

# APPENDIX B

## CHEMICAL CHARTS

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL RESISTANCE CHARTS

#### RATINGS AND DEFINITIONS

**The Goodyear Engineered Products Chemical Resistance Chart is to be used as a guide only.**

- A** The chemical is expected to have minor or no effect on the product. Product may be used for continuous service. Changes in working conditions, such as concentration of the chemical or temperature, may affect product performance and cause degradation of the product.
- B** The product may be used for continuous or intermittent service, however the product properties will be affected by the exposure to the chemical. Changes in working conditions, such as concentration of the chemical or temperature, may affect product performance and cause degradation of the product.
- X** The product should not be used with this chemical.
- I** Insufficient or no data available for this chemical. Further testing is recommended to determine compatibility of the chemical with the product.

**Caution:** Unless otherwise specified, the ratings applied to tube stocks are based on fully concentrated or saturated solutions at 100°F under normal service conditions.

**Note:** Hose ratings are for the effect on the polymer only. The degree of resistance of a rubber compound to a specific chemical depends on many variables such as temperature, concentration, length of exposure, stability of chemical, etc. For a specific compound, many grades of polymers are available which can alter the compound's chemical resistance.

**WHEN IN DOUBT**, before using a specific product, contact your local Goodyear Engineered Products Sales Representative for assistance if unusual service conditions or high temperatures are present in the product application.

**THIS CHEMICAL RESISTANCE CHART SUPERSEDES ALL PREVIOUSLY PUBLISHED INFORMATION REGARDING GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE RESISTANCE RATINGS.**

AIR &  
MULTIPURPOSE  
*General Purpose*  
*Heavy Duty*  
*Push-on*

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
*Transfer*  
*Washdown*

MARINE

MATERIAL  
HANDLING  
*Abrasives*  
*Bulk Transfer*  
*Cement & Concrete*

MINING

PETROLEUM  
*Aircraft Fueling*  
*Dispensing*  
*Dock*  
*Transfer*

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
*Discharge*  
*Suction &*  
*Discharge*  
*Washdown*

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

Common Name & Description	Veyance Technologies, Inc. Trade Name	Goodyear Engineered Products Examples with Polymer in the Tube
UHMWPE (Ultra High Molecular Weight Polyethylene)	Pliosyn™	Fabchem™
Butyl (Isobutylene and Isoprene)	Weatherex®	Gray Flexwing®
Hypalon® (Chlorosulfonated Polyethylene)	Hysunite™	Yellow Flexwing®
NR - Natural Rubber (Isoprene, natural)	Pureten™	Tan Flexwing®
Viton®	Flosyn®	Orange Flexwing®
Nitrile		Flexwing® Petroleum
CPE (Chlorinated Polyethylene)	Chemrin®	Brown Flexwing®, ExtremeFlex™ Brown
EPDM (Ethylene Propylene Diene)	Versigard®	Purple Flexwing®, ExtremeFlex™ Purple
EPDM (Heat Resistant)	Pyrosyn®	Flexsteel® 250 Steam, Whitewater®
Cross-Link Polyethylene (XLPE)	Speclar®	Blue Flexwing®, Green XLPE
Alphasyn® (Modified Cross-Link Polyethylene)	Alphasyn®	Viper™
Teflon®		Hi-Per®
316 Stainless Steel		Insta-Lock™
Aluminum		Insta-Lock™
Brass		Insta-Lock™

Caution: This chart and the following chemical resistance charts are intended to reflect the various tube compounds as they pertain to Goodyear Engineered Products petroleum and chemical hose. Always use a Goodyear Engineered Products petroleum or chemical hose when the hose is to be used for conveyance of petroleum or chemicals. Consult the following pages for chemical compatibility of the various tube stocks.

Hypalon® is a registered trademark of DuPont Dow Elastomers L.L.C.  
 Viton® is a registered trademark of DuPont Dow Elastomers L.L.C.  
 Teflon® is a registered trademark of E.I. du Pont de Nemours and Company.  
 Versigard® is a registered trademark of The Goodyear Tire and Rubber Company.

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

	Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE											FITTING			
		HOSE TUBE POLYMER											METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Basket
Acetaldehyde	100	B	B	X	X	X	X	I	A	A	A	A	A	B	X	TS
Acetic Acid, Conc.	100	A	A	X	B	X	X	A	A	A	A	A	A	B	X	T
Acetic Acid, Dilute 10	150	B	A	X	A	X	X	A	A	A	A	A	A	I	X	TVN
Acetic Acid, Glacial	100	A	B	X	X	X	X	A	A	A	A	A	A	B	X	TS
Acetic Aldehyde	100	A	B	X	X	X	X	I	A	A	A	A	A	B	X	T
Acetic Anhydride	100	B	A	B	X	X	X	A	A	A	A	A	A	B	X	TS
Acetic Ester	100	B	B	X	X	X	X	B	A	A	A	A	A	A	A	TV
Acetic Ether	100	B	B	X	X	X	X	B	A	A	A	A	A	A	A	T
Acetic Oxide	100	B	A	B	X	X	X	A	A	A	A	A	A	B	X	T
Acetone	100	A	A	X	B	X	X	A	A	A	A	A	A	A	I	T
Acetone Cyanohydrin	100	B	A	X	X	X	X	A	A	A	A	A	I	I	I	TS
Acetyl Acetone	100	B	B	X	X	X	X	B	I	A	A	A	I	B	I	T
Acetyl Chloride	100	B	X	X	X	B	X	A	B	B	A	A	B	X	A	TV
Acetyl Oxide	100	B	A	B	X	X	X	A	A	A	A	A	A	B	X	T
Acetylene (dry)	100	A	A	A	A	A	A	A	A	A	X	A	A	I	I	TVBNS
Acetylene Dichloride	100	B	X	X	X	A	X	I	I	A	X	A	I	A	X	TV
Acetylene Tetrachloride	100	B	X	X	X	A	X	I	I	A	I	A	A	X	X	TV
Acrolein	100	B	A	B	B	A	B	I	I	A	A	A	I	I	I	TV
Acrylic Acid	100	B	X	X	X	A	X	X	X	A	A	A	A	I	I	TV
Acrylonitrile	100	B	X	X	X	X	X	A	X	B	A	A	A	X	I	T
Alk-Tri	100	I	X	X	X	A	X	I	I	A	I	A	A	I	I	TV
Allyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	A	TBN
Allyl Bromide	100	B	X	X	X	B	X	B	I	B	I	A	I	I	I	T
Allyl Chloride	100	B	X	X	X	B	X	B	X	B	I	A	A	X	X	TS
Alum	150	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS
Aluminum Acetate	100	A	A	A	X	X	X	A	A	A	A	A	A	I	X	T
Aluminum Chloride	150	A	A	A	A	A	A	A	A	A	A	A	I	I	X	TVB
Aluminum Formate	100	A	B	X	X	X	X	I	I	A	A	A	I	I	I	T
Aluminum Hydroxide	150	A	A	B	A	X	B	A	A	A	A	A	A	I	X	TS
Aluminum Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS
Aminoethanol	100	A	A	B	B	I	B	A	I	A	A	A	A	B	I	TBN
Aminoethylethanolamine	100	A	A	B	B	I	B	A	I	A	A	A	I	I	I	T
Ammonia	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														

# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE													FITTING			
		Fabchlen™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing,	ExtremeFlex™ Brown	Purple Flexwing,	ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock™	Insta-Lock™
GASKET		Temperature (°F)	HOSE TUBE POLYMER											METAL				
T = Teflon®	V = Viton®		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
A = May be used for Continuous Service																		
B = May be used for Intermittent Service																		
I = Insufficient data, contact customer services																		
X = Do not use																		
T = Teflon®																		
B = Nitrile																		
S = Silicone																		
V = Viton®																		
N = Neoprene																		
S = Silicone																		
Ammonia Cupric Sulfate	150	A	A	A	X	A	A	A	A	A	A	A	A	I	I	I	TVB	
Ammonium Chloride	150	A	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN	
Ammonium Hydroxide	150	A	A	B	A	X	X	A	A	A	A	A	A	A	X	I	TNS	
Ammonium Nitrate (ANFO)	150	SPECIAL HOSE REQUIRED											A	B	X	TVBS		
Ammonium Phosphate	150	A	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Ammonium Sulfate	150	A	A	A	A	A	X	A	A	A	A	A	A	A	X	X	TVNS	
Ammonium Sulfide	150	A	A	A	A	A	X	A	A	A	A	A	A	A	X	X	TVN	
Ammonium Sulfite	150	A	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBN	
Ammonium Thiosulfate	100	A	A	A	A	A	A	A	A	A	A	A	A	A	B	X	TVBN	
Amyl Acetate	100	A	A	B	X	X	X	X	B	A	A	A	A	A	A	I	T	
Amyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	A	I	A	TBNS	
Amyl Chloride	100	A	X	X	X	A	X	X	X	A	B	A	A	X	I	T		
Amyl Oleate	100	A	X	X	X	I	B	I	I	A	I	A	I	I	I	T		
Amyl Phenol	100	A	X	X	X	A	X	I	I	A	I	A	I	I	I	T		
Amyl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T		
Amylamine	100	A	B	X	X	X	X	B	X	A	I	A	I	I	I	T		
Anethole	100	X	X	X	X	B	X	X	I	X	I	A	I	I	I	T		
Anhydrous Ammonia	---	NO HOSE RECOMMENDED FOR THIS APPLICATION																
Aniline	100	A	A	X	X	A	X	B	A	A	A	A	A	A	B	X	T	
Animal Grease	100	A	X	X	X	A	A	B	X	A	A	A	A	A	A	I	TVB	
Animal Oils	100	A	B	X	X	A	A	A	X	A	B	A	A	A	A	I	TVB	
Antimony Pentachloride	100	A	X	X	X	I	X	I	X	B	B	A	I	I	I	T		
Aqua Ammonia	150	A	A	B	A	A	B	B	B	A	A	A	A	X	I	T		
Aromatic Spirits	100	A	X	X	X	A	X	I	X	A	I	A	A	I	I	T		
Aromatic Tar	100	A	X	X	X	A	X	B	X	A	I	A	I	I	I	T		
Arquads	100	A	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Arsenic Acid	100	A	A	A	A	I	X	A	A	A	A	A	A	X	X	TVS		
Arsenic Chloride	100	I	X	X	X	X	X	X	X	X	X	A	I	I	I	T		
Arsenic Trichloride	100	I	X	X	X	X	X	X	X	X	X	A	X	I	I	T		
Asphalt	500	SPECIAL HOSE REQUIRED											A	I	I	TVN		
ASTM #1 Oil	100	A	X	B	X	A	A	A	X	A	A	A	A	A	A	I	TVBNS	
ASTM #2 Oil	100	A	X	X	X	A	A	A	X	A	A	A	A	A	A	TVB		
ASTM #3 Oil	100	A	X	X	X	A	A	A	X	A	A	A	A	A	A	TVB		

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile        **N** = Neoprene
- S** = Silicone

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER											METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket
Barium Carbonate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBN
Barium Chloride	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBN
Barium Hydroxide	150	A	A	A	A	B	A	A	A	A	A	A	A	X	X	TBNS
Barium Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	B	A	X	TVBS
Barium Sulfide	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBS
Benzal Chloride	100	A	B	I	I	I	X	X	I	A	I	A	B	X	I	T
Benzaldehyde	100	A	B	X	X	X	X	X	B	A	B	A	A	B	I	T
Benzene (Benzol)	100	A	X	X	X	A	X	X	X	B	B	A	A	A	A	T V
Benzine (Ligroin)	100	A	X	X	X	A	A	I	X	A	B	A	A	A	I	TVB
Benzine Solvent (Ligroin)	100	A	X	X	X	A	A	I	X	A	I	A	A	A	I	TVBS
Benzoic Acid	100	A	B	B	X	I	I	A	B	A	A	A	B	B	X	TVN
Benzoic Aldehyde	100	A	B	X	X	X	X	X	B	A	I	A	A	I	B	T
Benzotrichloride	100	X	I	I	I	I	X	X	X	X	X	A	I	I	I	T
Benzoyl Chloride	100	X	I	I	I	I	X	X	X	B	X	A	B	I	I	T
Benzyl Acetate	100	A	A	B	X	X	X	B	I	A	B	A	B	I	I	T
Benzyl Alcohol	100	A	A	X	X	A	X	A	X	A	A	A	A	B	I	TVS
Benzyl Chloride	100	A	X	X	X	A	X	X	X	A	I	A	A	X	X	T V
Bichromate of Soda	150	A	A	X	I	I	I	I	I	A	A	A	I	I	I	T
Black Sulfate Liquor	150	A	X	B	B	B	B	A	B	A	A	A	A	X	X	TVBN
Black Sulfate Liquor	275	X	X	X	X	X	X	A	X	X	X	A	A	X	X	T
Bleach	100	X	B	X	X	B	X	I	A	X	B	A	X	X	X	T V
Brine	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBNS
Bromine	100	X	X	X	X	B	X	I	X	X	X	A	X	X	X	T V
Bromo Benzene	100	B	X	X	X	B	X	X	X	X	X	A	I	I	I	T V
Bromo Toluene	100	X	X	X	X	B	X	X	X	X	X	A	I	I	I	T
Bromochloromethane	100	X	B	X	X	B	X	X	I	X	A	A	A	X	X	T
Bunker C.	100	B	X	X	X	A	A	I	X	A	B	A	A	I	I	TVB
Bunker Oil	100	B	X	X	X	A	A	I	X	X	B	A	A	I	I	TVB
Butanol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBN
Butyl (Normal) Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBN
Butyl (Secondary) Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBN
Butyl Acetate	100	A	A	B	X	X	X	B	B	A	B	A	A	B	I	T
Butyl Acetoacetate	100	A	X	X	X	X	X	X	I	A	B	A	I	I	I	T

MARINE

MATERIAL HANDLING

Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING			
A = May be used for Continuous Service		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
B = May be used for Intermittent Service		HOSE TUBE POLYMER														METAL	
I = Insufficient data, contact customer services																	
X = Do not use																	
GASKET		Temperature (°F)															
T = Teflon®	V = Viton®																
B = Nitrile	N = Neoprene																
S = Silicone																	
B																	
Butyl Acrylate	100	B	X	X	X	X	X	B	X	B	B	A	I	I	I	T	
Butyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBN	
Butyl Aldehyde	100	A	B	X	X	X	X	B	X	A	B	A	X	A	X	T	
Butyl Amine	100	A	B	X	X	X	X	B	X	A	B	A	A	A	I	T	
Butyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	TV	
Butyl Benzl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T	
Butyl Bromide	100	B	X	X	X	B	X	X	X	B	B	A	I	I	I	T	
Butyl Butyrate	100	B	X	X	X	X	X	X	I	B	I	A	I	I	I	TV	
Butyl Carbitol	100	A	A	A	X	I	X	A	B	A	A	A	I	I	I	T	
Butyl Cellosolve	100	A	A	A	X	X	X	A	A	X	A	A	A	A	X	T	
Butyl Chloride	100	B	X	X	X	A	X	X	I	B	I	A	B	I	I	TV	
Butyl Ether	100	A	X	B	X	X	B	A	X	A	A	A	A	I	I	T	
Butyl Ethyl Acetaldehyde	100	A	B	X	X	X	X	I	I	A	B	A	I	I	I	T	
Butyl Ethyl Ether	100	A	X	B	X	I	B	I	X	A	A	A	I	I	I	T	
Butyl Phthalate	100	A	A	X	X	X	X	I	I	A	A	A	A	A	I	T	
Butyl Stearate	100	A	X	X	X	I	A	B	X	A	B	A	A	A	A	TBS	
Butylate	100	A	I	I	I	I	I	I	A	I	I	I	I	I	I	I	
Butyraldehyde	100	A	B	X	X	X	X	B	X	A	B	A	X	A	X	T	
Butyric Acid	100	A	X	B	X	I	X	A	B	A	A	A	A	B	I	T	
Butyric Anhydride	100	A	X	B	X	I	X	I	I	A	I	A	I	I	I	T	
C																	
Cadmium Acetate	100	A	A	A	X	X	X	A	I	A	A	A	I	I	I	T	
Calcium Acetate	100	A	A	A	X	X	X	A	A	A	A	A	A	I	I	TB	
Calcium Aluminate	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Calcium Bichromate	150	X	A	X	I	I	I	I	I	X	I	A	I	I	I	T	
Calcium Bisulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN	
Calcium Bisulfite	150	A	A	A	A	A	A	A	A	I	A	A	A	X	X	TVBNS	
Calcium Carbonate	150	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS	
Calcium Chloride	150	A	A	A	A	A	A	A	A	A	A	A	B	X	X	TVBNS	
Calcium Hydroxide (Caustic Lime)	100	A	A	B	A	X	B	A	A	A	A	A	A	X	X	TNS	
Calcium Hypochlorite	100	B	B	X	X	B	X	A	B	X	A	A	A	X	X	TV	
Calcium Nitrate	150	A	A	A	A	A	A	A	A	A	A	A	B	X	X	TVBN	
Calcium Silicate	150	A	A	A	A	A	A	A	A	A	A	A	I	A	I	TVBN	

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

	Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE											FITTING					
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing, ExtremeFlex™ Brown	Purple Flexwing, ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock	
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket		
		HOSE TUBE POLYMER											METAL					
Calcium Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBS	
Calcium Sulfhydrate	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	I	TVB	
Calcium Sulfide	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	X	TVBN	
Calcium Sulfite	150	A	A	A	X	A	A	A	A	A	A	A	B	B	X	X	TVBNS	
Caprylic Acid	100	A	X	B	X	I	X	A	I	A	A	A	B	I	X	T		
Carbitol	100	A	A	A	X	I	X	A	A	A	A	A	B	A	X	T		
Carbitol Acetate	100	A	B	B	X	I	X	I	I	A	A	A	I	I	I	T		
Carbolic Acid, Phenol	100	A	A	X	X	A	X	A	X	A	B	A	A	B	A	T	V	
Carbon Dioxide	100	A	A	A	A	A	A	A	A	A	A	A	A	B	I	I	TVBNS	
Carbon Disulfide	---	NO HOSE RECOMMENDED FOR THIS APPLICATION																
Carbon Tetrachloride	100	B	X	X	X	A	X	X	X	A	B	A	A	I	I	I	T	V
Carbonic Acid	100	A	A	A	A	A	A	A	A	A	A	A	A	B	B	B	TVBS	
Casinghead Gasoline	100	B	X	X	X	A	A	B	X	B	B	A	I	I	I	I	TVB	
Caster Oil (Castor Oil)	100	A	A	A	X	A	A	A	A	A	A	A	A	A	I	I	TVBS	
Caustic Potash	150	A	A	B	A	X	B	A	B	A	A	A	A	X	X	T		
Caustic Soda	150	A	A	B	A	X	B	A	A	A	A	A	A	X	X	TNS		
Cellosize	100	A	A	X	X	I	X	I	I	A	A	A	I	I	I	T		
Cellosolve	100	A	A	A	X	X	X	I	A	A	A	A	A	A	X	T		
Cellosolve Acetate	100	A	B	B	X	X	X	X	B	A	A	A	A	I	X	T		
Chloracetic Acid	100	A	X	X	B	X	X	A	X	A	A	A	A	X	X	T		
Chlorinated Solvents	100	B	X	X	X	A	X	B	X	A	I	A	B	X	A	T	V	
Chlorine (Dry) (Gas)	---	NO HOSE RECOMMENDED FOR THIS APPLICATION																
Chlorine (Wet)	100	X	X	X	X	B	X	X	X	X	X	A	X	X	X	T	V	
Chloroacetone	100	A	I	X	X	X	X	X	X	A	I	A	A	X	X	T		
Chlorobenzene	100	B	X	X	X	A	X	X	X	A	B	A	A	B	I	T	V	
Chlorobenzol	100	A	X	X	X	A	X	I	X	A	B	A	A	B	I	T	V	
Chlorobutane	100	X	X	X	X	A	X	X	I	X	I	A	I	I	I	T	V	
Chloroethylbenzene	100	A	X	X	X	A	X	I	X	A	I	A	I	I	I	T	V	
Chloroform	100	B	X	X	X	B	X	X	X	X	B	A	A	B	I	T	V	
Chloropentane	100	A	X	X	X	A	X	X	X	A	I	A	A	X	I	T	V	
Chlorophenol	100	A	X	X	X	B	X	X	X	X	B	A	I	I	I	T	V	
Chloropropanone	100	A	I	X	X	X	X	X	X	A	I	A	I	I	I	T		
Chlorosulfonic Acid	100	X	X	X	X	X	X	I	X	X	X	A	B	X	X	T		

# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

C	Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING					
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing	ExtremeFlex™ Brown	Purple Flexwing	ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon™	316 SS	Aluminum	Brass	Gasket			
		HOSE TUBE POLYMER												METAL					
Chloroethene	100	X	X	X	X	A	X	I	X	A	I	A	A	I	I	T	V		
Chlorotoluene	100	X	X	X	X	A	X	X	X	X	I	A	A	I	I	T	V		
Chloropyrifos	100	I	I	I	I	I	I	I	X	I	I	I	I	I	I	I	I		
Chromic Acid 25%	100	B	X	B	X	I	X	A	X	X	B	A	B	X	X	T	V		
Coal Oil	100	A	X	X	X	A	A	A	X	A	A	A	A	X	A	TVB			
Coal Tar	100	A	X	X	X	A	X	B	X	A	A	A	A	I	I	TVS			
Coal Tar Naptha	100	A	X	X	X	A	X	B	X	A	A	A	A	A	I	T	V		
Copper Chloride	100	A	A	A	X	A	A	A	A	A	A	A	X	X	X	TVBNS			
Copper Hydrate	100	A	A	B	X	X	B	I	I	A	A	A	I	I	I	T	B		
Copper Hydroxide	100	A	A	B	X	X	B	I	I	A	A	A	I	I	I	T	B		
Copper Nitrate	100	A	A	A	X	A	A	A	A	A	A	A	A	X	X	TVBNS			
Copper Nitrite	100	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVB			
Copper Sulfate	100	A	A	A	X	A	A	A	A	A	A	A	A	X	X	TVBNS			
Copper Sulfide	100	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVB			
Creosols	100	A	A	X	X	A	X	A	X	A	B	A	A	I	X	T	V		
Creosote	100	A	X	X	X	A	B	I	X	A	B	A	A	I	I	T	V		
Cresylic Acid	100	A	A	X	X	I	X	X	X	A	I	A	A	B	X	T	V		
Crotonaldehyde	100	A	A	X	X	X	X	A	I	A	A	A	I	I	I	T			
Crude Oil	100	A	X	X	X	A	A	B	X	A	B	A	A	A	I	TVB			
Cumene	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	T	V		
Cupric Carbonate	100	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVBN			
Cupric Chloride	100	A	A	A	X	A	A	A	A	A	A	A	B	X	I	TVBNS			
Cupric Nitrate	100	A	A	A	X	A	A	A	A	A	A	A	B	I	I	TVBN			
Cupric Nitrite	100	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVB			
Cupric Sulfate	100	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVBNS			
Cyclohexane	100	A	X	X	X	A	B	A	X	A	B	A	A	B	X	T	V		
Cyclohexanol	100	A	X	X	X	B	B	A	X	A	B	A	A	X	X	TVB			
Cyclohexanone	100	A	X	X	X	X	X	X	X	A	B	A	A	I	I	T			
Cyclopentane	100	A	X	X	X	A	B	B	X	A	B	A	I	I	I	TVN			
Cyclopentane, methyl	100	A	X	X	X	A	B	I	X	A	B	A	I	I	I	T	V		
Cyclopentanol	100	A	X	X	X	B	B	A	X	A	A	A	I	I	I	TVB			
Cyclopentanone	100	A	X	X	X	X	X	X	X	A	B	A	I	I	I	T			

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### D

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER												METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
D.D.T. in Kerosene	100	A	X	X	X	A	A	A	X	A	B	A	I	I	A	TVB	
D.M.P.	100	X	X	X	X	X	X	X	X	X	A	A	A	I	I	TV	
Decalin®	100	X	X	X	X	A	X	X	X	A	X	A	I	I	I	TV	
Decanol	100	A	A	A	X	B	A	A	A	A	A	A	I	I	I	TB	
Decyl Alcohol	100	A	A	A	X	B	A	A	A	A	A	A	I	I	I	TB	
Decyl Aldehyde	100	A	X	X	X	X	X	I	I	A	B	A	I	I	I	T	
Decyl Butyl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T	
Denatured Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	B	A	TB	
Diacetone Alcohol	100	A	A	B	B	X	X	A	X	A	A	A	A	I	I	T	
Diamyl Phenol	100	A	X	X	X	A	X	A	X	A	I	A	I	I	I	TV	
Diamylamine	100	A	A	X	B	I	B	A	I	A	B	A	I	I	I	TB	
Diamylene	100	A	X	X	X	A	X	B	X	A	B	A	I	I	I	TV	
Dibenzyl Ether	100	A	B	X	X	I	X	X	X	A	B	A	A	A	X	T	
Dibromobenzene	100	B	X	X	X	A	X	I	X	A	I	A	I	I	I	TV	
Dibutyl Amine	100	A	X	X	B	X	B	A	X	A	A	A	I	I	I	T	
Dibutyl Ether	100	A	X	B	X	X	X	A	X	A	A	A	A	A	X	T	
Dibutyl Phthalate	100	A	A	X	X	X	X	X	A	A	A	A	A	A	I	TV	
Dibutyl Sebacate	100	A	A	X	X	X	X	B	X	A	I	A	I	I	I	TVS	
Dicalcium Phosphate	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Dicamba	100	A	I	I	I	I	I	I	A	A	I	A	I	I	I	T	
Dichloroacetic Acid	100	A	X	X	B	X	X	B	I	A	I	A	I	I	I	T	
Dichlorobenzene	100	A	X	X	X	A	X	X	X	A	B	A	A	B	I	TV	
Dichlorobutane	100	A	X	X	X	A	X	X	X	A	I	A	I	I	I	TV	
Dichlorodifluoromethane	100	I	X	X	X	B	B	I	X	I	X	A	I	I	I	TVB	
Dichloroethane	100	A	X	X	X	A	X	X	X	A	A	A	I	A	I	TV	
Dichloroethyl Ether	100	A	X	X	X	I	X	B	X	A	B	A	I	I	I	T	
Dichloroethylene	100	X	X	X	X	A	X	I	I	X	X	A	I	A	X	TV	
Dichlorohexane	100	A	X	X	X	A	X	X	X	A	A	A	I	I	I	TV	
Dichloropentane	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	TV	
Dichloropropane	100	A	X	X	X	A	X	X	X	B	I	A	A	X	I	TV	
Diesel Oil	150	A	X	X	X	A	A	A	X	A	B	A	A	A	I	TVB	
Diethanol Amine	100	A	A	X	B	I	B	A	I	A	A	A	A	I	I	T	
Diethyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	TV	

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING		
A = May be used for Continuous Service																
B = May be used for Intermittent Service																
I = Insufficient data, contact customer services																
X = Do not use																
GASKET		Temperature (°F)	HOSE TUBE POLYMER												METAL	
T = Teflon®	V = Viton®		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass
B = Nitrile	N = Neoprene															
S = Silicone																
D																
Diethyl Carbinol	100	A	A	A	A	B	A	I	I	A	A	A	I	I	I	TBN
Diethyl Ketone	100	A	B	X	X	X	X	X	X	A	B	A	I	I	I	T
Diethyl Oxalate	100	A	B	X	B	I	X	A	X	A	B	A	I	I	I	T
Diethyl Phthalate	100	A	A	X	X	X	X	B	X	A	B	A	I	I	I	T
Diethyl Sebacate	100	A	A	X	X	X	X	B	X	A	B	A	A	A	I	T
Diethyl Sulfate	100	A	B	X	X	X	X	A	I	A	A	A	X	I	I	TNS
Diethyl Triamine	100	A	A	X	B	I	B	A	I	A	A	A	I	I	I	TB
Diethylamine	100	A	A	X	B	I	B	B	B	A	B	A	A	I	X	TB
Diethylene Dioxide	100	A	B	X	X	X	X	B	A	A	A	A	X	X	X	T
Diethylene Glycol	100	A	A	A	A	A	A	X	A	A	A	A	A	B	A	TVBN
Diethylene Triamine	100	A	A	X	B	I	B	A	I	A	A	A	I	I	X	T
Dihydroxydiethyl Ether	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN
Dihydroxyethyl Amine	100	A	A	X	B	I	B	A	I	A	A	A	I	I	I	TB
Diisobutyl Ketone	100	A	B	X	X	X	X	I	B	A	B	A	I	I	I	T
Diisobutylene	100	A	X	X	X	A	A	X	X	A	B	A	A	I	I	TVB
Diisooctyl Adipate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T
Diisooctyl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T
Diisocyanate	100	X	X	X	X	X	X	X	X	X	B	A	I	I	I	T
Diisodecyl Adipate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T
Diisodecyl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T
Diisopropanol Amine	100	A	A	X	B	I	B	I	I	A	B	A	I	I	I	TB
Diisopropyl Amine	100	A	A	X	B	I	B	I	I	A	B	A	I	I	I	TB
Diisopropyl Ether	100	A	X	B	X	I	B	I	X	A	B	A	A	I	I	TB
Diisopropyl Ketone	100	A	B	X	X	X	X	I	B	A	B	A	A	A	I	T
Dilauryl Ether	100	A	I	B	X	I	B	I	I	A	B	A	I	I		TB
Dimethyl Amine	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														
Dimethyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	A	I	I	TV
Dimethyl Ether	100	A	X	B	X	I	B	I	X	B	B	A	I	I	I	TB
Dimethyl Ketone	100	A	A	X	B	X	X	A	A	B	A	A	A	A	I	T
Dimethyl Phenol	100	A	X	X	X	A	X	I	X	A	A	A	I	I	I	TV
Dimethyl Phthalate	100	A	A	X	X	X	X	A	B	A	A	A	A	I	I	TV
Dimethyl Sulfate	100	A	B	X	X	X	X	A	I	A	A	A	I	I	I	T
Dimethyl Sulfide	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives

Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing

Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge

Washdown

WELDING

COUPLING SYSTEMS

# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING					
	Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing	ExtremeFlex™ Brown	Purple Flexwing	ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
	UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket			

### D

### HOSE TUBE POLYMER

### METAL

Dimethyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	I	TBNS
Dinitrobenzene	100	A	X	X	X	A	X	I	I	A	B	A	I	I	I	I	TV
Diocetyl Adipate	100	A	A	X	X	X	X	X	B	A	I	A	I	I	I	I	T
Diocetyl Amine	100	A	A	X	B	I	B	I	I	A	B	A	I	I	I	I	T
Diocetyl Phthalate	100	A	B	X	X	A	X	X	X	A	A	A	A	I	I	I	TV
Diocetyl Sebacate	100	A	A	X	X	X	X	X	B	A	I	A	I	I	I	I	TV
Dioxane	100	A	B	X	X	X	X	B	X	A	A	A	A	I	I	I	T
Dioxolane	100	A	X	X	X	I	X	B	X	A	B	A	I	I	I	I	T
Diphenyl Phthalate	100	A	A	X	X	X	X	I	I	A	A	A	I	I	I	I	T
Dipropyl Ketone	100	A	B	X	X	X	X	X	I	A	A	A	I	I	I	I	T
Dipropylamine	100	A	A	X	B	I	B	B	I	A	A	A	I	I	I	I	T
Dipropylene Glycol	100	A	A	A	A	A	A	A	I	A	A	A	I	I	I	I	TVB
Disodium Phosphophate	100	A	A	A	A	I	A	A	I	A	A	A	A	I	B	I	TB
Divinyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	I	TV
Dodecyl Benzene	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	I	TV
Dodecyl Toluene	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	I	TV
Dow-Per	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	I	TV
Dowtherm® A	100	A	I	X	X	A	X	X	X	A	A	A	I	A	I	I	TV
Dowtherm® E	100	A	X	X	X	A	X	X	X	A	A	I	I	X	I	I	V
Dowtherm® SR-1	100	A	A	A	A	A	A	I	I	A	A	A	I	I	I	I	TVB

### E

Endolene	100	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Epichlorohydrin	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ethanol	100	A	A	A	A	B	A	A	A	A	A	A	A	B	A	I	TBN
Ethanol Amine	100	A	A	B	B	I	B	A	B	A	B	A	A	B	I	I	TB
Ethyl Acetate	100	A	B	X	X	X	X	B	A	A	A	A	A	A	A	I	T
Ethyl Acetoacetate	100	A	B	X	X	X	X	A	B	A	A	A	B	I	I	I	T
Ethyl Acrylate	100	A	X	X	X	X	X	B	X	B	B	A	A	A	A	I	T
Ethyl Alcohol	100	A	A	A	A	A	A	A	A	A	A	A	A	B	A	I	TVBNS
Ethyl Aldehyde	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ethyl Aluminum Dichloride	100	X	X	X	X	B	X	I	X	B	I	A	I	I	I	I	TV
Ethyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	A	A	X	I	TV
Ethyl Butanol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	I	TB

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE													FITTING		
A = May be used for Continuous Service																	
B = May be used for Intermittent Service																	
I = Insufficient data, contact customer services																	
X = Do not use																	
GASKET		Temperature (°F)	HOSE TUBE POLYMER													METAL	
T = Teflon®	V = Viton®		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket
B = Nitrile	N = Neoprene																
S = Silicone																	
E																	
Ethyl Butyl Acetate	100	A	A	B	X	X	X	I	I	A	B	A	I	I	I	T	
Ethyl Butyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB	
Ethyl Butyl Amine	100	A	A	X	B	I	B	I	I	I	I	A	I	I	I	TB	
Ethyl Butyl Ketone	100	A	B	X	X	X	X	X	I	A	A	A	I	I	I	T	
Ethyl Butyraldehyde	100	A	B	X	X	X	X	X	I	A	B	A	I	I	I	T	
Ethyl Chloride	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ethyl Dichloride	100	B	X	X	X	B	X	X	X	B	B	A	I	I	I	TV	
Ethyl Ether	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ethyl Formate	100	A	B	X	X	X	X	A	B	A	A	A	A	I	I	TV	
Ethyl Hexanol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TBN	
Ethyl Hexoic Acid	100	A	X	B	X	I	X	I	I	A	A	A	I	I	I	T	
Ethyl Hexyl Acetate	100	A	A	B	X	X	X	I	I	A	B	A	I	I	I	T	
Ethyl Hexyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TBN	
Ethyl Iodide	100	X	X	X	X	B	X	X	X	B	B	A	I	I	I	TV	
Ethyl Isobutyl Ether	100	A	X	B	X	I	B	I	X	A	B	A	I	I	I	T	
Ethyl Methyl Ketone	100	A	B	X	X	X	X	I	I	A	A	A	A	A	A	T	
Ethyl Oxalate	100	A	A	X	A	I	X	A	X	A	B	A	I	I	I	TV	
Ethyl Phthalate	100	A	A	X	X	X	X	B	I	A	I	A	I	I	I	T	
Ethyl Propyl Ether	100	A	X	B	X	I	B	A	X	A	B	A	I	I	I	TB	
Ethyl Propyl Ketone	100	A	B	X	X	X	X	I	I	A	A	A	I	I	I	T	
Ethyl Silicate	100	A	A	I	X	I	A	A	I	A	A	A	A	I	I	TBN	
Ethyl Sulfate	100	A	B	X	X	X	X	A	I	A	A	A	X	I	I	TBS	
Ethylamine	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ethylene Bromide	100	X	X	X	X	B	X	I	X	B	B	A	A	X	I	TV	
Ethylene Chloride	100	B	X	X	X	B	X	I	X	B	B	A	A	B	I	TV	
Ethylene Diamine	100	A	A	X	B	I	B	I	B	A	I	A	A	I	I	TB	
Ethylene Dibromide	100	X	X	X	X	B	X	I	X	B	B	A	A	X	I	TV	
Ethylene Dichloride	100	B	X	X	X	B	X	X	X	B	A	A	A	B	I	TV	
Ethylene Glycol	150	A	A	A	A	A	A	A	A	A	A	A	A	A	I	TVBNS	
Ethylhexil Phosphorodieth	100	I	X	X	I	I	A	A	X	X	I	I	I	I	I	B	
Ex-Tri	100	A	X	X	X	A	X	I	I	A	B	A	I	I	I	TV	

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER												METAL			
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing, ExtremeFlex™ Brown	Purple Flexwing, ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Castel	
<b>F</b>																	
Ferric Bromide	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Ferric Chloride	150	A	A	A	A	A	A	A	A	A	A	A	X	X	X	TVBNS	
Ferric Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN	
Ferrous Acetate	100	A	A	A	X	X	X	I	I	A	A	A	I	I	I	T	
Ferrous Chloride	150	A	A	A	A	B	A	A	A	A	A	A	I	X	X	T B	
Ferrous Hydroxide	100	A	A	B	A	X	B	I	I	A	A	A	B	I	I	T N	
Ferrous Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	B	X	X	TVBN	
Fluoboric Acid 65%	150	B	A	A	A	I	I	A	I	I	A	A	I	I	X	T N	
Fluorine (wet)	100	X	X	X	X	X	X	X	X	X	X	B	X	X	X	T	
Fluosilicic Acid 50%	150	B	A	A	A	I	I	A	I	I	A	A	A	X	X	T N	
Formaldehyde 40%	100	A	A	A	B	B	A	A	A	A	A	A	A	B	I	T B	
Formalin	100	A	A	A	B	A	A	A	A	A	A	A	A	B	I	TVB	
Formic Acid	100	A	A	X	B	X	X	A	A	B	A	A	B	I	X	T V	
Freon® 12	100	A	X	X	X	B	B	I	X	B	X	A	A	I	I	T N	
Freon® 22	100	A	X	X	X	X	X	I	I	B	X	A	A	I	I	T N	
Fuel A (ASTM)	100	B	X	X	X	A	A	I	X	B	B	A	A	A	A	TVB	
Fuel B (ASTM)	100	B	X	X	X	A	A	I	X	B	B	A	I	I	I	TVB	
Fuel Oil	100	A	X	X	X	A	A	X	X	B	B	A	A	A	I	TVB	
Furfural	100	A	A	I	I	X	X	A	B	A	A	A	A	A	X	T	
Furfuryl Alcohol	100	A	X	I	I	X	I	A	I	A	A	A	A	A	I	T	
<b>G</b>																	
Gallic Acid	100	A	B	I	A	I	I	A	B	I	B	A	B	I	I	T S	
Gasoline	100	B	X	X	X	A	A	B	X	B	B	A	A	I	I	TVB	
Glacial Acetic Acid	100	A	B	X	X	X	X	B	A	A	A	A	A	B	X	T	
Gluconic Acid	100	A	X	B	X	I	X	A	I	A	A	A	X	X	A	T	
Glycerin	100	A	A	A	A	A	A	A	A	B	A	A	A	A	A	TVBNS	
Glyphosate	100	A	I	I	I	I	I	I	A	I	I	I	I	I	I	I	
Graffinite	100	I	X	X	X	X	A	A	X	X	I	I	I	I	I	B	
Grease	100	A	X	X	X	A	A	I	X	B	A	A	A	A	A	TVB	
Green Sulfate Liquor	150	A	A	A	A	I	A	A	A	A	A	A	A	X	X	TBS	
<b>H</b>																	
Heptanal	100	A	X	X	X	X	X	X	I	A	I	A	I	I	I	T B	
Heptane	100	A	X	X	X	A	A	A	X	B	B	A	A	A	I	TVB	

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

H	Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING			
		HOSE TUBE POLYMER												METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Basket	
Heptane Carboxylic Acid	100	A	X	B	X	A	X	A	I	A	A	A	I	I	I	T	V
Hexaldehyde	100	A	X	X	X	X	X	I	X	A	B	A	A	A	I	T	
Hexane	100	B	X	X	X	A	A	B	X	B	B	A	A	A	A	TVB	
Hexanol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	T	B
Hexyl Methyl Ketone	100	A	B	X	X	X	X	I	I	A	A	A	I	I	I	T	
Hexylamine	100	A	B	X	X	X	X	B	I	A	B	A	I	I	I	T	
Hexylene	100	X	X	X	X	A	A	I	X	X	I	A	I	I	I	TVB	
Hexylene Glycol	150	A	A	A	A	A	A	A	I	A	A	A	A	B	A	TVBN	
Hexyl-Alcohol	100	A	A	A	A	B	A	A	X	A	A	A	A	I	I	T	B
Hi-Tri	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	T	V
Hydrobromic Acid (37%)	150	B	A	A	A	I	X	A	A	I	A	A	X	X	X	T	N
Hydrochloric Acid 38% concentrated, fuming acid	125	A	B	X	I	I	X	X	I	A	I	A	X	X	X	T	
Hydrochloric Acid 37%	125	A	B	A	B	X	X	A	B	A	A	A	X	X	X	T	
Hydrofluoric Acid (10%)	125	A	A	A	X	I	X	A	I	A	A	A	A	X	X	T	N
Hydrofluosilicic Acid	150	B	B	A	A	I	I	A	A	I	A	A	A	X	X	T	
Hydrogen Dioxide 10%	100	B	X	X	X	A	X	I	I	I	I	A	A	B	X	T	V
Hydrogen Dioxide over 10%	100	B	X	X	X	I	X	I	X	I	I	A	I	I	X	T	
Hydrogen Gas	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Hydrogen Peroxide 10% to 50%	100	B	X	X	X	A	X	A	I	I	I	A	I	B	I	TVS	
Hydrogen Peroxide over 50%	100	X	X	X	X	X	X	X	X	X	I	A	A	I	X	T	
Iodine	100	A	I	A	I	I	I	A	I	B	I	A	I	I	X	TVB	
Iron Acetate	100	A	A	A	X	X	X	I	I	A	A	A	I	I	I	TNS	
Iron Hydroxide	100	A	A	B	X	X	B	I	I	A	A	A	I	I	I	T	N
Iron Salts	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN	
Iron Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN	
Iron Sulfide	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Isoamyl Acetate	100	A	A	B	X	X	X	I	X	A	B	A	I	I	I	T	
Isoamyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	A	T	B
Isoamyl Bromide	100	B	X	X	X	B	X	I	X	B	I	A	I	I	I	T	V
Isoamyl Butyrate	100	B	X	X	X	X	X	I	I	B	B	A	I	I	I	T	
Isoamyl Chloride	100	X	X	X	X	B	X	I	I	X	B	A	I	I	I	T	V

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER												METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Castel	
Isoamyl Ether	100	A	X	B	X	I	B	I	X	A	I	A	I	I	I	T	
Isoamyl Phthalate	100	A	A	X	X	X	X	I	I	A	I	A	I	I	I	T	
Isobutane	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Isobutanol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBNS	
Isobutyl Acetate	100	A	A	B	X	X	X	B	X	A	B	A	A	B	I	T	
Isobutyl Alcohol	100	A	A	A	A	B	X	A	A	A	A	A	A	I	I	TNS	
Isobutyl Aldehyde	100	A	B	X	X	X	X	B	I	A	B	A	I	I	I	T	
Isobutyl Amine	100	A	B	X	X	X	X	I	I	A	B	A	I	I	I	T	
Isobutyl Bromide	100	B	X	X	X	B	X	I	X	X	I	A	I	I	I	TV	
Isobutyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	A	TBN	
Isobutyl Chloride	100	B	X	X	X	B	X	I	X	X	I	A	I	I	I	TV	
Isobutyl Ether	100	A	X	B	X	I	X	I	X	A	I	A	I	I	I	TB	
Isobutylene	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	TV	
Isooctane	100	B	X	X	X	A	A	I	X	B	B	A	A	A	A	TVBS	
Isopentane	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Isophorone	100	B	A	I	I	I	X	I	A	B	B	A	B	A	I	T	
Isopropanol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TVBS	
Isopropanol Amine	100	A	A	X	B	X	B	I	I	A	B	A	I	I	I	TB	
Isopropyl Acetate	100	A	A	X	X	X	X	B	X	A	A	A	A	I	I	T	
Isopropyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TBNS	
Isopropyl Amine	100	A	B	X	X	X	X	I	I	A	B	A	I	I	I	T	
Isopropyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	I	I	I	TV	
Isopropyl Chloride	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Isopropyl Ether	100	A	X	B	X	I	X	I	X	A	B	A	A	I	I	TB	
Isopropyl Toluene	100	A	X	X	X	A	X	I	X	A	I	A	I	I	I	TV	
J																	
Jet Fuels	---	SPECIAL HOSE REQUIRED															
K																	
Kerosene	100	A	X	X	X	A	A	A	X	A	A	A	A	A	I	TVB	
L																	
Lauryl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB	
Lead Acetate	100	A	A	X	X	X	X	A	B	A	A	A	A	X	X	T	

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE													FITTING		
A = May be used for Continuous Service																	
B = May be used for Intermittent Service																	
I = Insufficient data, contact customer services																	
X = Do not use																	
GASKET		Temperature (°F)	HOSE TUBE POLYMER													METAL	
T = Teflon®	V = Viton®		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket
B = Nitrile	N = Neoprene																
S = Silicone																	
L																	
Lead Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN	
Ligroin	100	A	X	X	X	A	A	I	X	A	B	A	A	A	I	TVB	
Linseed Oil	100	A	A	B	X	A	A	A	B	I	A	A	A	I	A	TVBNS	
Liquefied Natural Gas (LNG)	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Liquefied Petroleum Gas (LPG)	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Lubricating Oils	100	A	X	X	X	A	A	I	X	A	I	A	A	A	A	TVB	
M																	
MIBK	100	A	X	X	X	X	X	X	X	A	B	A	X	X	X	T	
M.E.K.	100	A	X	X	X	X	X	X	X	A	B	A	X	X	X	T	
Magnesium Acetate	100	A	A	A	X	X	X	A	I	A	A	A	I	I	I	T	
Magnesium Chloride	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBS	
Magnesium Hydrate	150	A	A	B	A	B	B	I	I	A	A	A	A	X	I	TN	
Magnesium Hydroxide	150	A	A	B	A	B	B	A	A	A	A	A	A	X	I	TVBN	
Magnesium Sulfate	150	A	A	A	A	A	A	A	B	A	A	A	A	I	I	TVBNS	
Maleic Acid	100	A	X	X	X	I	X	I	I	B	I	A	A	B	X	TV	
Malic Acid	150	B	I	A	A	I	I	I	I	I	I	A	A	B	X	TVBNS	
Manganese Sulfate	150	A	A	A	X	A	A	A	A	A	A	A	A	I	I	TVBN	
Manganese Sulfide	150	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVB	
Manganese Sulfite	150	A	A	A	X	A	A	A	A	A	A	A	I	I	I	TVB	
Methanol	100	A	A	A	A	X	A	A	A	A	A	A	A	I	I	TB	
Mesityl Oxide	100	A	B	X	X	X	X	B	X	A	B	A	A	I	I	T	
Methyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB	
Methyl (Wood) Alcohol	100	A	A	A	A	X	A	A	A	A	A	A	A	I	I	TBNS	
Methyl Acetate	100	A	A	B	X	X	X	A	A	A	A	A	A	I	I	T	
Methyl Acetoacetate	100	A	B	X	X	X	X	A	I	A	A	A	I	I	I	T	
Methyl Acetone	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Methyl Amyl Acetate	100	B	A	B	X	X	X	I	X	A	B	A	I	I	I	T	
Methyl Amyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TBN	
Methyl Amyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB	
Methyl Amyl Ketone	100	A	B	X	X	X	X	X	I	A	B	A	I	I	I	T	
Methyl Benzene	100	A	X	X	X	A	X	X	X	A	B	A	A	A	A	TV	
Methyl Butanol	100	A	A	A	A	B	A	A	I	A	A	A	A	I	A	TBN	

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING

Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling

Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS





# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### M

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

Temperature (°F)	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING			
	Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing, ExtremeFlex™ Brown	Purple Flexwing, ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
	UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
	HOSE TUBE POLYMER											METAL				

Methyl Butanone	100	A	B	X	X	X	X	B	B	A	B	A	I	I	I	T
Methyl Butyl Ketone	100	A	B	X	X	X	X	X	I	A	B	A	A	B	I	T
Methyl Carbitol	100	A	A	A	X	I	X	A	I	A	A	A	I	I	I	T
Methyl Cellosolve	100	A	A	A	X	I	X	A	A	A	A	A	A	B	A	T
Methyl Chloride	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														
Methyl Cyclohexane	100	A	X	X	X	B	X	B	X	B	I	A	I	I	I	TV
Methyl Ethyl Ketone (M.E.K.)	100	A	X	X	X	X	X	X	X	A	B	A	X	X	X	T
Methyl Hexanol	100	A	A	A	B	A	A	A	A	A	A	A	I	I	I	TVB
Methyl Hexanone	100	A	B	X	X	X	X	X	I	A	B	A	I	I	I	T
Methyl Hexyl Ketone	100	A	B	X	X	X	X	X	I	A	B	A	I	I	I	T
Methyl Isobutyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	B	I	I	TBN
Methyl Isobutyl Ketone (MIBK)	100	A	X	X	X	X	X	X	X	A	B	A	X	X	X	T
Methyl Isopropyl Ketone	100	A	B	X	X	X	X	B	B	A	B	A	A	I	I	T
Methyl Normal Amyl Ketone	100	A	B	X	X	X	X	I	I	A	B	A	I	I	I	T
Methyl Propyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB
Methyl Propyl Ether	100	A	X	B	X	I	X	I	X	A	B	A	I	I	I	T
Methyl Propyl Ketone	100	A	B	X	X	X	X	B	I	A	B	A	I	I	I	T
Methyl Tertiary Butyl Ether (MTBE) 100% Concentratel	100	X	X	X	X	X	X	X	X	A	B	I	I	I	I	I
Methylallyl Acetate	100	A	A	B	X	X	X	I	A	A	A	A	I	I	I	T
Methylallyl Chloride	100	A	X	X	X	X	X	X	I	B	I	A	I	I	I	T
Methyldiethanolamine	100	A	X	X	X	X	A	A	X	A	A	A	I	I	I	TB
Methylene Bromide	100	B	X	X	X	B	X	I	X	B	A	A	I	I	I	TV
Methylene Chloride	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														
Metribuzin	100	A	I	I	I	I	I	I	A	I	I	A	I	I	I	T
Mineral Spirits	100	A	X	X	X	B	A	I	X	A	B	A	A	A	I	TB
Monochloroacetic Acid	100	A	X	X	B	I	X	A	X	A	A	A	A	X	X	T
Monochlorobenzene	100	B	X	X	X	A	X	X	X	B	B	A	A	B	B	TV
Monochlorodifluoromethane	100	I	X	X	X	X	X	I	I	I	I	A	A	I	I	TN
Monoethanol Amine	100	A	A	X	B	I	B	A	B	A	B	A	A	B	I	TN
Monoethyl Amine	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														
Monoisopropanol Amine	100	A	A	X	B	I	B	I	I	A	B	A	I	I	I	TB
Muriatic Acid	125	A	X	X	A	I	X	A	X	A	A	A	X	X	X	T

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING		
A = May be used for Continuous Service		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket
B = May be used for Intermittent Service		HOSE TUBE POLYMER												METAL		
I = Insufficient data, contact customer services		HOSE TUBE POLYMER												METAL		
X = Do not use		HOSE TUBE POLYMER												METAL		
GASKET		HOSE TUBE POLYMER												METAL		
T = Teflon®	V = Viton®	HOSE TUBE POLYMER												METAL		
B = Nitrile	N = Neoprene	HOSE TUBE POLYMER												METAL		
S = Silicone		HOSE TUBE POLYMER												METAL		
N		HOSE TUBE POLYMER												METAL		
N/Methylpyrrolidone	100	A	X	X	X	X	X	X	X	A	I	A	I	I	I	T
Naphtha	100	A	X	X	X	A	A	A	X	A	A	A	A	A	I	TVBN
Naphthalene	100	A	X	X	X	A	X	I	X	A	I	A	A	B	I	TV
Natural Gas	---	NO HOSE RECOMMENDED FOR THIS APPLICATION														
Neohexane	100	A	X	X	X	A	A	B	X	A	B	A	A	A	I	TVB
Neu-Tri	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	TV
Nickel Chloride	150	A	A	A	A	A	A	A	A	A	A	A	B	X	X	TVBS
Nickel Nitrate	150	A	A	A	A	A	A	A	A	A	A	A	B	X	X	TVBN
Nickel Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS
Nitric Acid 25%	100	B	B	X	X	X	X	X	X	B	A	A	A	X	X	TV
Nitric Acid 37%	100	X	X	X	X	X	X	X	X	X	A	A	A	X	X	TV
Nitric Acid 40%-60%	100	X	X	X	X	X	X	X	X	X	B	A	B	X	X	TV
Nitric Acid 70%	100	X	X	X	X	X	X	X	X	X	B	A	B	X	X	T
Nitro Benzene	100	A	X	X	X	B	X	X	X	A	B	A	A	B	X	T
Nitrogen Gas	100	A	A	A	A	A	A	A	A	A	A	A	A	I	I	TVBNS
Nitrous Oxide	100	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS
Nonenes	100	A	X	X	X	A	A	I	X	A	B	A	I	I	I	V B
O		HOSE TUBE POLYMER												METAL		
Octadecanoic Acid	100	A	B	X	X	I	A	A	B	A	A	A	A	B	A	T B
Octane	100	B	X	X	X	A	A	A	X	B	B	A	B	I	B	TVB
Octanol	100	A	A	A	A	B	A	A	X	A	A	A	A	I	I	TBN
Octyl Acetate	100	A	A	A	X	X	X	X	I	A	B	A	I	I	I	T
Octyl Alcohol	100	A	A	A	A	B	A	A	X	A	A	A	A	I	I	T B
Octyl Aldehyde	100	A	X	X	X	X	X	I	I	A	I	A	I	I	I	T
Octyl Amine	100	A	B	X	X	X	X	B	I	A	B	A	I	I	I	T
Octyl Carbinol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	T B
Octylene Glycol	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB
Oil Petroleum	100	B	X	X	X	A	A	A	X	A	B	A	A	A	X	TVB
Oleic Acid	100	A	B	X	X	I	B	A	X	A	B	A	A	B	X	T B
Oleum	100	X	X	X	X	X	X	X	X	X	X	A	I	X	X	TV
Organic Fatty Acids	100	A	X	X	X	X	A	A	X	A	B	A	A	I	I	T B
Orthodichlorobenzene	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	TV

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING

Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling

Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING

Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling

Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX

	RATING SCALE	GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE											FITTING				
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing, ExtremeFlex™ Brown	Purple Flexwing, ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
	GASKET	HOSE TUBE POLYMER											METAL				
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
	<b>A</b> = May be used for Continuous Service																
	<b>B</b> = May be used for Intermittent Service																
	<b>I</b> = Insufficient data, contact customer services																
	<b>X</b> = Do not use																
	<b>T</b> = Teflon® <b>V</b> = Viton®																
	<b>B</b> = Nitrile <b>N</b> = Neoprene																
	<b>S</b> = Silicone																
	<b>O</b>																
Orthodichlorobenzol	100	A	X	X	X	A	X	I	X	A	I	A	I	I	I	TV	
Orthoxylene	100	B	X	X	X	A	X	I	X	A	B	A	I	I	I	TV	
Oxalic Acid	100	A	A	X	X	I	X	A	B	I	B	A	A	B	X	TS	
Oxygen	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Ozone	100	A	B	B	X	I	X	A	A	I	B	A	I	I	I	TS	
	<b>P</b>																
Palmitic Acid	100	A	A	B	X	I	A	A	B	B	B	A	A	I	X	TBS	
Papermakers Alum	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN	
Paradichlorobenzol	100	B	X	X	X	A	X	I	X	A	I	A	I	I	I	TV	
Paraffin	150	A	B	X	X	A	A	A	X	X	I	A	A	A	A	TVB	
Paraldehyde	100	A	B	X	X	X	X	I	B	A	B	A	A	A	I	T	
Paraxylene	100	A	X	X	X	A	X	I	X	A	B	A	I	I	I	TV	
Pelargonic Acid	100	A	A	X	X	I	A	I	I	A	I	A	I	I	I	TB	
Pentachloroethane	100	A	X	X	X	A	X	I	X	A	I	A	A	B	X	TV	
Pentane	---	NO HOSE RECOMMENDED FOR THIS APPLICATION															
Pentanol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TBN	
Pentanone	100	A	B	X	X	X	X	B	I	A	B	A	I	I	I	T	
Perchloroethylene	100	B	X	X	X	A	X	X	X	A	B	A	A	B	X	TV	
Petroleum Ether (Ligroin)	100	A	X	X	X	A	A	A	X	A	B	A	A	A	I	TVB	
Petroleum - Crude	100	A	X	X	X	A	A	A	X	A	B	A	A	A	X	TVB	
Petroleum Oils	100	A	X	X	X	A	A	A	X	A	B	A	A	A	X	TVB	
Phenol	125	A	A	X	X	A	X	A	X	A	B	A	A	B	B	TV	
Phenolsulfonic Acid	100	X	X	X	X	X	X	A	I	B	B	A	B	I	I	T	
Phenyl Chloride	100	A	X	X	X	A	X	X	X	A	B	A	A	B	I	TV	
Phosphoric Acid 10%	150	A	A	A	A	X	A	A	A	A	A	A	A	X	X	TVBN	
Phosphoric Acid 10-85%	100	A	A	A	B	X	X	A	A	A	A	A	A	X	I	TVN	
Pine Oil	100	A	X	X	X	A	X	B	X	A	B	A	A	I	X	TV	
Pinene	100	A	X	X	X	A	B	B	X	A	B	A	B	I	I	TV	
Polyethylene Glycol	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN	
Polypropylene Glycol	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB	
Potassium Acetate	100	A	A	B	X	X	X	A	B	A	A	A	A	X	X	TB	
Potassium Bisulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBN	
Potassium Bisulfite	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBN	



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE													FITTING		
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing, ExtremeFlex™ Brown	Purple Flexwing, ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
GASKET		Temperature (°F)	HOSE TUBE POLYMER											METAL			
T = Teflon®	V = Viton®		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket
P																	
Potassium Carbonate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN S	
Potassium Chloride	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Potassium Chromate	150	B	A	X	I	I	I	A	I	B	B	A	B	I	I	TVBN	
Potassium Dichromate	150	B	A	X	I	I	I	A	I	B	B	A	A	B	X	TVBNS	
Potassium Hydrate	150	A	A	B	A	X	B	A	B	A	A	A	A	X	I	T S	
Potassium Hydroxide	150	B	A	B	A	X	B	A	B	A	A	A	A	X	X	T N	
Potassium Nitrate	150	A	A	A	A	A	A	A	A	A	A	A	A	B	A	TVBNS	
Potassium Permanganate	100	A	A	A	A	A	B	I	I	A	A	A	A	I	I	TVS	
Potassium Silicate	150	A	A	A	A	A	A	A	A	A	A	A	A	I	I	TVBNS	
Potassium Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	B	A	TVBNS	
Potassium Sulfide	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Potassium Sulfite	150	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS	
Propanediol	100	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVBS	
Propane Gas	---	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Propanol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	TVB	
Propyl Acetate	100	A	A	B	X	X	X	B	X	A	B	A	A	I	I	T	
Propyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	A	I	I	T B	
Propyl Aldehyde	100	A	B	X	X	X	X	X	I	A	B	A	I	I	I	T	
Propyl Chloride	---	<b>NO HOSE RECOMMENDED FOR THIS APPLICATION</b>															
Propylene Diamine	100	A	A	X	B	I	B	A	I	A	I	A	I	I	I	T B	
Propylene Dichloride	100	B	X	X	X	B	X	X	X	B	I	A	A	X	I	T V	
Propylene Glycol	100	A	A	A	A	A	A	A	A	A	A	A	A	I	I	TVBS	
Propylene Tetramer	100	A	X	X	X	X	A	A	X	A	B	I	I	I	I	B	
<b>S</b>																	
Sea Water	100	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS	
Sewage	100	A	X	A	X	I	A	A	A	A	A	A	A	X	I	TBNS	
Silicate of Soda	100	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Soap	100	A	X	X	X	X	A	A	X	X	I	A	A	X	X	TBNS	
Soda Ash	100	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBNS	
Soda, Caustic	100	A	A	B	A	X	B	A	A	A	A	A	A	X	X	TNS	
Soda, Lime	100	A	A	B	A	X	B	A	A	A	A	A	I	I	I	TVB	
Soda, Niter	100	A	A	A	A	A	A	A	B	A	A	A	A	B	I	TVB	
Sodium Acetate	100	A	A	A	X	X	X	A	B	B	B	A	A	I	A	TNS	

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives

Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing

Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile        **N** = Neoprene
- S** = Silicone

### S

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER												METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket	
Sodium Aluminate	100	A	A	A	A	A	A	A	A	A	A	A	A	I	I	TVBN	
Sodium Bisulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Sodium Bisulfite	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Sodium Carbonate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBNS	
Sodium Chloride (Brine)	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBNS	
Sodium Chromate	150	X	A	X	I	I	I	A	I	X	I	A	A	A	A	TVBN	
Sodium Dichromate	150	A	A	X	I	I	I	A	A	A	A	A	A	I	X	T	
Sodium Hydrate	150	A	A	B	A	X	B	A	A	A	A	A	B	X	X	T N	
Sodium Hydrosulfide	100	A	X	X	X	X	A	A	X	A	I	A	I	B	I	T B	
Sodium Hydroxide (50%)	150	A	A	B	A	X	B	A	A	A	A	A	A	X	X	TBN	
Sodium Hypochlorite	100	B	B	X	X	B	X	A	A	X	B	A	X	X	X	TVS	
Sodium Nitrate	150	A	A	A	A	A	A	A	B	A	A	A	A	B	I	TVBNS	
Sodium Silicate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS	
Sodium Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	B	X	TVBNS	
Sodium Sulfide	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBN	
Sodium Sulfite	150	A	A	A	A	A	A	A	B	A	A	A	A	I	I	TVBNS	
Sodium Sulphydrate	100	A	X	X	X	X	A	A	X	A	B	A	I	I	I	T B	
Sodium Thiosulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	I	X	TVBNS	
Stannic Chloride	150	A	A	A	A	I	A	A	A	A	A	A	X	X	X	T B	
Stannic Sulfide	150	A	A	A	A	I	A	A	A	A	A	A	I	I	I	TBN	
Stannous Chloride	150	A	A	A	A	I	A	A	B	A	A	A	A	X	X	T B	
Stannous Sulfide	150	A	A	A	A	I	A	A	A	A	A	A	I	I	I	T B	
Stearic Acid	100	A	B	X	X	I	A	A	B	A	A	A	A	B	A	TVB	
Stoddard Solvent	100	A	X	X	X	A	A	A	X	A	B	A	A	A	I	TVB	
Styrene	100	B	X	X	X	A	X	X	X	X	I	A	A	I	I	T V	
Sulfamic Acid (>10%)	100	X	A	B	B	I	B	A	I	I	I	A	I	I	I	TVN	
Sulfonic Acid	100	B	X	X	X	X	X	I	I	B	I	A	I	I	I	TVN	
Sulfur Dioxide (Liquid)	100	B	B	B	I	X	I	I	I	X	I	A	A	I	I	T N	
Sulfuric Acid 25%	150	A	A	B	B	I	X	A	A	A	A	A	I	X	X	TVN	
Sulfuric Acid 93%	100	X	X	B	X	B	X	X	B	A	A	A	I	X	X	T V	
Sulfuric Acid 93-98%	100	X	X	X	X	B	X	X	X	I	B	A	I	X	X	T V	
Sulfuric Acid Fuming	100	X	X	X	X	X	X	X	X	X	X	A	I	X	X	T	

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

RATING SCALE		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE													FITTING					
A = May be used for Continuous Service		Temperature (°F)	Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing	ExtremeFlex™ Brown	Purple Flexwing	ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
B = May be used for Intermittent Service			UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Elasto			
I = Insufficient data, contact customer services		HOSE TUBE POLYMER													METAL					
X = Do not use																				
GASKET																				
T = Teflon®																				
V = Viton®																				
B = Nitrile																				
N = Neoprene																				
S = Silicone																				
<b>S</b>																				
Sulfurous Acid 10%	150	A	A	A	A	I	X	A	A	A	A	A	A	I	X	X	T			
Sulfurous Acid 10-75%	100	A	A	A	A	I	X	A	A	A	A	A	A	I	X	X	T			
Sulphonate	100	I	X	X	X	X	A	A	X	X	I	I	I	I	I	I	B			
<b>T</b>																				
Tall Oil	100	A	X	X	X	A	A	I	X	I	I	A	A	X	X	TVB				
Tallow	150	A	X	X	X	I	A	A	X	I	I	A	A	I	A	TBNS				
Tannic Acid	150	A	A	A	A	I	B	A	X	I	I	A	A	X	I	TVBN				
Tar	---	SPECIAL HOSE REQUIRED													A	A	I	I		
Tartaric Acid	150	A	A	A	A	I	A	A	A	A	A	A	A	A	I	A	TBN			
Tergitol	100	X	I	I	I	I	I	I	I	I	I	A	I	I	I	T				
Tertiary Butyl Alcohol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB				
Tetrachlorobenzene	100	B	X	X	X	B	X	I	X	B	I	A	I	I	I	T				
Tetrachloroethane	100	A	X	X	X	A	X	I	X	X	I	A	A	X	X	TV				
Tetrachloroethylene	100	A	X	X	X	A	X	X	X	A	B	A	A	B	X	TV				
Tetrachloromethane	100	A	X	X	X	A	X	X	X	X	B	A	A	I	I	TV				
Tetrachloronaphthalene	100	B	X	X	X	B	X	I	X	X	I	A	I	I	I	T				
Tetradecanol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB				
Tetraethylene Glycol	150	A	A	A	A	A	A	A	A	A	A	A	I	I	I	TVB				
Tetraethylene Lead	100	X	X	X	X	A	X	X	X	X	I	A	I	I	I	TV				
Tetrahydrofuran	100	B	X	X	X	X	X	X	X	B	X	A	A	B	X	T				
THF	100	B	X	X	X	X	X	X	X	B	X	A	A	B	X	T				
Thionyl Chloride	100	X	I	I	I	I	I	I	I	I	X	A	X	X	X	T				
Tin Chloride	100	A	A	A	A	I	A	A	A	A	A	A	X	X	X	TVB				
Tin Tetrachloride	150	B	A	A	A	I	A	A	A	A	A	A	X	X	X	TB				
Titanium Tetrachloride	100	B	X	X	X	A	B	X	X	A	B	A	B	X	X	TV				
Toluene	100	A	X	X	X	A	X	X	X	B	B	A	A	A	A	TV				
Toluidine	100	X	I	I	I	I	I	I	I	I	I	A	I	I	I	T				
Toluol	100	A	X	X	X	A	X	X	X	A	B	A	A	A	A	TV				
Transformer Oil	100	X	I	I	I	I	I	I	I	I	I	A	A	I	I	T				
Transmission Oil "A"	150	B	X	X	X	A	A	I	X	I	I	A	A	A	A	TVB				
Tributoxy Ethylsulphate	100	I	A	X	X	A	X	X	A	X	I	I	I	I	I	V				
Tributyl Amine	100	A	A	X	B	I	B	A	I	A	A	A	I	I	I	T				
Tributyl Phosphate	100	A	A	X	X	X	X	X	X	A	I	A	A	I	X	T				

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives

Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

### RATING SCALE

- A** = May be used for Continuous Service
- B** = May be used for Intermittent Service
- I** = Insufficient data, contact customer services
- X** = Do not use

### GASKET

- T** = Teflon®      **V** = Viton®
- B** = Nitrile      **N** = Neoprene
- S** = Silicone

### GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE

### FITTING

Temperature (°F)

	Temperature (°F)	HOSE TUBE POLYMER											METAL			
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Telion®	316 SS	Aluminum	Brass	Gasket
<b>T</b>																
Trichlorobenzene	100	B	X	X	X	B	X	X	X	B	I	A	I	A	I	T
Trichloroethane	100	A	X	X	X	A	X	B	X	X	B	A	A	I	I	TV
Trichloroethylene	100	X	X	X	X	A	X	X	X	X	B	A	A	I	I	TV
Trichloropropane	100	A	X	X	X	A	X	I	X	A	I	A	A	X	I	TV
Tricresylphosphate	100	A	A	X	X	A	X	A	A	A	I	A	A	X	I	TV
Tridecanol	100	A	A	A	A	B	A	A	A	A	A	A	I	I	I	TB
Triethanolamine	100	A	A	X	B	X	B	A	A	A	A	A	A	I	X	TB
Triethylamine	100	A	A	X	B	I	B	A	I	A	A	A	A	I	I	TVBN
Triethylene Glycol	150	A	A	A	A	I	A	A	I	A	A	A	A	A	I	TB
Trifluralin (Trefalin)	100	A	X	X	X	A	X	X	X	A	I	A	I	I	I	TV
Triphenyl Phosphate	100	A	A	X	X	I	X	I	I	A	I	A	A	I	I	T
Tripolyphosphate	100	X	I	I	I	I	I	I	I	I	I	A	I	I	I	T
Trisodium Phosphate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	I	TVBNS
Turpentine	100	A	X	X	X	A	A	B	X	A	X	A	A	A	A	TVB
<b>U</b>																
Urea	100	A	A	I	I	I	X	A	I	A	A	A	A	B	I	TVBN
Undecanol	100	B	A	A	A	B	A	A	A	A	A	A	I	I	I	TB
<b>V</b>																
V.M. & P. Naptha	100	A	X	X	X	A	A	I	X	A	I	A	I	I	I	TVBS
Vinyl Acetate	100	A	A	B	X	X	X	A	X	A	B	A	A	I	X	TV
Vinyl Benzene	100	A	X	X	X	A	X	X	X	A	I	A	A	I	I	TV
Vinyl Chloride	---	<b>NO HOSE RECOMMENDED FOR THIS APPLICATION</b>														
Vinyl Ether	---	<b>NO HOSE RECOMMENDED FOR THIS APPLICATION</b>														
Vinyl Toluene	100	A	X	X	X	A	X	X	X	A	I	A	I	I	I	TV
Vinyl Trichloride	100	A	X	X	X	A	X	X	X	A	B	A	A	I	I	TV

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## CHEMICAL CHARTS

This chemical chart is offered as a guide only. There are many variables to be considered with each application. Ratings are for tube polymer only! For explanation of ratings see the initial page of these Chemical Charts in Appendix B. Contact customer services for chemicals or polymers not listed at 800-235-4632.

		GOODYEAR ENGINEERED PRODUCTS CHEMICAL HOSE												FITTING					
		Fabchem™	Gray Flexwing®	Yellow Flexwing	Tan Flexwing	Orange Flexwing	Flexwing Petroleum	Brown Flexwing	ExtremeFlex™ Brown	Purple Flexwing	ExtremeFlex™ Purple	Green XLPE	Blue Flexwing	Chem One™ & Viper™	HI-PER®	Insta-Lock™	Insta-Lock	Insta-Lock	Insta-Lock
		UHMWPE	Butyl	Hypalon®	NR	Viton®	Nitrile	CPE	EPDM	XLPE	Alphasyn™	Teflon®	316 SS	Aluminum	Brass	Gasket			
		HOSE TUBE POLYMER												METAL					
		Temperature (°F)																	
W		Water	180	A	A	A	A	A	A	A	A	A	A	A	A	A	I	I	TVBNS
Wax	100	A	X	X	X	X	A	A	X	X	X	A	A	I	I	TVBN			
White Oil	100	A	X	X	X	I	A	A	X	I	I	A	I	I	I	TVB			
Wood Alcohol	100	A	A	A	A	X	A	A	A	A	A	A	A	I	I	TBNS			
X		Xylene (Xylol)	100	X	X	X	X	A	X	X	A	B	A	A	I	I	T	V	
Xylidine	100	B	X	X	X	X	X	X	X	B	B	A	B	A	I	T			
Z		Zinc Carbonate	150	A	A	A	A	A	A	A	A	A	A	B	B	X	TVBN		
Zinc Chloride	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS			
Zinc Chromate	150	A	A	X	I	I	I	A	X	B	I	A	I	I	I	T			
Zinc Phosphate	100	A	X	X	X	X	A	A	A	X	I	A	I	I	I	TBNS			
Zinc Sulfate	150	A	A	A	A	A	A	A	A	A	A	A	A	X	X	TVBNS			

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives

Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

APPENDIX



# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

Thermoplastic Hose					
A	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPP/Green Hornet XF
		Acetaldehyde	70°	X	X
Acetic Acid, Conc.	70°	X	B	I	I
Acetic Acid, Dilute 10	70°	B	A	I	I
Acetic Acid, Glacial	70°	X	B	I	X
Acetic Aldehyde	70°	I	X	I	X
Acetic Anhydride	70°	X	X	X	X
Acetic Ester	70°	X	X	X	B
Acetic Ether	70°	X	X	X	I
Acetone	70°	X	X	X	B
Acetone Cyanohydrin	70°	X	X	X	I
Acetyl Acetone	70°	X	X	X	I
Acetyl Chloride	70°	X	I	X	X
Acetylene Dichloride	70°	I	X	I	X
Acetylene Tetrachloride	70°	I	X	I	I
Acrylonitrile	70°	A	A	B	I
Allyl Alcohol	70°	X	X	X	X
Allyl Bromide	70°	X	X	X	I
Allyl Chloride	70°	X	X	X	I
Alum	70°	A	A	A	B
Aluminum Acetate	70°	I	I	I	I
Aluminum Chloride	70°	A	A	A	B
Aluminum Hydroxide	70°	A	A	A	I
Aluminum Sulfate	70°	A	A	A	B
Ammonia Cupric Sulfate	70°	I	X	I	I
Ammonia Water	70°	A	A	A	A
Ammonium Chloride	70°	A	A	A	B
Ammonium Hydroxide	70°	B	B	I	B
Ammonium Nitrate	70°	A	A	A	I
Ammonium Phosphate	70°	I	I	I	B
Ammonium Sulfate	70°	A	A	A	B
Ammonium Sulfide	70°	A	A	A	I
Ammonium Sulfite	70°	A	A	A	I
Ammonium Thiosulfate	70°	A	A	I	I

Thermoplastic Hose					
A	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPP/Green Hornet XF
		Amyl Acetate	70°	X	X
Amyl Alcohol	70°	B	B	I	X
Amyl Chloride	70°	X	X	X	X
Amyl Phenol	70°	I	X	I	I
Amyl Phthalate	70°	I	X	I	I
Aniline Oils	70°	X	X	X	I
Animal Grease	70°	A	A	A	I
Animal Oils	70°	A	A	A	X
Aqua Ammonia	70°	I	B	B	I
Aromatic Tar	70°	X	X	X	I
Arsenic Acid	70°	A	A	A	I
Arsenic Chloride	70°	A	A	I	I
Arsenic Trichloride	70°	A	A	I	I
Asphalt	70°	X	X	X	X
ASTM #1 Oil	70°	A	A	A	X
ASTM #2 Oil	70°	A	A	I	X
ASTM #3 Oil	70°	A	A	B	X
B					
Barium Carbonate	70°	A	A	A	I
Barium Chloride	70°	A	A	A	I
Barium Hydroxide	70°	A	A	A	I
Barium Sulfate	70°	A	A	A	I
Barium Sulfide	70°	A	A	A	I
Benzyl Chloride	70°	I	X	I	I
Benzaldehyde	70°	X	X	X	X
Benzene (Benzol)	70°	X	X	X	X
Benzine (Ligroin)	70°	X	X	X	X
Benzine Solvent (Ligroin)	70°	X	X	X	X
Benzoic Acid	70°	B	A	A	B
Benzoic Aldehyde	70°	I	X	I	I
Benzotrithloride	70°	I	X	I	I
Benzoyl Chloride	70°	I	X	I	I
Benzyl Acetate	70°	I	X	I	I

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>B</b>					
Benzyl Chloride	70°	I	X	I	I
Bichromate of Soda	70°	I	A	I	I
Black Sulfate Liquor	70°	A	A	A	I
Bleach	70°	A	A	A	B
Brine	70°	A	A	A	B
Bromine	70°	X	X	X	X
Bromo Benzene	70°	I	X	I	X
Bromo Toluene	70°	I	X	I	I
Bromochloromethane	70°	I	X	I	X
Butanol	70°	I	X	I	B
Butyl (Normal) Alcohol	70°	I	X	X	B
Butyl (Secondary) Alcohol	70°	I	X	X	B
Butyl Acetate	70°	X	X	I	X
Butyl Acetoacetate	70°	I	X	I	I
Butyl Acrylate	70°	I	X	I	I
Butyl Alcohol	70°	A	A	A	B
Butyl Benzene	70°	I	X	I	I
Butyl Benzl Phthalate	70°	I	X	I	I
Butyl Bromide	70°	I	X	I	I
Butyl Butyrate	70°	I	X	I	I
Butyl Chloride	70°	I	X	I	I
Butyl Phthalate	70°	I	X	I	X
Butyric Acid	70°	I	X	B	I
<b>C</b>					
Cadmium Acetate	70°	I	A	I	I
Calcium Acetate	70°	I	A	I	I
Calcium Aluminate	70°	I	A	I	I
Calcium Bichromate	70°	I	A	I	I
Calcium Bisulfate	70°	I	A	B	I
Calcium Bisulfite	70°	A	A	A	I
Calcium Carbonate	70°	A	A	A	I
Calcium Chloride	70°	A	A	A	I
Calcium Hydroxide (Caustic Lime)	70°	A	A	A	I

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>C</b>					
Calcium Hypochlorite	70°	A	A	I	I
Calcium Nitrate	70°	A	A	I	I
Calcium Silicate	70°	A	A	I	I
Calcium Sulfate	70°	A	A	A	I
Calcium Sulfide	70°	A	A	I	I
Calcium Sulfite	70°	A	A	I	I
Carbolic Acid, Phenol	70°	X	X	X	X
Carbon Dioxide	70°	A	A	A	B
Carbon Disulfide	70°	X	X	X	X
Carbon Monoxide	70°	A	A	A	B
Carbon Tetrachloride	70°	X	X	X	X
Carbonic Acid	70°	I	A	A	I
Casinghead Gasoline	70°	I	X	X	X
Caster Oil (Castor Oil)	70°	A	A	A	I
Caustic Potash	70°	A	A	A	A
Caustic Soda	70°	A	A	A	B
Chlorinated Solvents	70°	I	X	I	I
Chlorine (Dry)	70°	A	A	A	B
Chlorine (Wet)	70°	B	X	I	B
Chloroacetone	70°	I	X	I	I
Chlorobenzene	70°	X	X	X	X
Chlorobutane	70°	I	X	I	I
Chloroethylbenzene	70°	I	X	I	I
Chloroform	70°	X	X	X	X
Chloropentane	70°	I	X	I	X
Chlorophenol	70°	I	X	I	I
Chloropropanone	70°	I	X	I	I
Chlorosulfonic Acid	70°	I	B	I	X
Chlorothene	70°	I	X	I	X
Chlorotoluene	70°	X	X	X	X
Chromic Acid	70°	B	B	B	B
Copper Chloride	70°	A	A	A	B
Copper Hydrate	70°	I	A	I	I

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>C</b>					
Copper Hydroxide	70°	I	A	I	I
Copper Nitrate	70°	A	A	A	I
Copper Nitrite	70°	A	A	A	I
Copper Sulfate	70°	A	A	A	I
Copper Sulfide	70°	B	A	B	I
Creosol	70°	X	X	X	X
Creosote	70°	X	X	X	X
Crude Oil	70°	B	A	B	X
Cupric Carbonate	70°	I	A	I	I
Cupric Chloride	70°	A	A	I	I
Cupric Nitrate	70°	A	A	I	I
Cupric Nitrite	70°	A	A	I	I
Cupric Sulfate	70°	A	A	A	I
Cyclohexane	70°	X	X	X	X
Cyclohexanol	70°	X	X	X	X
Cyclohexanone	70°	X	X	X	X
Cyclopentane, methyl	70°	I	A	I	I
Cyclopentanol	70°	I	A	I	I
Cyclopentanone	70°	I	A	I	I
<b>D</b>					
D.D.T.	70°	I	A	I	I
D.D.T. in Kerosene	70°	X	X	X	X
Decalin	70°	I	B	I	I
Decanol	70°	I	B	I	I
Decyl Alcohol	70°	I	A	I	I
Decyl Butyl Phthalate	70°	X	X	X	X
Denatured Alcohol	70°	I	A	B	I
Diacetone Alcohol	70°	B	A	B	B
Diamyl Phenol	70°	X	X	X	X
Dibromobenzene	70°	I	X	I	I
Dibutyl Amine	70°	I	X	I	I
Dibutyl Phthalate	70°	X	X	X	X
Dibutyl Sebacate	70°	I	X	I	I

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>D</b>					
Dicalcium Phosphate	70°	B	A	B	I
Dichlorobenzene	70°	X	X	X	X
Dichlorobutane	70°	I	X	I	I
Dichlorodibromomethane	70°	X	X	X	X
Dichloroethane	70°	I	X	I	I
Dichloroethyl Ether	70°	I	X	I	X
Dichloroethylene	70°	I	X	I	X
Dichlorohexane	70°	I	X	I	X
Dichloromethane	70°	I	X	I	X
Dichloropentane	70°	I	X	I	X
Dichloropropane	70°	I	X	I	X
Diesel Oil	70°	I	B	X	X
Diethylamine	70°	I	I	I	I
Diethyl Benzene	70°	I	X	I	X
Diethyl Ketone	70°	I	X	I	I
Diethyl Oxalate	70°	I	X	I	I
Diethyl Phthalate	70°	I	X	I	I
Diethyl Sebacate	70°	I	X	I	I
Diethylene Glycol	70°	I	B	I	I
Diisobutyl Ketone	70°	I	X	I	I
Diisooctyl Adipate	70°	I	X	I	I
Diisooctyl Phthalate	70°	I	X	I	I
Diisodecyl Adipate	70°	I	X	I	I
Diisopropyl Amine	70°	I	X	I	I
Diisopropyl Ketone	70°	I	X	I	I
Dimethyl Amine	70°	I	X	I	I
Dimethyl Benzene	70°	I	X	I	I
Dimethyl Ketone	70°	I	X	I	I
Dimethyl Phthalate	70°	I	X	I	I
Dinitrobenzene	70°	I	X	I	I
Dioctyl Adipate	70°	I	X	I	I
Dioctyl Phthalate	70°	X	X	X	X
Dioctyl Sebacate	70°	I	X	I	I

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPV/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>D</b>					
Diphenyl Phthalate	70°	I	X	I	I
Dipropyl Ketone	70°	I	X	I	I
Disodium Phosphate	70°	A	A	A	B
Divinyl Benzene	70°	I	X	I	I
Dodecyl Benzene	70°	I	X	I	I
<b>E</b>					
Ethanol	70°	A	A	A	A
Ethanol Amine	70°	B	A	B	I
Ethyl Acetate	70°	X	X	X	B
Ethyl Acetoacetate	70°	I	X	I	I
Ethyl Acrylate	70°	X	X	X	I
Ethyl Alcohol	70°	A	A	A	A
Ethyl Benzene	70°	I	X	I	X
Ethyl Butanol	70°	I	A	I	I
Ethyl Butyl Acetate	70°	I	X	I	I
Ethyl Butyl Alcohol	70°	I	A	I	I
Ethyl Butyl Ketone	70°	I	X	I	I
Ethyl Chloride	---	X	X	X	X
Ethyl Dichloride	70°	X	X	X	X
Ethyl Ether	---	X	X	X	X
Ethyl Formate	70°	I	X	I	I
Ethyl Hexyl Acetate	70°	I	X	I	I
Ethyl Hexyl Alcohol	70°	I	A	I	I
Ethyl Iodide	70°	X	X	X	X
Ethyl Isobutyl Ether	70°	I	X	I	I
Ethyl Methyl Ketone	70°	X	X	X	X
Ethyl Oxalate	70°	I	X	I	I
Ethyl Phthalate	70°	I	X	I	I
Ethyl Propyl Ether	70°	I	X	I	I
Ethyl Propyl Ketone	70°	X	X	X	I
Ethylene Bromide	70°	X	X	X	X
Ethylene Chloride	70°	X	X	X	X
Ethylene Dibromide	70°	X	X	X	X

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPV/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>E</b>					
Ethylene Dichloride	70°	X	X	X	X
Ethylene Glycol	70°	A	A	A	A
<b>F</b>					
Ferric Bromide	70°	A	A	A	B
Ferric Chloride	70°	A	A	A	A
Ferric Sulfate	70°	A	A	A	A
Ferrous Acetate	70°	A	A	A	I
Ferrous Chloride	70°	A	A	A	B
Ferrous Hydroxide	70°	I	A	A	I
Ferrous Sulfate	70°	A	A	A	A
Fluorine	70°	X	X	X	X
Fluosilicic Acid	70°	A	A	A	B
Formaldehyde	70°	X	X	B	A
Formalin	70°	I	I	A	A
Formic Acid (less than 50%)	70°	B	B	A	A
Formic Acid (more than 50%)	70°	B	X	X	B
Freon® 12	70°	B	B	B	X
Freon® 22	70°	X	X	X	X
Fuel A (ASTM)	70°	A	B	B	I
Fuel B (ASTM)	70°	A	B	X	X
Fuel Oil	70°	A	B	B	X
Furfural	70°	X	X	X	X
<b>G</b>					
Gasoline	70°	X	X	X	X
Glacial Acetic Acid	70°	X	B	I	I
Glycerin	70°	A	A	A	B
Grease	70°	A	A	A	B
<b>H</b>					
Heptane	70°	A	A	X	X
Hexane	70°	A	A	B	X
Hexanol	70°	B	A	B	B
Hexyl Methyl Ketone	70°	I	X	I	I
Hexylene Glycol	70°	I	B	I	I

Freon® is a registered trademark of E.I. du Pont de Nemours and Company.

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>H</b>					
Hexyl-Alcohol	70°	I	A	I	I
Hydrobromic Acid	70°	A	A	B	B
Hydrochloric Acid	70°	A	B	A	A
Hydrofluoric Acid	70°	A	B	A	B
Hydrofluosilicic Acid	70°	B	B	I	I
Hydrogen Dioxide 10%	70°	I	A	A	I
Hydrogen Dioxide (over 10%)	70°	I	A	A	I
Hydrogen Gas	70°	X	X	X	B
Hydrogen Peroxide 10%	70°	A	A	A	B
Hydrogen Peroxide (over 10%)	70°	A	A	A	B
<b>I</b>					
Iodine	70°	X	X	X	X
Iron Acetate	70°	I	A	I	I
Iron Hydroxide	70°	I	A	A	I
Iron Salts	70°	I	A	A	B
Iron Sulfate	70°	I	A	A	A
Iron Sulfide	70°	I	A	I	I
Isoamyl Acetate	70°	I	X	I	I
Isoamyl Alcohol	70°	I	A	I	I
Isoamyl Bromide	70°	X	X	X	I
Isoamyl Butyrate	70°	I	X	I	I
Isoamyl Chloride	70°	I	X	I	I
Isoamyl Ether	70°	I	X	I	I
Isoamyl Phthalate	70°	I	X	I	I
Isobutanol	70°	I	A	I	A
Isobutyl Acetate	70°	I	X	I	I
Isobutyl Alcohol	70°	I	A	I	A
Isooctane	70°	I	B	X	I
Isopentane	---	I	B	I	I
Isopropanol	70°	I	A	I	A
Isopropyl Acetate	70°	X	X	X	I
Isopropyl Alcohol	70°	A	A	B	B
Isopropyl Benzene	70°	I	X	I	X

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>I</b>					
Isopropyl Chloride	---	I	X	I	I
<b>J</b>					
Jet Fuels	---	X	X	X	X
<b>K</b>					
Kerosene	70°	X	B	X	X
Ketones	70°	X	X	X	X
<b>L</b>					
Lead Acetate	70°	A	A	A	B
Lead Sulfate	70°	I	X	I	I
Linseed Oil	70°	A	A	A	X
Lubricating Oils	70°	A	B	B	I
<b>M</b>					
MIBK	70°	I	X	I	X
M.E.K.	70°	X	X	B	X
Magnesium Acetate	70°	I	A	I	I
Magnesium Chloride	70°	A	A	A	A
Magnesium Hydrate	70°	I	A	A	B
Magnesium Hydroxide	70°	A	A	A	A
Magnesium Sulfate	70°	A	A	A	A
Malic Acid	70°	B	A	B	B
Manganese Sulfate	70°	I	A	I	I
Manganese Sulfide	70°	I	A	I	I
Manganese Sulfite	70°	I	A	I	I
Methanol	70°	A	A	A	A
Methallyl Alcohol	70°	I	A	I	I
Methyl (Wood) Alcohol	70°	B	B	A	A
Methyl Acetate	70°	X	X	X	X
Methyl Acetoacetate	70°	I	X	I	I
Methyl Acetone	70°	I	X	I	X
Methyl Amyl Acetate	70°	X	X	X	X
Methyl Amyl Alcohol	70°	I	A	I	I
Methyl Amyl Ketone	70°	I	X	A	I
Methyl Benzene	70°	I	X	I	X

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>M</b>					
Methyl Butanol	70°	I	B	I	X
Methyl Butyl Ketone	70°	I	X	I	I
Methyl Cellosolve	70°	I	B	I	I
Methyl Chloride	---	X	X	X	X
Methyl Ethyl Ketone	70°	X	X	X	X
Methyl Hexyl Ketone	70°	X	X	X	X
Methyl Isobutyl Ketone	70°	X	X	X	X
Methyl Isopropyl Ketone	70°	X	X	X	X
Methyl Normal Amyl Ketone	70°	X	X	X	X
Methylallyl Chloride	70°	X	X	X	X
Methyl Propyl Ether	70°	I	I	A	I
Methyl Propyl Ketone	70°	I	X	I	I
Methylallyl Acetate	70°	I	X	I	I
Methylene Bromide	70°	X	X	X	I
Methylene Chloride	---	X	X	X	X
Mineral Spirits	70°	I	B	I	I
Monochlorobenzene	70°	X	X	X	X
Monochlorodibluoromethane	70°	I	X	I	I
Muriatic Acid	70°	I	B	A	B
<b>N</b>					
Naphtha	70°	B	B	B	X
Naphthalene	70°	B	X	B	X
Natural Gas	No hose is recommended for this service				
Nickel Chloride	70°	A	A	A	B
Nickel Nitrate	70°	A	A	A	B
Nickel Sulfate	70°	A	A	A	A
Nitric Acid 10%	70°	A	A	A	B
Nitric Acid 20%	70°	A	B	A	B
Nitric Acid 30%	70°	B	B	A	B
Nitric Acid 30-70%	70°	X	X	X	X
Nitro Benzene	70°	X	X	X	X
Nitrogen Gas	70°	A	A	A	A
Nitrous Oxide	70°	A	A	A	B

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>O</b>					
Octanol	70°	I	A	I	B
Octyl Acetate	70°	I	X	I	I
Oil Petroleum	70°	A	B	A	I
Oleic Acid	70°	B	B	B	B
Oleum	70°	X	X	X	X
Orthodichlorobenzene	70°	I	X	I	I
Orthodichlorobenzol	70°	I	X	I	I
Oxalic Acid	70°	A	A	A	A
Oxygen	No hose is recommended for this service				
Ozone	70°	B	B	B	B
<b>P</b>					
Palmitic Acid	70°	B	B	B	B
Papermakers Alum	70°	I	A	I	I
Paradichlorobenzol	70°	I	X	I	I
Paraffin	70°	B	A	B	I
Pentachloroethane	70°	I	I	X	I
Pentane	70°	B	B	I	X
Pentanol	70°	I	A	I	I
Perchloroethylene	70°	X	X	X	X
Petroleum Ether (Ligroin)	70°	A	B	I	X
Petroleum - Crude	70°	A	B	X	X
Petroleum Oils	70°	A	B	X	X
Phenol	70°	X	X	X	X
Phenolsulfonic Acid	70°	I	X	I	I
Phenyl Chloride	70°	I	I	X	X
Phosphoric Acid 10%	70°	A	A	A	A
Phosphoric Acid 10%-85%	70°	B	B	A	B
Polyethylene Glycol	70°	B	B	A	B
Polypropylene Glycol	70°	B	B	A	B
Potassium Acetate	70°	I	A	A	B
Potassium Bisulfate	70°	A	A	A	B
Potassium Bisulfite	70°	A	A	A	B
Potassium Carbonate	70°	A	A	A	A

AIR & MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
Washdown

MARINE

MATERIAL HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction & Discharge  
Washdown

WELDING

COUPLING SYSTEMS

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

AIR &  
MULTIPURPOSE  
General Purpose  
Heavy Duty  
Push-on

CHEMICAL  
TRANSFER

CLEANING  
EQUIPMENT

FOOD  
Transfer  
Washdown

MARINE

MATERIAL  
HANDLING  
Abrasives  
Bulk Transfer  
Cement & Concrete

MINING

PETROLEUM  
Aircraft Fueling  
Dispensing  
Dock  
Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
Discharge  
Suction &  
Discharge  
Washdown

WELDING

COUPLING  
SYSTEMS

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>P</b>					
Potassium Chloride	70°	A	A	A	A
Potassium Chromate	70°	A	A	A	B
Potassium Dichromate	70°	A	A	A	B
Potassium Hydrate	70°	I	A	I	B
Potassium Hydroxide	70°	B	A	A	B
Potassium Nitrate	70°	A	A	A	B
Potassium Silicate	70°	I	A	I	B
Potassium Sulfate	70°	A	A	A	B
Potassium Sulfide	70°	A	A	A	B
Potassium Sulfite	70°	A	A	A	B
Propanediol	70°	I	A	I	B
Propanol	70°	I	A	I	B
Propyl Acetate	70°	I	X	I	I
Propyl Alcohol	70°	A	A	B	B
Propyl Chloride	---	X	X	X	X
Propylene Dichloride	70°	X	X	X	X
Propylene Glycol	70°	A	I	A	A
<b>S</b>					
Sea Water	70°	A	A	A	A
Silicate of Soda	70°	I	B	A	A
Soda Ash	70°	A	A	A	A
Soda, Caustic	70°	A	B	A	A
Soda, Lime	70°	I	B	A	I
Soda, Niter	70°	I	B	I	A
Sodium Acetate	70°	A	B	A	B
Sodium Aluminate	70°	I	A	A	B
Sodium Bisulfate	70°	A	A	A	A
Sodium Bisulfite	70°	I	A	A	A
Sodium Carbonate	70°	A	A	A	A
Sodium Chloride (brine)	70°	A	A	A	A
Sodium Chromate	70°	I	A	I	I
Sodium Dichromate	70°	A	A	A	B
Sodium Hydrate	70°	I	A	I	I

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Pliovic Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>S</b>					
Sodium Hydrochlorite	70°	A	A	B	B
Sodium Hydroxide	70°	A	A	A	A
Sodium Hypochlorite	70°	A	A	A	A
Sodium Nitrate	70°	A	A	A	A
Sodium Silicate	70°	A	A	A	A
Sodium Sulfate	70°	A	A	A	A
Sodium Sulfide	70°	A	A	A	A
Sodium Sulfite	70°	A	A	A	A
Sodium Thiosulfate	70°	A	A	A	A
Stannic Chloride	70°	A	A	A	B
Stannic Sulfide	70°	I	A	I	I
Stannous Chloride	70°	I	A	I	I
Stannous Sulfide	70°	I	A	I	I
Stearic Acid	70°	A	A	A	A
Sulfonic Acid	70°	I	B	I	I
Sulfur Dioxide (Liquid)	70°	X	X	X	X
Sulfuric Acid (Dry)	70°	A	A	A	A
Sulfuric Acid 25%	70°	A	A	A	A
Sulfuric Acid 25-50%	70°	A	A	A	A
Sulfuric Acid 50-96%	70°	X	X	B	B
Sulfuric Acid Fuming	70°	X	X	X	X
Sulfurous Acid 10%	70°	B	B	B	A
Sulfurous Acid 10-75%	70°	X	X	X	X
<b>T</b>					
Tannic Acid	70°	B	B	B	A
Tar	---	I	X	I	I
Tartaric Acid	70°	A	A	A	A
Tertiary Butyl Alcohol	70°	B	B	B	I
Tetrachlorobenzene	70°	I	X	I	I
Tetrachloroethane	70°	I	X	X	X
Tetrachloroethylene	70°	I	X	X	X
Tetraethylene Glycol	70°	I	B	I	I
Tetrachloromethane	70°	I	X	I	X

# APPENDIX B

## SPIRAFLEX HOSE CHEMICAL RESISTANCE GUIDE

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>T</b>					
Tetrachloronaphthalene	70°	I	X	I	X
Tetrahydrofuran	70°	X	X	X	X
Tin Chloride	70°	B	B	B	B
Tin Tetrachloride	70°	B	B	B	B
THF	70°	I	X	I	X
Toluene	70°	X	X	X	X
Toluidine	70°	I	X	I	I
Toluol	70°	X	X	X	X
Transmission Oil "A"	70°	A	B	I	I
Tributyl Phosphate	70°	X	X	X	X
Trichlorobenzene	70°	X	X	X	X
Trichloroethane	70°	I	X	X	X
Trichloroethylene	70°	X	X	X	X
Trichloropropane	70°	I	I	X	X
Triethanolamine	70°	B	B	B	I
Triethylene Glycol	70°	I	B	I	B
Triphenyl Phosphate	70°	B	X	I	I
Trisodium Phosphate	70°	B	B	A	A
Turpentine	70°	B	B	A	X

Thermoplastic Hose					
	Temperature (°F)	Polyurethane/Spirathane	PVC/Plivoc Plus	TPE/Arvac SW	TPR/Green Hornet XF
<b>A</b> = May be used for Continuous Service <b>B</b> = May be used for Intermittent Service <b>X</b> = Do not use <b>I</b> = Insufficient data					
<b>U</b>					
Urea	70°	A	A	A	A
Undecanol	70°	I	A	I	I
<b>V</b>					
V.M. & P. Naptha	70°	I	B	I	I
Vinyl Acetate	70°	I	X	I	X
Vinyl Benzene	70°	I	X	I	X
Vinyl Chloride	---	X	X	X	X
<b>W</b>					
Water	70°	A	A	A	A
Wood Alcohol	70°	B	B	B	A
<b>X</b>					
Xylene (Xylol)	70°	X	X	X	X
Xylidine	70°	I	X	I	I
<b>Z</b>					
Zinc Carbonate	70°	I	A	A	B
Zinc Chloride	70°	A	A	A	B
Zinc Chromate	70°	A	A	A	I
Zinc Sulfate	70°	A	A	A	B

AIR & MULTIPURPOSE  
 General Purpose  
 Heavy Duty  
 Push-on

CHEMICAL TRANSFER

CLEANING EQUIPMENT

FOOD Transfer  
 Washdown

MARINE

MATERIAL HANDLING  
 Abrasives  
 Bulk Transfer  
 Cement & Concrete

MINING

PETROLEUM  
 Aircraft Fueling  
 Dispensing  
 Dock Transfer

SPRAY

STEAM

VACUUM

VEYANCE

WATER  
 Discharge  
 Suction & Discharge  
 Washdown

WELDING

COUPLING SYSTEMS

