	X	X	X	X	X		E	E		X	X	C	X			X	X	C	C
Trichloropropane		X	X	X	X		E	E		X	X					X		E	E
Trichlorotoluene							E				X								
Tricresyl Phosphate (TCP)		X	E	C	E	X	E	E		C	X	G	X	X	X	X		E	E
Triemethyl Propane														C	C				
Triethanolamine		E	G	X	E	C	E	X		G	C	E	X	C	G	G		E	E
Triethylamine			C	G	E		E	E		G	E	E	X	G	G	X			
Triethylene Glycol		E	E				E	E		E	E								E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.

Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended

Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Trihydroxybenzoic Acid		G	G	G	G		E	E		E	G	G	X			G		G	
Trimethyl Pentanes, Mixed	E	C	X	C	X		E	E		X	E	E	G			X	X	E	
Trimethyl Pentene	E											E						E	
Trimethylamine	E						E											E	E
Trinitrotoluene (TNT)		G	X	G	X			G		X	X					X		X	X
Triphenyl Phosphate		C	E	C	G		E	C		X	X					X		E	E
Trisodium Phosphate		E	E	E	E					E	E					E			
Tritoyl Phosphate		X	E	X	E		E	E		X	X	G	X			X		E	
Tung Oil	C	E	X	E	X		E	E		X	E	G	C			X		E	E
Turbine Oil		G	X	G	X			E		X	G					X		E	E
Turpentine		X	X	X	X	X	E	E		X	G		E	C	G	X		G	E
Ucon Hydrolube Oils		X	E	G	E		E	E	E	X	E					X		E	E
UDMH		E	E	G	E		E	X		E	G		X			X		C	C
1 Undecanol		E	E	E	E		E	G		E	E					E			E
Undecyl Alcohol		E	E	E	E		E	G	E	E	E					E		E	E
Uran		E	G	G	G		E	C		G	G					C		E	E
Urea		E	E	G	E	E	E	E		E	G	E	E	E				E	E
Urethane Formulations							E				E	E							
Uric Acid							E					G	X				E		E
Urine						E							E	E	E				
Varnish	C	X	X	X	X	X	E	E		X	G	E	C	X	X	X		E	
Vegetable Oils		G	C	C	C	X	E	E		X	E	G	E	G	G	X		E	G
Versilube F44		E	E	E	E		E	E		E	E	E	E			E			
Versilube F55		E	E	E	X		E	E		E	E	E	E			E			
Vinegar		E	E	G	E	E	E	E		G	G	C	C	E		G		E	E
Vinegar Acid	G																		
Vinyl Acetate		C	E	X	G	X	X	E		X	X		X	X	X	X		E	E
Vinyl Benzene		X	X	X	X		E	G		X	X		C			X		E	G
Vinyl Chloride														X	X				
Vinyl Chloride, Gas			X		G		E			G		E						C	E
Vinyl Cyanide	E	C	X	C	X		E	C		C	X	E	X			C	X		
Vinyl Ether		G	X				E	X		X	G							E	E
Vinyl Styrene		X	X				E	E		X						X		E	E
Vinyl Toluene		X	X				E	E		X	X							E	E
Vinyl Trichloride		X	X	X			E	E		X	X							E	E
Vital, 4300, 5310					X		E			X	E								
VM&P Naphtha		X	X	C	X		E	E		X	C								X
Water	G	E	E	G	E		E	E	E	E	E	E	E			G	E	E	E
Water, Acid						E							G	E	E				
Water, Boiling		E	E	G	E		G	G			G	X	G			G	G	X	X
Water, Demineralized						E							E	E	E				
Water, Detergent Solution		E	E	G	E		E	E	G	G	E	E	G			G		E	E
Water, Distilled						E							E	E	E				
Water, Fresh						E	E	E	E				G	E	E			E	E
Water, Potable						E							E	E	E				
Water, Salt		G	E	E	E	E	E	E	E	E	G		G	E	E	G		E	E
Water, Soda							E					E					E	E	E
Wemco C		X	X	G	X					X	E					X			
Whey						G								E					
Whiskey		E	E	E	E		E	E		E	E	E	X	C		E		E	E
White Gasoline						X							E	E	E				
White Liquor		E	G	E	C			E		E	E		E	E	E			E	E
White Oil		X	X	G	X		E	E		X	E		E			X		E	X
White Pine Oil		X	X	X	X		E	E		X	G					X			
Wines		E	E	E	E		E	E		E	E	E	X	G		E		E	G
Wood Alcohol		E	E	E	E		E	C		E	E		X			E		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

(Continued on the following page)

Hose and Chemical Table (Continued)

Refer to *Names and General Properties of Hose Materials* table.
**Key: E = Excellent G = Good C = Conditional
Blank = No Data X = Not Recommended**

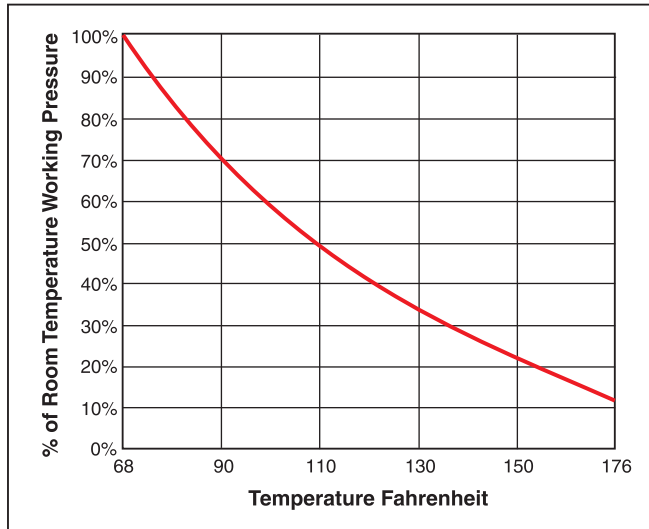
Chemical Or Material Conveyed	CPE	CSM	Chlorobutyl	Chloroprene	EPDM	EVA***	FEP/PTFE	FKM	MXLPE	Natural	Nitrile	Nylon	PU***	PVC***	PVC/PU***	SBR	TPV***	UHMWPE	XLPE
Wood Oil		C	C	G	X		E	E		X	E	G	C			X		E	E
Xenon		E	E	E	E		E	E		E	E		E			E			
Xylene, Xylol	C	X	X	X	X	X	E	E		X	X	G	C	X	C	X	X	C	X
Xylidine		X	G	X	C		E	C		X	C					X		G	G
Zeolites		E	E	E	E			E		E	E					E			
Zinc Acetate		C	E	G	E		E	C		E	G	X	X			X			E
Zinc Carbonate		E	E	E	E		E	E		E	E		E					E	E
Zinc Chloride	X	E	E	E	E	E	E	E		E	E	C	G	E	E	E		E	E
Zinc Chromate		C	E			E	E						E	E	E				G
Zinc Cyanide						E							E	E	E				
Zinc Nitrate						E							E	E	E				
Zinc Sulfate	X	E	E	E	E	E	E	E		E	E	E	G	E	E	G		E	E

***Refer to the PVC and Thermoplastic Temperature/Pressure chart in this section.

PVC and Thermoplastic Temperature / Pressure Chart

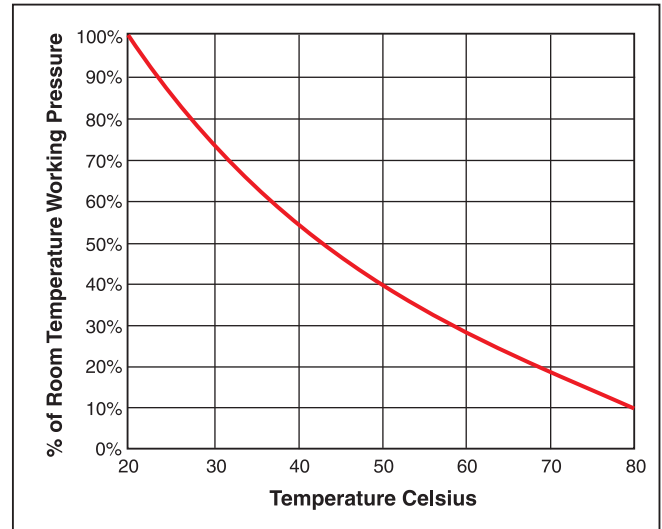
Effects of Elevated Temperatures on PVC / Thermoplastic Hose and Tubing

Thermoplastic hose and tubing achieve their optimum physical properties at room temperature, 68°F (20°C). As thermoplastic materials are exposed to increased ambient temperatures, they soften and their physical properties change. For hose and tubing, heat sharply reduces the available working pressure and coupling retention. The charts below illustrate this effect. In all cases, test the product in a controlled, secure and safe environment, and consider all operating conditions prior to use.



Example from the Fahrenheit Chart

If Working Pressure at 68°F is 200 PSI, then the WP at 110°F is $200 \times 50\%$, or 100 PSI.



Example from the Celsius Chart

If Working Pressure at 20°C is 14 bar, then the WP at 50°C is $14 \times 40\%$, or 5.6 bar.

For further information, refer to the Parker Safety Guide No. 4400-B.1 previously in this section and the Parker User Responsibility Statement on the inside front cover of in this catalog.

Metal/Coupling Corrosion Resistance Table

⚠WARNING! The following data has been compiled from generally available sources and should not be relied upon without consulting and following the specific recommendations of the manufacturer regarding particular coupling materials.

Key: E = Excellent • G = Good • C = Conditional • Blank = No Data • X = Not Recommended

Chemical Or Material Conveyed	Aluminum	Brass	Carbon Steel	Stainless Steel 202, 302, 304, 308	Stainless Steel 316	Stainless Steel 410, 416, 430
Acetate, Solvents, Crude	C	C		E	E	G
Acetate, Solvents, Pure	E	E		E	E	E
Acetic Acid	X	X	X	G	G	G
Acetic Acid Vapors	C	X	X	G	G	X
Acetic Anhydride	G	X	X	G	G	X
Acetone	E	E	E	E	E	E
Acetylene	E	X	E	E	E	E
Alcohols	E	G	E	E	E	E
Aluminum Sulfate	X	X	X	C	G	X
Alums	C	C	X	C	G	X
Ammonia Gas	C	X	E	E	E	E
Ammonium Chloride	C	X	X	C	C	X
Ammonium Hydroxide	G	X	X	E	E	C
Ammonium Nitrate	G	X	E	E	E	E
Ammonium Phosphate		X		E	E	E
Ammonium Phosphate, Acid		C		G	E	C
Ammonium Phosphate, Neutral	C	C	X	E	E	E
Ammonium Sulfate	X	X	X	G	G	G
Asphalt	E	E	E	E	E	E
Beer	E	E	X	E	E	E
Beet Sugar Liquors	E	G	C	E	E	G
Benzene, Benzol	E	E	E	E	E	E
Benzine	E	E	E	E	E	E
Biodiesel	E	X	G	E	E	E
Borax		E	G	E	E	E
Boric Acid	E	C	C	G	E	C
Butane, Butylene	E	E	E	E	E	E
Butadiene	E	E	E	E	E	E
Calcium Bisulfate		X		G	E	X
Calcium Hypochlorite	X	X	X	C	G	C
Cane Sugar Liquors	E	E	E	E	E	E
Carbon Dioxide, Dry	E	E	E	E	E	E
Carbon Dioxide, Wet, (AQ)	E	E	G	E	E	E
Carbon Disulfide	G	C	G	E	E	G
Carbon Tetrachloride	C	E	E	E	E	E
Chlorine, Dry	X	X	G	G	E	G
Chlorine, Wet	X	C	X	X	C	X
Chromic Acid	X	X		G	G	C
Citric Acid	E	X	X	X	E	C
Coke Oven Gas	G	C	E	E	E	E
Copper Sulfate	X	X	X	E	E	E
Core Oils		E		E	E	E
Cottonseed Oil	E	C	C	E	E	E
Creosote	E	C	G	E	E	E
Ethers	E	C	C	E	E	E
Ethylene Glycol		G	G	E	E	E
Ferric Chloride	X	X	X	X	X	X
Ferric Sulfate	X	X	X	E	E	C
Formaldehyde, 50%	G	G	C	E	E	C
Formic Acid	X	G	X	E	E	E
Freon	E	E	C	E	E	E
Furfural	E	G	E	E	E	E
Gasoline, Refined	E	E	E	E	E	E
Gasoline, Sour	C	C	E	E	E	C
Gelatin	E	C	X	E	E	E
Glucose	E	E	E	E	E	X
Glue	E	E	E	E	E	E
Glycerine or Glycerol	E	G	E	E	E	E
Hydrochloric Acid, 37%	X	X	X	X	C	X
Hydrocyanic Acid, 10%	E	X	X	E	E	X
Hydrofluoric Acid	X	X	X	X	X	X
Hydrogen	E	E	E	E	E	E
Hydrogen Fluoride		C		X	E	X
Hydrogen Peroxide	E	X	C	G	E	E
Hydrogen Sulfide, Dry	C	C	C	G	C	C
Hydrogen Sulfide, Wet	X	X	X	G	E	X
Lacquers, Lacquer Solvents	E	G	C	E	E	E
Lactic Acid	C	X	X	C	G	E
Lime, Sulfur	G	X	G	E	G	E
Linseed Oil	E	E	E	E	E	E
Magnesium Chloride	X	C	C	G	X	X
Magnesium Hydroxide	X	G	E	E	E	E
Magnesium Sulfate	C	G	G	E	E	E
Mercuric Chloride	X	X	X	X	X	X
Mercury	X	X	E	E	E	E
Milk	X	C	X	E	E	G
Molasses	G	E	G	E	E	G
Natural Gas	E	G	E	E	E	E
Nickel Chloride	X	X	X	C	G	E
Nickel Sulfate	X	C	X	G	E	C
Nitric Acid	C	X	X	G	G	G
Oleic Acid	E	C	X	G	E	G
Oxalic Acid	X	X	X	G	E	C
Oxygen	E	E	E	E	E	E
Palmitic Acid	E	E	C	G	E	C
Petroleum Oils, Sour		C		E	E	C
Petroleum Oils, Refined	E	E	E	E	E	E
Phosphoric Acid, 25%	X	X	X	C	E	C
Phosphoric Acid, 25%-50%	X	X	X	X	G	C
Phosphoric Acid, 50%-85%	X	X	X	X	G	C
Picric Acid	C	X	X	C	E	C
Potassium Chloride	X	E	C	G	C	C
Potassium Hydroxide	X	X	X	E	E	E
Potassium Sulfate	E	C	G	E	E	E
Propane	E	E	E	E	E	E
Rosin			X	E	E	E

(Continued on the following page)

Metal/Coupling Corrosion Resistance Table (Continued)

Key: E = Excellent • G = Good • C = Conditional • Blank = No Data • X = Not Recommended

Chemical Or Material Conveyed	Aluminum	Brass	Carbon Steel	Stainless Steel 202, 302, 304, 308	Stainless Steel 316	Stainless Steel 410, 416, 430
Shellac	G	G		E	E	E
Sludge Acid		X		X	C	X
Soda Ash	X	C	E	E	E	E
Sodium Bicarbonate	X	C	X	E	E	E
Sodium Bisulfate	C	X	X	E	E	C
Sodium Chloride	E	E	C	G	C	E
Sodium Cyanide	X	X	G	E	E	E
Sodium Hydroxide	X	X	X	G	G	G
Sodium Hypochlorite	X	X	X	X	X	X
Sodium Metaphosphate	E	X	X	E	E	G
Sodium Nitrate	E	C	E	E	E	E
Sodium Perborate	E	C	C	E	E	E
Sodium Peroxide	E	X	X	E	E	E
Sodium Phosphate, Acid		G	G	G	E	E
Sodium Phosphate, Alkaline		C	C	E	E	E
Sodium Phosphate, Neutral		G	C	E	E	E
Sodium Silicate	X	C	E	E	E	E
Sodium Sulfate	C	G	E	E	E	E
Sodium Sulfide		X	X	E	E	E
Sodium Thiosulfate	G	X	X	E	E	E
Stearic Acid	C	C	X	G	E	G
Sulfate Liquors		X	X	E	E	E
Sulfur	C	X	X	G	E	C
Sulfur Chloride	X	X	X	X	X	X
Sulfur Dioxide, Dry	E	E	G	E	E	E
Sulfur Dioxide, Wet	C	X		G	E	X
Sulfuric Acid , 1%-50%	C	X	X	X	G	X
Sulfuric Acid, 50%-70%	X	X	X	X	C	X
Sulfuric Acid, 70%-90%	X	X	X	X	X	X
Sulfuric Acid, 90%-98%	X	X	X	X	X	X
Sulfurous Acid	X	X	X	C	G	C
Tannic Acid	X	C	X	E	E	C
Tar	E	G	E	E	E	G
Toluene, Toluol	E	E	E	E	E	E
Trichlorethylene	E	E	C	E	E	E
Turpentine	E	E	E	E	E	E
Varnish		C	X	E	E	C
Vegetable Oils	E	G	E	E	E	E
Vinegar	X	X	X	G	E	E
Water , Acid	X	X	X	E	E	G
Water, Fresh	C	E	E	E	E	E
Water, Salt	X	X	X	G	G	C
Whiskey		G	X	E	E	C
Wines		G	X	E	E	C
Xylene, Xylol	E	E	G	E	E	E
Zinc Chloride	X	X	X	C	C	X
Zinc Sulfate	C	C	X	G	E	E

Silicone Hose and Chemical Table

⚠WARNING! The following data is based on tests and believed to be reliable; however, the tabulation should be used as a guide ONLY, since it does not take into consideration all variables, such as elevated temperatures, fluid contamination, concentration, etc., that may be encountered in actual use. All critical applications should be tested. Refer to the Safety & Technical Information section of this catalog for safety, handling and use information.

Key: E = Excellent • G = Good • C = Conditional • X = Not Recommended • I = Insufficient Data

Chemical or Material Conveyed	Rating	Chemical or Material Conveyed	Rating	Chemical or Material Conveyed	Rating	Chemical or Material Conveyed	Rating
Acetic acid, dilute, 10%	G	Carbon tetrachloride	X	Hydraulic fluids: Water glycol	E	Potassium hydroxide	C
Acetic acid glacial	C	Castor oil	E	Hydrobromic acid	X	Potassium sulfate	E
Acetic acid anhydride	I	Cellosolve acetate	X	Hydrochloric acid	X	Propane	X
Acetone	X	CFC-12	I	Hydrocyanic acid	G	Sewage	G
Acetylene	C	China wood oil, tung oil	X	Hydrofluoric acid	X	Soap solution	E
Air 68°F (20°C)	E	Chlorine, dry/wet	X	Hydrofluosilicic acid	I	Soda ash, sodium carbonate	E
Air 150°F (65°C)	E	Chlorinated solvents	X	Hydrogen gas 140°F (60°C)	C	Sodium bicarbonate, baking soda	E
Aluminum chloride 150°F (65°C)	E	Chloroacetic acid	I	Hydrogen peroxide	E	Sodium bisulfate	E
Aluminum fluoride 150°F (65°C)	G	Chlorosulfonic acid	X	Hydrogen sulfide, dry	X	Sodium chloride	E
Aluminum sulfate 150°F (65°C)	E	Chromic acid	C	Hydrogen sulfide, wet	X	Sodium cyanide	E
Alums 150°F (65°C)	E	Citric acid	E	Isobutyl alcohol	E	Sodium hydroxide to 50% at 140°F	E
Ammonia gas, anhydrous	I	Coke oven gas	G	Isopropyl alcohol	E	Sodium hypochlorite	G
Ammonia 10%water solution	E	Copper chloride 150°F (65°C)	E	Isooctane	X	Sodium metaphosphate	E
Ammonia 30%water solution	C	Copper sulfate 150°F (65°C)	E	Kerosene	X	Sodium nitrate	X
Ammonium chloride	C	Corn oil	E	Lacquers	X	Sodium perborate	G
Ammonium hydroxide	C	Cottonseed oil	E	Lacquers solvents	X	Sodium peroxide	C
Ammonium nitrate	E	Creosote, coal tar	C	Lactic acid	E	Sodium phosphate, monobasic	X
Ammonium phosphate monobasic	E	Creosote, coal tar wood	X	Linseed oil	E	Sodium phosphate, dibasic	X
Ammonium phosphate dibasic	E	Creosols, cresylic acid	I	Lubricating oil, crude	C	Sodium phosphate, tribasic	X
Ammonium phosphate tribasic	E	Dichlorobenzene	X	Lubricating oil, refined	C	Sodium silicate	E
Ammonium sulfate	E	Dichloroethylene	X	Magnesium chloride 150°F (65°C)	E	Sodium sulfate	E
Amyl acetate	X	Diesel fuel	X	Magnesium hydroxide 150°F (65°C)	G	Sodium sulfide	E
Amyl alcohol	X	Diethanolamine 20%	X	Magnesium sulfate 150°F (65°C)	E	Sodium thiosulfate, hypo	I
Aniline, Aniline oil	X	Diethylamine	G	Mercuric chloride	E	Soybean oil	E
Aniline, dyes	X	Diisopropylamine	I	Mercury	E	Stannic chloride	G
Asphalt	I	Diethylphthalate	X	Methyl alcohol, methanol	E	Steam 450°F (230°C)	I
Barium chloride 150°F (65°C)	E	Ethers	X	Methyl chloride	X	Stearic acid	E
Barium hydroxide 150°F (65°C)	E	Ethyl acetate	G	Methyl ethyl ketone	X	Sulfur	G
Barium sulfide 150°F (65°C)	E	Ethyl alcohol	E	Methyl isopropyl ketone	C	Sulfur chloride	C
Beer	E	Ethyl cellulose	C	Milk	E	Sulfur dioxide, dry	G
Beet sugar liquors	E	Ethyl chloride	C	MTBE	I	Sulfur trioxide, dry	G
Benzene, Benzol	X	Ethyl glycol	E	Mineral oils	E	Sulfuric acid, 10%	X
Benzine, petroleum ether	X	Ferric chloride 150°F (65°C)	E	Natural gas	C	Sulfuric acid, 11% - 75%	X
Benzine, petroleum naphtha	X	Ferric sulfate 150°F (65°C)	G	Nickel chloride 150°F (65°C)	E	Sulfuric acid, 76% - 95%	X
Black sulfate liquor	E	Formaldehyde	G	Nickel sulfate 150°F (65°C)	E	Sulfuric acid, fuming	X
Blast furnace gas	E	Formic acid	C	Nitric acid, crude	X	Sulfurous acid	X
Borax	G	Fuel oil	X	Nitric acid, diluted 10%	C	Tannic acid	G
Boric acid	E	Furfural	X	Nitric acid, concentrated 70%	X	Tar	G
Bromine	X	Gasoline, unleaded	X	Nitrobenzene	C	Tartaric acid	E
Butane	X	Gasoline + MTBE	X	Oleic acid	X	Toluene, Toluol	X
Butyl acetate	X	Gasoline Hi Test + MTBE	X	Oleum	I	Trichloroethylene	X
Butyl alcohol, Butanol	C	Gelatin	E	Oxalic acid	G	Turpentine	X
Calcium bisulfate	C	Glucose	E	Oxygen	X	Urea, water solution	E
Calcium chloride	E	Glue	E	Palmitic acid	X	Vinegar	E
Calcium hydroxide	E	Glycerine, glycerol	E	Perchlorethylene	C	Vinyl acetate	X
Calcium hypochlorite	C	Green sulfate liquor	E	Petroleum oils and crude	X	Water, acid mine	E
Caliche liquors	G	HFC-134	I	200°F (95°C)	X	Water, fresh	E
Cane sugar liquors	E	Hydraulic fluids: Petroleum	C	Phosphoric acid, crude	C	Water, distilled	E
Carbolic acid, phenol	X	Hydraulic fluids: Phosphate ester alkyl	X	Phosphoric acid, pure 45%	C	Whiskey and wines	E
Carbon dioxide, dry-wet	E	Hydraulic fluids: Phosphate ester aryl	X	Picric acid, molten	X	Xylene, xylol	X
Carbon disulfide	X	Hydraulic fluids: Phosphate ester blends	X	Picric acid, water solution	I	Zinc chloride	E
Carbon monoxide 140°F (60°C)	E	Hydraulic fluids: Silicate ester	X	Potassium chlorite	E	Zinc sulfate	E
				Potassium cyanide	E		

Parker Fluid Connectors Group

North American Divisions & Distribution Service Centers

Your complete source for quality tube fittings, hose & hose fittings, brass & composite fittings, quick-disconnect couplings, valves and assembly tools, locally available from a worldwide network of authorized distributors.

Fittings:

Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

Hose, Tubing and Bundles:

Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability:

Parker operates Fluid Connectors manufacturing locations and sales offices throughout North America, South America, Europe and Asia-Pacific.

For information, call toll free...

1-800-C-PARKER
(1-800-272-7537)

North American Divisions

Fluid System Connectors Division

Otsego, MI
phone 269 694 9411
fax 269 694 4614

Hose Products Division

Wickliffe, OH
phone 440 943 5700
fax 440 943 3129

Parflex Division

Ravenna, OH
phone 330 296 2871
fax 330 296 8433

Quick Coupling Division

Minneapolis, MN
phone 763 544 7781
fax 763 544 3418

Tube Fittings Division

Columbus, OH
phone 614 279 7070
fax 614 279 7685

Distribution Service Centers

Buena Park, CA

phone 714 522 8840
fax 714 994 1183

Louisville, KY

phone 502 937 1322
fax 502 937 4180

Portland, OR

phone 503 283 1020
fax 503 283 2201

Toledo, OH

phone 419 878 7000
fax 419 878 7001
fax 419 878 7420
(FCG Kit Operations)

Canada

Milton, ONT

phone 905 693 3000
fax 905 876 1958
(Contact Milton for other Service Center locations.)

Mexico

Toluca, MEX

phone (52) 722 2754 200
fax (52) 722 2722 168



Parker Hannifin Corporation

Hose Products Division

30240 Lakeland Boulevard
Wickliffe, OH 44092

Customer Service:

phone (440) 943-5700

email HPD.Support@support.parker.com

www.parker.com/safehose