The following chemical resistance tables indicate the suitability of various elastomers and metals for use with fluids being conveyed. The ratings given are intended as a guide only and not a guarantee. Ratings are for tube compound only, unless otherwise stated. The final selection of the proper hose and fitting to use is further dependent on many factors including temperature, concentration, and length of exposure.

Hose ratings are for the effect on the polymer only. The degree of resistance of a rubber compound to a specific fluid depends on the variables of temperature, concentration, and length of exposure. When in doubt or when conditions vary, contact Continental ContiTech for assistance before using a specific product.

### **Ratings and Definitions**

- E The fluid is expected to have a minor or no effect on the hose and compound. Product may be used in continuous service. Changes in the substance, such as concentration or temperature, may affect hose product performance and cause degradation of the product.
- G > The hose and compound may be used for continuous or intermittent service, however the product properties will be affected by the exposure of the chemical. Changes in the substance, such as concentration or temperature, may affect hose product performance and cause degradation of the product.
- X The hose and compound should not be used with this fluid.
- ••• Insufficient or no data is available for this fluid. Further testing is recommended to determine compatibility of the fluid with the hose and the compound.

Blank > No data is available.

Warning: Compatibility of hose fittings with the fluid is an essential factor in avoiding chemical reactions that may result in loss of fluid or failure of the hose connection, with the potential of causing personal injury or property damage.

Hoses

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	сѕм	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Absorption Oil		G	E	G	-	G	-	-		-	-	-	E
Acetaldehyde	E	X	X	X	-	Х	E	G	E	E	E	E	E
Acetamide	E	E	G	-	-	-	X	-	-	-	-	-	-
Acetate Solvent Crude	E												
Acetate Solvent Pure	E												
Acetic Acid, 100%	E	X	X	-	-	-	-	X	X	X	G	G	Х
Acetic Acid, 100%													
(Hot Vapors)(to 200 °F)	E	G	G	-	-	-	-	Х	Х	Х	G	G	Х
Acetic Acid, 100% Boiling		X	X	-	-	-	X	X	X	X	G	-	Х
Acetic Acid, 25%		G	Х	G	E	G	-	X	Х	G	G	G	Х
Acetic Acid, 30%	E	G	X	-	E	-	-	G	X	G	E	G	Х
Acetic Acid, 50%		G	x	G	E		-	G	X	G	G	G	Х
Acetic Acid, 50% Boiling		X	X	-	-	-	-	X	X	X	G		-
Acetic Acid, 5-20%		G	X	G	E	G	X	E	X	G	G	G	Х
Acetic Acid, 80%		X	X	-				X	X	G	G	G	Х
Acetic Acid, 80% Boiling		X	X	-				X	X	X	G	X	Х
Acetic Acid, Aerated		-						-	Х	X	Х		Х
Acetic Acid, Air Free		-		-				-	X	X	X		Х
Acetic Acid, Anhydride	E	X	X	X	E	G		X	X	G	G	G	Х
Acetic Acid, Crude		X	X	-	-	-	-	E	X	G	E	G	Х
Acetic Acid, Glacial	E	X	X	X	E	Х	X	X	X	G	G	G	-
Acetil Bromide													
Acetil Chloride													
Acetil Chromide													
Acetone (Dimethilketone)	E	X	X	X	E	Х	X	E	E	E	E	E	E
Acetonitrile (Methyl Cyanide)		G	X	G	E	G	-	-	-	-	-	-	-
Acetophenone													
Acetylene	E	G	G	E	E			E	E	E	E	E	G
Acrylic Esters													
Acrylonitrile (Vinyl Cyanide)	E	X	X	X	E	X	-	-	E	E	E	G	E
Adipic Acid													
Aero Lubriplate		E	E	-	-		-		E	E	E	E	-
Aero Safe 2300		x	X				X		E	E	E	E	E
Aeroshell 17A Grease		G	E				X		E	E	E	E	-
Aeroshell 750		X	G	-	-		X		E	E	E	E	-
Aeroshell 7A Grease		G	E	-			X		E	E	E	E	-
Aeroshell type 1A, 1AC, 4		G	E	-			E		-	-	-	-	-
Air 150°F		E	E	E	E	E	E	E	E	E	E	E	E
Air 180°F		G	G	G	F	G	G	 F	F	F	F	F	F

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

**Ontinental** Contilech

Fittings

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

= No Data

### Rating Scale

<b>E</b> = Excellent resistance	X = Not recommended	Blank
<b>G</b> = Good resistance	- = Testing recommended	

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Air 200°		Х	х	х	E	Х	G	G	E	E	E	E	E
Air Ambient		E	E	E	E	E	E	E	E	E	E	E	E
Aircraft Hydr Oil AA		-	E	-	-	-	-	-	E	E	E	E	E
Alcohol	E	E	E	-	-	-		-	E	E	E	E	E
Alcohol, Amyl		G	G	-	-	-		E	-	G	E	G	-
Alcohol, Benzyl		x	X	-	E	G	G	-	E	E	E		-
Alcohol, Butyl		G	X	G	-	G	E	E	E	E	E	E	E
Alcohol, Denatured		E	E	-	-	E		E	E	E	E	E	E
Alcohol, Diacetone		-	X	-	-	G	-	-	E	E	E	E	E
Alcohol, Ethyl (Ethanol)		E	E	E	E	E	G	E	E	E	E	E	G
Alcohol, Furfural		G	X	Х	E	G		-	G	E	E	E	E
Alcohol, Hexyl (Hexanol)		G	E	-	-	Х	-	-	E	E	E	E	G
Alcohol, Isobutyl		G	G	-	-	E	-	E	E	E	E	E	G
Alcohol, Isopropyl													
(Isopropanol)		G	G	G	-	G	G	E	E	E	E	E	G
Alcohol, Methyl (100%)													
(Methanol)1		E	E	E	Е	Е		E	E	E	E	E	G
Alcohol, Methyl (6%)		E	E	E	-	E	-	E	E	E	E	E	G
Alcohol, Octyl		G	G	-	-	-	-	E	E	E	E	E	-
Alcohol, Propyl		E	E	-	-	-		X	G	E	E	E	E
Aliphatic (to 70°F)	E												
Alkazene		X	X	Х	-	Х	Х	-	E	E	-	-	-
Alkyd Resins													
Aluminum Chloride	E	E	E	E	E	E	G	x	X	G	G	X	Х
Aluminum Fluoride, 20%+A21	E	E	E	E	E	E	G	X	X	G	G	G	Х
Aluminum Hydroxide	E	E	E	E	E	E		E	-	E	E	-	E
Aluminum Hydroxide,													
Saturated		E	E	-	-	-	-	E	-	E	E	-	-
Aluminum Nitrate	E	E	E	E	E	E	G	-	X	E	E	G	-
Aluminum Sulfate	E	E	E	E	E	E	Х	E	X	Х	G	X	Х
Alums (Ammonium or													
Potassium)	E	E	E	E	Е	Е	-	-	Х	G	G	Х	Х
Ammonia Gas Cold, Dry													
(to 175 °F)													
Ammonia Gas Cold, Wet													
(to 480 °F)													
Ammonia Liquid (Anhydrous)													
Ammonia, Aqueous	E	E	G	E	-	E	-	E	-	E	E	-	Х
Ammonium Acetate	F												

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon<sup>®</sup> is a registered trademark of Dupont.

373

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose		16						Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Ammonium Carbonate													
Ammonium Chloride, 1%	E	X	G	E	E	E	E	E	X	G	G	X	X
Ammonium Chloride,													
10% Boiling	E	Х	Х	-	-	-	-	Х	Х	G	G	Х	Х
Ammonium Chloride,													
28% Boiling	E	Х	Х	-	-		-	Х	Х	G	G	Х	Х
Ammonium Chloride,													
50% Boiling	E	Х	Х	-	-		-	Х	G	E	E		Х
Ammonium Hydroxide	E	G	G	G	E	E	X	E	G	E	E	-	X
Ammonium Hydroxide,													
3 Molar		E	Х	-	-		G	-	Х	G	G	Х	Х
Ammonium Hydroxide													
Concentrated2		E	Х		Е		Х	E	Х	G	G	Х	Х
Ammonium Metaphosphate	E	G	G	G	-	G	-	-	E	E	E	X	-
Ammonium Nitrate, Fertilizer	E	E	G	E	E	E	E	X	E	E	E	G	X
Ammonium Nitrite		-	-	-		-		E	G	E	E	X	-
Ammonium Persulfate		X	X	X	E	-	X	X	X	G	G	X	X
Ammonium Persulfate 10%		E	X	-		-	X	X	X	G	G	X	X
Ammonium Persulfate 5%		E	X	-		-		X		G	G	X	X
AmmoniumPhosphate													
(Mono,Di,Tri,Basic)	E	E	E	E	Е	Е	E	G	Х	G	G	Х	-
Ammonium Sulfate	E	E	G	E	E	E	E	X	X	X	G	X	X
Ammonium Sulfide	E	E	E	E	-	E	-	E	E	E	E	E	G
Ammonium Thiocyanate	E	E	E	-	E	E	-	-	E	E	E	-	-
Amyl Chloride	E	X	-	X	G	X	-	G	-	E	E	-	-
Amyl Chloronaphthalene	E	X	X	X	-	Х	-	-	-	E	E	-	-
Amyl Naphthalene	E	X	x	X	-	X	-	-	-	E	E	-	-
Amyl Phenol		-	-	-	-	-	-	-	-	E	E	-	-
Amyl Acetate	E	X	X	X	G	Х	G	E	X	E	E	X	G
Amyl Alcohol	E	E	E	E	E	E	G	X	X	G	G	G	X
Amyl Borate		G	G	G	-	-	-	-	-		-	-	-
AN-0-3 Grade M		E	E	-	-	-	-	-	-	-	-	-	-
AN-0-366		E	E	-		-		-	-		-		-
AN-0-6		E	E	-	-	-	-		-			-	-
Anderol, L-774 (Diester)		X	G	-		-	-	Х	-			-	-
Anderol, L-826 (Diester)		X	G	-		-		X	-			-	-
Anderol, L-829 (Diester)		X	G	-		-		X	-			-	-
ANG-25 (Diester Base,TG749)		X	G	-	-	-	-	X	E	E	E	E	-
ANG-25 (Glyceral Ester)		G	G	-	-	-	-	G	-	-	-	-	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

374

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

### Rating Scale

E = Excellent resistance	<b>X</b> = Not recommended	Blank = No Data
<b>G</b> = Good resistance	- = Testing recommended	

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Aniline	E	Х	Х	Х	G	х	х	G	G	E	E	х	Х
Aniline Dyes	E												
Animal Fat	E												
Animal Gelatin		E	E	-	E	-	-	-	-	E	E	-	-
Animal Oil (Lard Oil)	E	G	E	-	E	-	-	-	E	E	E	E	-
Antifreeze, Alcohol Base		G	G	G	G	G	-	-	E	E	E	E	-
Antifreeze, Glycol Base	E	G	E	E	E	E		E	E	E	E	E	E
Antimony Chloride,													
50% (to 70°F)	E	-	E	-				Х	Х	Х	Х		
AN-VV-0-366B Hydraulic Fluid		E	-	-	-	-		G	-		-		-
Aqua Regia (Concentrated)	E	X	X	X	G	Х	Х	X	X	Х	Х	X	
Arco A.T.F.Dexron		-	E	-	-	-		-	-		-	-	
Arco C2, 100		-	E	-	-	-		-	-		-		-
Argon Gas	E												
Aromatic Fuel 30%, Mil		-	-	-	-	-		-	-		-	-	
Aromatic Fuel 50%		X	G	-	-	-	-	-	-		-	-	
Aromatic Hydrocarbons	E	X	X	-	-	X	G	-	G	E	G	G	G
Arsenic Salt (to 70°F)	E												
Askarel, Transformer Oil	-	X	X	X	-	X		-	E	E	E	-	E
Asphalt, Cut Back													
(Including Emulsions)	E	х	G	G		Х	E	E	E	E	E	G	G
Asphalt, Topping													
(Including Emulsions)	E	E	Х	-	-	-		-	E	E	E		-
Asphalt, Under 180°F													
(Including Emulsions)	E	G	G	G	Х	Х	E	-	E	E	E		G
ASTM Oil N° 1	E	E	E	E	E	G	E	E	E	E	E	E	E
ASTM Oil N° 2	E	G	E	-	G	-	E	E	E	E	E	E	E
ASTM Oil N° 3	E	X	E	X	Х	Х	-	E	E	E	E	E	E
ASTM Oil N° 4	E	X	G	-	-	-	-	-	E	E	E	E	-
ASTM Reference Fuel A													
( to 300°F)	E	G	E	E	E	E		E	E	E	E	E	Е
ASTM Reference Fuel B													
( to 300°F)	E	G	E	G	G	Х	-	-	E	E	E	E	Е
ASTM Reference Fuel C													
(to 300°F)	E	х	G	х	G	Х	-		E	E	E		Е
ATL-857		x	G	-		-		-	-				-
Atlantic Dominion F		 G	<u>-</u> Е	-	-	-	-		-		-	-	-
Aurex 903R (Mobil)		G	Ē	-		-	-	-	-			-	-
Automatic Brake Eluid											F		

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon<sup>®</sup> is a registered trademark of Dupont.

### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose						_		Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Automatic Transmission													
Fluid		G	E	-	Е		-	-	E	E	E	E	-
Aviation Gasoline, Mil		-	G	-	-		-	-	E	E	E	E	-
Baltic Types 100, 150, 200,													
300, 500		-	E	-	-	-		-	-		-	-	-
Banvel Concentrated													
(Ag Spray)		-	-	-				E	-		E		
Bardol B		X	X	X	-	X	-	-	E	E	E	-	-
Barium Chloride	E	X	E	E	E	E	E	E	X	G	G	X	E
Barium Chloride. 5%	E	X	E	-	-		-	X	G	E	E	X	G
Barium Chloride. Aqueous													-
Solution (Hot)		х	F					х	G	G	G	Х	
Barium Concentrate		F	 F	F	F	F	-	F	 G	 F	 F	X	
Barium Hydroxide	F	 F	 F	 F	F	 F	X	 F	X	 F	F	X	X
Barium Sulfate	 F	 F	 F	-		G	-	 F	<u> </u>	F	F	<u> </u>	G
Barium Sulfate Aqueous												<u> </u>	
Solution (Hot)	F	x	-				-	х	G	F	F	G	х
Barium Sulfide	 F	<u> </u>	F		F	F		<u> </u>	×	F	F	×	-
Ravidon	<u> </u>		<u> </u>	<u> </u>		<u> </u>			<u> </u>	<u> </u>		<u>~</u>	
3avol 35													
Bayol D			E										X
Reer			<u> </u>										
Reet Sugar Liquors	E	×	F	F	F	F	X			G			F
Rellows 80-20 Hydraulic Oil	<u> </u>		<u> </u>	<u> </u>		-	<u> </u>		-	<u> </u>		<u> </u>	
Benzaldebyde	F		<u>г</u>		G	×	G	F	F		F	F	
Benzene Benzo	E	×	×	×	<u>v</u>	X	G	<u>г</u>	<u> </u>	<u> </u>	F	E	
Panzina Datroloum Ethor	L	~	<u>~</u>	~			<u> </u>	L			L		v
Renzine, Feli Oleum Naabtha	F	<u>^</u>		<u>^</u>	L				<u> </u>	L	L	L	^
	<u> </u>												<u> </u>
Renzyl Alcohol	F												
Right Point 77	<u>Ľ</u>												^
Plack FUITL / /			<u> </u>					- 		- 	- 		^
	E					<u> </u>		Ľ	<u>с</u>	<u>г</u>	<u>г</u>	^	-
Diast Fulfiace Gas	<u> </u>	^	×	<u>×</u>	-	<u>~</u>	<u>^</u>	-	E	<u> </u>	<u>с</u>	<u> </u>	E
Sorax, Sodium Borate	E	<u>×</u>	<u> </u>	<u> </u>	£	£	<u>г</u>	×	<u>u</u>	L	E	<u>х</u> г	£
sordeaux Mixture	E	<u> </u>	<u> </u>	<u> </u>		-	±	E	<u>×</u>		£	£	
Soric Acid	£	E	<u>E</u>	<u> </u>		E	±	<u>×</u>	<u>X</u>	۵ 	<u>с</u>	£	
Boron Fuels, HEF		<u>×</u>	<u>×</u>		-						-		-
3rake Fluid, Petroleum Base													
(to 300°F)	E	G	E	G	E	Х	-	-	E	E	E	-	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

<b>E</b> = Excellent resistance	X = Not recommended	Blank = No Data
<b>G</b> = Good resistance	- = Testing recommended	

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Brake Fluid, Synthetic Base		Х	Х	Х	E	х	-	-	E	E	E	E	-
Bray GG-130		X	G	-	-	-	-	-	-		-	-	-
Brayco 719-r (VV-H-910)		G	X	-	-	-	-	-	-	-	-	-	E
Brayco 885 (MIL-L-6085A)		X	G	-	-	-	-	-	-	-		-	-
Brayco 910		G	G	-	-	-	-	-	-		-	-	E
Brine	E												E
Brom-113		X	G	-	-	-	-	-	-	-	-	-	-
Brom-114		G	G	-	-	-	-	-	-	-	-	-	Х
Bromine (Permiable )	E												Х
Bunker Oil	E	X	G	G	-	Х	G	-	E	E	E	E	Х
Butane	E	X	X	X	-	Х	X	X	X	-	-	-	E
Butanone, MEK													-
Butyl Acetate	E	X	X	X	G	Х		-	G	E	E	E	Х
Butyl Acetate	Е												G
Butyl Alcohol, Butanol	- <u>—</u>												Х
Butyl Cellosolve	- <u>—</u>												Х
Butyl Stearate	E												Х
Butylene ( Permiable )	- <u>—</u>												Х
Butyraldehyde	- <u>—</u>												Х
Cadmium Salts (to 70°F)	E												
Calcium Acetate	- <u>—</u>	X	X	X	E	Х		-	G	G	G	X	E
Calcium Arsenate		-	-	-	-		E	E	-		-		E
Calcium Bisulfate	E	E	E	G	E	E		-	-	G	E		E
Calcium Bisulfide	E	E	E	G	E	E	E		-	G	G	X	-
Calcium Bisulfite	- <u>—</u>	E	E	E	E	E		E	X	E	E	E	G
Calcium Carbonate	E	E	E	E	E	E	E	E	G	E	E	X	Х
Calcium Chlorate	- <u>—</u>	E	E	E	-	E		-	G	G	E	E	E
Calcium Chloride	- <u>—</u>	E	E	E	E	E	E	E	X	G	G	X	E
Calcium Hydroxide	E	E	G	G	E	E	Х	-	X	Х	E		Х
Calcium Hydroxide,													
10% Boiling		-	G		-			Х	G	E	E	Х	E
Calcium Hydroxide,													
20% Boiling		-	-	-				Х	-	E	E	Х	-
Calcium Hydroxide,													
50% Boiling		-	-	-	-		-	Х	-	Х	G	Х	G
Calcium Hypochlorite,													
15% (Under 100°F)	E	х	-	х	E	G	-	х	-	Х	G	Х	Х
Calcium Hypochlorite,													
5% (Under 100°F)	E	х	G	х	E	G	-	Х	х	Х	G	Х	E

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon<sup>®</sup> is a registered trademark of Dupont.

### **Ontinental** Contilect

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Calcium Nitrate	E	E	E	E	E	E	-	E	Х	G	G	Х	Х
Calcium Salts (to 70°F)	E												
Calcium Silicate	E	-	G	-	E	G	-	-	E	E	E	E	Х
Calcium Sulfate	E	E	E	E	E	E	-	-	G	E	E	G	-
Calcium Sulfide	E	E	G	-	E		-	G	G	E	E	G	Х
Caliche Liquors E	E												
Cane Sugar Liquors	E	E	E	G	E	E	E	-	E	E	E	E	G
Carbitol													-
Carbolic Acid, Phenol	E	X	X	X	E	Х	X	X	X	E	E	G	Х
Carbon Bisulfide	E												
Carbon Dioxide, Dry	E	G	E	E	E	E	E	-	E	E	E	E	E
Carbon Dioxide, Wet	E	G	E	E	E	E		-	E	E	E	E	E
Carbon Disulfide	-	X	X	-	-	X	G	E	G	E	E	G	
Carbon Monoxide,													
(Under 150°F) (Hot)	E	G	G	G	E	Е		G	E	E	E	E	
Carbon Tetrachloride, 5-10%	E	-	-	-				-	-	X	-	-	Х
Carbon Tetrachloride, Pure	E	X	X	X	G	Х	Х	X	X	X	G	G	
Carbonic Acid	E	E	E	E	E	E	X	-	X	E	E	G	-
Castor Oil	E	G	G	G	E	G	G	E	G	E	E	E	G
Caustic Soda, 20%	E	G	X	X	E	E	Х	G	G	E	E	X	E
Caustic Soda, 50%	E	G	X	X	E	E	X	G	G	E	E	X	E
Cellosolve Acetate,													
Under 100°F	E	Х	Х	Х	G	Х		-	G	G	G	E	Е
Cellosolve Butyl,													
Under 100°F	E	Х	Х	Х		Х		-	G	G	G	G	Е
Cellosolve Union Carbide,													
Under 100°F	E	Х	Х	-				-	G	G	G	G	
Cellugard, Cellugard 200		E	E	-	-			-	-	X	Х	-	Х
Cellulube 1000, 220A,													
ST220, A60 (to 70°F)	E	Х	Х	Х		Х		-	E	E	E	E	Х
Cellulube 90, 150, 220,300,													
551 (to 70°F)	E	Х	Х	Х		Х		-	E	E	E	E	Х
Cellutherm 2505A	-	X	G	-			-	-	-		-		Х
Chevron FR-10,13, 20, 8													
China wood Oil (Tung)	E												
Chlor Acetone													
Chlordane (to 70°F)	E	x	x	x		X		E	-		-	X	X
Chlorinated Paraffine													
Chlorinated Solvents - Drv													
(to 212°E)	F												

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

378

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### Rating Scale

Hoses

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Chlorinated Solvents - Wet													
(to 70°F)	E												
Chlorine Gas, (Under 212°F)		-	X	-	-	-	-	-	-	X	Х	-	-
Chlorine Trifluoride (to 70°F)	E	X	X	-	-	-	-	-	E	E	E	E	-
Chlorine Water, 25% Chlorine		X	X	Х	-	G	G	X	-	Х	Х	-	E
Chloroacetic Acid													
(Under 100°F)	E	х	Х	Х	-	G	-	Х	Х	Х	Х	Х	Е
Chlorobenzene	E	X	X	Х	X	Х	-	X	G	G	G	Х	E
Chlorobromo Methane	E	X	X	X	-	Х	-	-	G	G	G	Х	G
Chloroform	E	X	X	X	X	Х	-	X	G	E	E	X	Х
Chlorosulphonic Acid	E												
Chlorotoluene	E	X	X	X	X	Х	X	-	G	G	G	X	Х
Chlorox, Bleach		G	G	-	E	G		E	X	G	E	X	Х
Chromic Acid, 10%	E	X	X	X	E	G	X	X	X	X	G	X	Х
Chromic Acid, 100%	E	-	-	-	-		X	-	X	X	X	X	Х
Chromic Acid, 25%	E	X	X	X	E	G	X	X	X	X	G	X	Х
Chromic Acid, 5%	E	X	X	-	-	-		X	X	G	E	X	Х
Chromic Acid, 50%	E	X	X	X	E	G	X	X	X	X	Х	X	Х
Chromium Potassium Sulfate													
Cider													
Circo Light Process Oil		E	E	-	-	-		-	E	E	E	E	
Citgo FR Fluids		-	X	-	-	-	G	-	-	-	-	-	-
Citgo FR15, 20,25													
Citgo Glycol FR-20XD		-	E	-	-	-	G	-	E	E	E	E	E
Citgo Pacemaker FR													
Citgo Pacemaker Glicol													
Citgo Sentry, (Under 100°F)		G	G	E	-	Х	G	-	E	E	E	-	E
Citgo Tractor Hydraulic Fluid		-	E	-	-	-	G	-	E	E	E		E
Citric Acid, 15%		E	G	-	-	-	-	E	X	E	E	-	Х
Citric Acid, 15% Boiling		E	G	-	-	-	-	X	X	G	E	X	Х
Citric Acid, 5%		-	G	-	-	-	-	E	X	E	E	E	Х
Citric Acid, 5% @150°F		-	G	-	-	-	-	X	X	E	E	G	Х
Citric Acid, Concentrated													
Boiling		E	Х	E	-	Е	G	Х	Х	Х	G	Х	Х
Coal Gas		E	X	-	E	-	E		-	-	-		-
Coal Tars		X	G	X	G	G	-	-	E	E	E	E	E
Codor 1000, 1002, 1004,													
1006, 1008		-	G	-	-	-	-	-	-	-			-
Coke Oven Gas													
(Under 100°F)	E	х	G	х	-	G	-	-	E	E	E	G	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon<sup>®</sup> is a registered trademark of Dupont.

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Conor 1008, 1010, 1012,													
1014, 1016		-	G	-		-	-	-	-		-		
Convelex 10		X	X		-		-	-	-		-	-	
Copper Arsenate,													
Cupric Arsenate		-	-			G		-	E	E	E		
Copper Chloride, 1%		E	E	-		-	-	X	-	G	G		
Copper Chloride, 5%	E	E	E	-				X	-	X	G		
Copper Chloride,													
Cupric Chloride	E	G	G	G	G	G	E	G	Х	Х	E		Х
Copper Cyanide,													
Cupric Cyanide	E	G	G	G		G	-	Х	E	E	E		Х
Copper Nitrate, 1% & 5%	E	E	E		-		-	E	X	E	E	X	Х
Copper Nitrate, Cupric Nitrate		E	E	E	E	E	-	-	X	E	E	-	Х
Copper Sulfate, 10%	E	E	E	-	-	-	-	-	X	G	G	Х	
Copper Sulfate, 50%	E	E	E	-				-	-	G	G		
Copper Sulfate, Cupric Sulfate		E	E	E	E	E	E	E	X	E	E	X	X
Corn Oil	E	X	G	G	G	X	X	-	E	E	E	E	E
Cosmolubric													
Cottonseed Oil	E	G	G	E	G	G	X	G	E	E	E	E	E
Creosol	E												
Creosote,Wood or Coal Tar													
(Under 100°F)	E	х	G	х	-	Х	Х	х	G	E	E	E	Х
Cresol, Cresylic Acid													
(Under 100°F)	E	х	х	х	Е	Х		х	G	E	E	G	
Crude Petroleum Oil	E	X	X	G	G	G	G	-	E	E	E	E	E
Cutting Oil	E	G	E	G	E	X	-	-	E	E	E	-	E
Cutting Oil, Sulfur Base	E	X	E	-				-	E	E	E	E	
Cutting Oil, Water Soluble	E	X	E	-				-	E	E	E	E	
Cyclohexane	E	X	G	-	E	X	E	E	G	G	G	G	
Cyclohexanol	E												
Cyclohexanone	E	X	<u>х</u>	x	G	X	E	E	G	G	G	G	
Cymene	E	X	x	x	G	X	-	-	E	E	E	E	E
Dasco FR 300													
Dasco FR150, FR200,													
FR200B, FR310			E	-	-			E			-		
Dasco IFR		-	E	-				E	E			E	
DDT Preparation (to 70°F)									<u> </u>				
(in Kerosene)	E												
Decalin	F	×	G		G	X	_		_	_	-		F

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### Rating Scale

E = Excellent resistance	X = Not recomme
<b>G</b> = Good resistance	- = Testing recom

X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Dectol R&O Oil		Х	E	-	-	-	G	-	-	-	-	-	-
Deionized Water													
Detergent / water Solution	E												
Developing Fluids, Photo	E	G	-	-	E	G	-	-	-	E	E	-	-
Developing Solutions, Hypos	E	G	-	-	E	G	-	-	-	E	E	-	-
Dextron AFT													
Diacetone	E	X	X	X	E	X		E	E	E	E	E	E
Diammonium Phosphate													
( to 70°F)	E												
Dibenzyl Ether	E												
Dibutyl Ether	E												
Dibutyl Phthalate													
(Under 120°F)	E	х	х	х	G	Х	G		E	E	E	E	E
Dichlorobenzene	E	x	X	X	X	X	X		E	E	E	X	E
Dichloroethylene	E	·										·	
Dieldrin													
Diesel Oil, Fuel ASTM #2	E	G	E	G	G	X	E	E	E	E	E	E	E
Diester Lubricant MIL-I-7809		x	G	-			-	-	E	E	E	E	
Diester Synthetic Lubricants		x	G	-			-	-	E	E	E	E	-
Diethanolamine, 20%	E												
Diethyl Ether (Permiable)	E												
Diethyl Sebacate	E												
Diethylamine (Under 120°F)	E	G	G	-	G	X	-	E	E	E	E	E	E
Diethylene Glycol	E		E	E	E	E	E	E	E	E	E	E	E
Diisobutyl Ketone	E	x	X	X	G	X	-	E	E	E	E	E	E
Diisobutylene	E	x	G	-	E	X	-	-	G	E	E	G	E
Diisopropyl Ketone		x	X	X	G	X	-	E	E	E	E	E	E
Dimethyk Benzol													
Dimethyl Aniline	E	X	X	X	G	X		-	-		-	-	E
Dimethyl Formamide													
(Under 120°F)		х	Х	Х	-			-	E	E	E	E-	
Dimethyl Phthalate	E	x	X	X	E	X	-	-	-	-	G	-	E
Dioctyl Phthalate (DOP)	E	x	X	x	G	X	-		E	E	E	 Е	E
Dioctyl Sebacate		x	X	X	X	X	-	-	E	E	E	E	-
Dioctylphospjate													
Dipentene	E	x	X	-	G		-		E	E	E	 Е	E
Dirco Oils		-	E	-		-	-	E	E	E	E	E	E
Dispersing Oil #10		x	X	-			-	-	E	E	E	Е	-
Dow Corning													
C200 DC510 DC550 DC560		-	F					F	-	F	F	F	F

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### **Ontinental** Contilect

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Dow HD 50-4													
Dow Therm 209													
Dowtherm A	E	X	X	X	G	X	X	-	E	E	E	E	E
Dowtherm E		X	X	-	G		-	-	E	E	E	E	E
DP47, 200 Flow-DOW		-	E	-	-	-	-	E	E	E	E	E	E
Duro AW-16, 31													
Duro FR-HD		-	E	-		-	X	E	-	-	-	-	-
Duro Oils		-	E	-		-	-	E	E	E	E	E	E
Elco 28-EP, Lubricant		X	E	-			-	-	E	E	E	E	
Enamels	- E	-	-	-	-		E	-	-		-	E	
Energol HL 68		-	E	-	-	-	-	-	E	E	E	E	E
Energol HLPC 68		-	E	-	-	-	-		E	E	E	E	E
EP Hydraulic Oils, Chevron		-	E	-	-			-	E	E	E	E	E
Epichlorohydrin													
Under 120°F)		х	Х	-				-	E	G	E	E	
Esam-6 Fluid		G	-	-			-	-	-	-	-		
Ethanoic Acid	E												
Ethanol	Е.		E	-	E		X	Е	-		-		
Ethanolamine.													
Aminoethanol	E	G	G		Е	Х	Х	E	Е	E	E	E	Е
Ethers (Under 120°F)	Е.	X	G	X	E	G	G	Е	E	E	E	E	E
Ethyl Acetate		X	×	X	G	X	G		E	E	E	G	G
Ethyl Acetoacetate		X	X	X	E	X	X	-	E	E	E	E	E
	 F	X	X	X	 G	X	X	-	F	– F	F		
Thyl Alcohol	 F	<u> </u>	<u> </u>	<u> </u>			<u> </u>						
Thyl Amine. Monoethylamine	 F	X	X	X	F	X	X	-	G	F	F	G	F
Ethyl Benzene	E	x	x	x	G	x	E		E	E	E	E	E
Ethyl Bromide. Di	<u>–</u> Е	X	X	X	<u> </u>	X			<u>–</u> Е	<u>–</u> Е	<u>–</u> Е	 E	 E
Ethyl Butvrate	<u>–</u>	x	X	X	-	-	-		-	 E	 E		
Thyl Cellulose		-	-		F		-		F	 F	 F	-	F
	– F	x	x	x	-	X	x	-	 G	 F	 F	F	- G
Thyl Chloride, Dry	– F		X	-		-	<u>х</u>	 F	 F	 F	 F	 F	-
Thyl Chloride, Wet			x				-	– F		 F	 F		F
Thyl Mercaptan	F	<u>~</u>	<u>x</u>			x	x	-		<u> </u>	<u> </u>	 G	-
Thyl Oxalate		x	<u>x</u>	-	 F	-	 F		-		-	-	-
-thyl Pentachlorobenzeno	F		×		×								
Ethyl Silicate ( to 70°F)	<u>Б</u>		F	F	F		 F		F	F	F	<u> </u>	F
	<u> </u>	<u> </u>	<u> </u>		<u> </u>		<u> </u>		<u> </u>	<u> </u>			
Luryiene Chioronyunin,	F	V	V	~			V	V	F	F	C	v	
Under TOU F)	E	^	X	~	-	-	~	~	E	E.	6	Χ	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the soc cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

382

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

### Rating Scale

**E** = Excellent resistance **X** = **G** = Good resistance - =

X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Ethylene Diamine													
(Under 100°F)	E	G	G	G	Е	Х	Х	-	E	E	E	Х	Е
Ethylene Dichloride													
(Permiable )	E	Х	Х	-	G	-	E	E	-	E	E	Х	
Ethylene Glycol	E	E	E	E	E	E	E	E	G	E	E	E	E
Ethylene Glycol, Ethyl Ether	E												
Ethylene Oxide	E												
Exxon Univolt 60, N61	·												
Factovis 52		-	E	-	-	-	-	-	E	E	E	E	E
Fatty Acids	E	G	G	G	G	Х	E	E	X	G	E	E	-
Ferric Chloride	E	-	-	-	E	G	-	-	X	Х	Х	X	Х
Ferric Chloride, 1%		E	E	-	-		-	E	X	G	G	X	Х
Ferric Chloride, 1% boiling		-	G	-	-	-	-	E	X	X	Х	X	Х
Ferric Chloride, 10%		G	E	-	-	-	-	E	X	X	Х	X	Х
Ferric Chloride, 5% Agitated													
or Aerated		G	G	-	-	-		E	Х	Х	Х	Х	Х
Ferric Chloride, 5% Still		G	E	-	-	-	-	E	X	X	Х	X	Х
Ferric Sulfate	E	G	G	G	E	G	-	E	X	G	G	X	Х
Ferrous Sulfate, Saturated	E	E	-	-	-	-	-	E	-	G	G	X	-
Ferrous Chloride	E	E	E	-	E	G	-	E	X	X	G	X	Х
Ferrous Nitrate	E	G	G	G	-	G	-	-	-	E	E	-	-
Ferrous Salt Solutions	E												
Ferrous Sulfate, 10%	E	E	E	-	-	-	-	E	X	G	G	X	-
Ferrous Sulfate, Copper Gas	E	G	G	G	E	G	-	-	X	E	E	E	G
Fire Resistant Hydraulic													
Fluid, Texaco		-	E	-	-	-	-	-	E	E	E	E	Е
Fire Safe, 225, 211													
Fire Safe,													
1090E,1150,1220,1300E,155													
Firtec 290, MF		-	-	-	-	-	-	-	-	-	-	-	-
Fixing Solution, Photo		G	-	-	-	G	-	-	-	E	E	-	
Flactid Acid	·												
Fluoboric Acid	E	E	E	-	E		-	-	E	-	E	X	-
Fluoboric Acid, 65%	E	G	-	-	E	G	X	-	-	E	E	-	-
Fluorine Gas, Dry or Wet	G												
Fluosilic Acid		G	E	-		-		-	X	X	X	X	E
Fluosilic Acid, 50%		G	X	X	E	G	X	X	-	-	-	E	-
Formaldehyde	E	E	X	-	E	-	-	G	E	E	E	E	Х
Formaldehyde, 37%		G	-G	-	E	G	- G	-		E	E	E	E
Formaldehvde. Hot		-	-	-			-	E	X	G	E	G	E

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### **Ontinental** Contilect

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Formic Acid (Under 120°F)	E	E	Х	E	E	G	х	G	Х	G	E	E	G
Formic Acid, Dilute Hot		E	X	-	-	-		Х	X	G	E	G	x
Freon 113 ( Permiable )			Use Freor	h Hose Only	/								
Freon 114 ( Permiable )	G		Use Freor	Hose Only	/								
Freon 12 ( Permiable )	G		Use Freor	Hose Only	/								
Freon 22 ( Permiable )			Use Freor	Hose Only	/								
Freon 502 ( Permiable )			Use Freor	Hose Only	/								
Fuel Oil	E	G	E	E	E	Х	G	E	G	G	G	E	G
Fumaric Acid	E	G	X	-	-	-	Х	-	E	E	E	-	-
Furan, Furfuran	E	X	X	Х	E	-		-	E	E	E	E	E
Furfural	E												
Furfural Alcohol, Ant Oil	E	G	X	X	E	G		E	G	E	E	E	E
Fusel oil, Grain Oil		X	X	-	-	-	-	-	-	-	-	-	-
Fyran Resin		X	X	-	-	-		-	-	-	E	-	-
Fyre Safe W/O													
Fyrguard 150, 200		-	E	-	-	-		-	E	E	E	E	E
Fyrquel 1000, 15R&O,													
220R&O, 550R&O		Х	Х	-	-			-	E		-	E	-
Fyrquel A60, 90, 100, 150,													
220, 300, 500		Х	Х	-	-			-	E		-	E	-
Gallic Acid	E	X	X	X	E	-	X	G	X	E	E	X	-
Gas Oil	E												
Gas, Natural	E	-	-	-	Х	-	-	-	E	E	E	-	G
Gasohol ( to 200°F)	E	G	X	X	-	X	-	-	G	E	E	E	E
Gasoline Unleaded,													
Under 50% Aromatics	E	Х	Х	Х	-	Х	Х	-	G	E	E	E	E
Gasoline, Aviation	E	X	-	G	-	-	-	-	-	E	E	E	E
Gasoline, Meter		X	X	-	-	-		X	E	E	E	E	X
Gasoline, Premium	E	G	X	X	-	Х	X	-	G	E	E	E	E
Gasoline, Sour	E	X	X	-		-		-	G	E	E	X	-
Gasoline, Standard	E	E	X	X	G	Х	X	-	G	E	E	E	E
Gelatin	E	E	E		-	-		E	E	E	E	E	X
Glauber's Salt	-	G	x	-		-			E	E	E	-	-
Glucose	E	E	E	E		E	E	E	E	E	E	E	E
Glue (Under 120°F)	E	G	G	G	-	E	E	G	G	E	E	G	X
Glycerine, Glycol	E	E	E	E	E	E	E	E	G	E	E	E	G
Glycol FR Fluids	E	-	E			-		-	E	E	E	E	E
Glysantine													
Grease, Ester Base		-	-	-		-		E	E	E	E	E	E

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

E = Excellent resistance X = Not recommended **G** = Good resistance

Blank = No Data - = Testing recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Grease, Petroleum Base	E	G	E	G		G	E	E	E	E	E	E	E
Grease, Silicone Base		-	-	-	-	-		E	E	E	E	E	E
Green Sulfate Liquor,													
Under 120°F	E	G	G	E	G	-	-	-	E	E	E	-	-
Gulf FR Fluid G-200 (to 70°F)	E	-	E	-	-	-	Х	-	E	E	E	E	E
Gulf FR Fluid P37, P40, P43,													
P45, P47 (to 70°F)	E	-	Х	-	-	-	Х	-	-		-		-
Gycols (Under 120°F)		E	E	E	E	E	E	E	G	E	E	E	E
H 515 (NATO)													
Halon													
Halowax Oil		X	X	X	-	X	-	-	-		-	-	-
Helium	E												
Hephtachlor, In Petroleum		-	G	X	-	-	-	-	-		-		-
Heptane (Under 100°F)	E	G	E	G	E	X	E	E	E	E	E	E	E
Hexane (Under 120°F)	E	G	E	G	G	E	E	E	E	E	E	E	E
Hexene	E	G	G		E	-		-	E	E	E		E
HF 20											-		
High Viscosity Lubricant, H2		G	E		-	-		-	-		-		-
High Viscosity Lubricant, U4		G	E		-	-		-	-		-		-
Hilo MS #1		X	X		-	-		-	-				-
Houghto-Safe 1010, 1055,													
(Phos, Ester) (to 70°F)	E	Х	Х	Х	Е	Х		-	E	E	E	E	E
Houghto-Safe 1115, 1120,													
1130, (Phos, Ester) (to 70°F)	E	х	Х	Х	E	Х		-	E	E	E	E	E
Houghto-Safe 271, 416, 520,													·
616, (Water/Glycol) (to 70°F)	E	G	E	E	-	-	G	-	E	E	E	E	E
Hul-E-Mul													
Hy-Chock Oil		-	G	-	-	-		E	E	E	E		-
Hydrafluid 760,													
Texaco & Houghton		-	E	-	-		-	E	E	E	E	E	-
Hydrafluid AZR&O, A, B, AA, C		-	E	-	-	-	-	E	E	E	E	-	-
Hydrasol A		-	E	-	-		-	E	E	E	E		-
Hvdraulic Fluid HF-18, HF-20		-	E	-			G	E	E	E	E	Е	E
Hvdraulic Fluid HF-31		-			-		-	E	E		E	E	E
Hydraulic Fluid,													
Phosphate Ester Base		х	х	х	Е		х	E	E	E	E		
Hvdraulic Fluid.			·	·									·
Std Petroleum Oils		G	E	G	Е	G	G	E	E	E	E	E	Е

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon® is a registered trademark of Dupont.

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose						Fittings and Adapters						
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Hydraulic Fluid,													
Water Glycol Base		E	E	E	-	-	E	E	E	E	E	E	Е
Hydraulic Oils, Petroleum	E	G	E	-		-	-	E	E	E	E	E	E
Hydraulic Oils, Synthetic	E	-	X	-	-	-	-	-	E	E	E	E	E
Hydraulic Safety Fluid													
200&300 Texaco		-	E	-	-	-	E	-	E	E	E	E	Е
Hydrazine	E	X	X	X	-	X	-	-	X	E	E	E	-
Hydrobromic Acid		X	X	-	-	-	-	-	X	X	X	X	Х
Hydrobromic Acid, 37%		X	X	X	E	G	X	X	X	X	X	X	Х
Hydrochloric Acid (Permiable)	E	G	X	-	-	-	-	X	X	X	X	X	Х
Hydrochloric Acid ,15%	E	X	X	X	E	G	X	X	X	X	X	X	Х
Hydrochloric Acid Concentrated		X	X	-		-		X	X	X	X	X	Х
Hydrochloric Acid, 3 Molar		G	X	-		-		X	-			-	Х
Hydrochloric Acid, 37%	E	X		X	E	G	Х	X	X	X	Х	X	Х
Hydrocyanic Acid, 20%													
(Under 100°F)		Х	Х	Х		G	Х	E	Х	E	E	E	Х
Hydrocyanic Acid, 98%	E	-	-			-		-	-			-	
Hydro-Drive Oil		-	E	-		-	G	-	-				-
Hydro-Drive Oil Houghton		-	E	-		-	G	-	-			-	-
Hydrofluoric Acid, 10%		X	X	X	E	E	Х	X	X	X	Х	X	Х
Hydrofluoric Acid, 20%													
(Under 120°F)		Х	Х	х	Е	G	Х	х	Х	Х	Х	Х	Х
Hydrofluoric Acid, 48%													
(Under 120°F)		Х	Х	Х	Е	G	Х	Х	Х	Х	Х	Х	Х
Hydrofluoric Acid, 70%													
(Permiable )	E	-	Х	х	-	G	Х	х	Х	Х	Х	Х	Х
Hydrofluoric Acid, Anhydrous		-	X	-		-		-	-				-
Hydrofluoric Acid, Concentrated	E	X	X	X	E	G	X	X	X	X	X	X	Х
Hydrofluorosilic Acid	E												
Hydrogen ( Permiable )	E	E	E	-	E	-		-	X	X	Х	E	-
Hydrogen Chloride Gas													
(Permiable )	E	-			Е	-		-		E	E		-
Hydrogen Cyanide Gas													
(Permiable - to 300°F)	E	-	-	-	-	-			-	-	-	E	-
Hydrogen Fluoride													
(Under 100°F)(Permiable)	E	-	Х	-			-		G	G	E	-	-
Hydrogen Perhydrol													
Hydrogen Peroxide, 10%	E	X	E	x	E	G	X	X	X	G	E	E	X
Hydrogen Peroxide, 30%	E	x	G	X	E	G	X	X	X	G	E	E	Х
Hydrogen Peroxide, 70%	E	X	X	X	E	-	X	X	X	G	E	E	X

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

E = Excellent resistance X = Not recommended **G** = Good resistance

Blank = No Data - = Testing recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Hydrogen Peroxide, 90%		Х	Х	-	-	-	-		Х	G	E	-	х
Hydrogen Peroxide, Dilute		E	G	-	-	-	-	E	E	-	E	-	Х
Hydrogen Sulfide,													
Aqueous Solution		G	Х	-	-	-		-	Х		-	Х	-
Hydrogen Sulfide, Dry, Cold		E	E	-	-	-	-	E	-	-		G	Х
Hydrogen Sulfide, Dry, Hot		G	X	-	-		-	E	E	X	G	G	X
Hydrogen Sulfide, Gas	E	-	-	-	-		-	-	-		-	-	-
Hydrogen Sulfide, Wet, Cold													
(Permiable )	E	E	Х		-	-		E	G	G	G	G	Х
Hydrogen Sulfide, Wet, Hot	E	G	X	-	-		-	E	G	G	E	-	X
Hydrogluosilic Acid												· · · · · · · · · · · · · · · · · · ·	
Hydrolube, Water Glycol	E	G	E	-	-	-	X	-	X		E		-
Hydrolubric Oil, Houghton		-	G	-	-	-	G	E	-		-		-
Hydroquinone	E	X	-	-	-	Х	-	-		E	E	G	-
Hydroxy Quinoline													
Hykil N°6 (33%), Water (67%)	E	-	G	-	-	-		-	E		-		-
Hypochlorous Acid,													
(Under 120°F)		х	Х	Х	-	G		Е	G	G	G	Х	
Hypoid Grease (Parapoid 10-C)		-	E	-	-	-		-	-	-	-	-	-
Imol, Imol S150, S220,													
S300, S500		-	E	-	-	-	G	Е	E	E	E	E	
Industron 53		-	E	-	-	-		-	-	-	-	-	-
Ink (Printers)	E	E	E		-	-		E	G	G	E		G
Ink Oil	E	-	G		-	-		-	E	E	E		E
Insulating Oil (Transformer)	E	G	E	G	-	X		-	E	E	E		E
lodine (Under 100°F)													
(Gas- Permiable )	E	Х	Х		Е	G	Х	Е	G	G	G	Х	-
lodine Pentafluoride		X	X	-	-	-		-	X	G	G	X	-
lodine, in Alcohol	E	G			-	-	X	-			-	X	-
Irus Fluid 902		-	E		-	-	E	E	E	E	E	E	E
Irus Fluid 905		-	E	-	-	-	E	E	E	E	E	E	E
Isobutane		X	X	-	-	-	X	X	X	E	E	G	E
Isocyanates (at 70°F)													
Isooctane		E	E	G	G	E	G	-	E	E	E	G	E
Isooctyl Thioglucolate	E	-	-	-				-	-			-	
Isopropyl Acetate	E	x	X	X		X	G	E	G	G	E	X	E
Isopropyl Alcohol												·	
(Isoprooanol)	E	G	G	G	E	G	G	E	E	E	E	E	G
Isopropyl Ether	E												
Isopropylamine												·	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

#### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose					Fittings and Adapters							
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Jet Fuel JP-3 (Under 100°F)	E	G	E	G	-	Х	G	E	G	E	E	G	E
Jet Fuel JP-4	E	Х	E	G	-	Х		E	G	E	E	G	E
Jet Fuel JP-5	E	Х	E	X	-	Х		E	G	E	E	G	E
Jet Fuel JP-6	E	Х	E	Х	-	Х		E	G	E	E	G	E
Jet Fuel JP-x (at 70°F)	E	G	E	x	-	Х		E	G	E	E	G	E
Kerosene	E	Х	E	G	E	Х		E	E	E	E	E	E
Ketchup	E	E	E	-	-	-		E	-	E	E	-	-
Ketones	E	X	X	X	-	Х	Х	E	E	E	E	G	E
Keystone #87Hx-													
Grease+A334		Х	E	-	-		-	-	E	E	E	E	-
Lacquer Solvents	E	X	X	X	-	Х	G	E	Х	G	E	E	E
Lacquers	E	X	X	X	-	X	-	E	X	X	E	E	E
Lactic Acid	E	E	X	X	-	E	X	-	X	G	E	X	G
Lactic Acid 10% Boiling	E	X	X	-	-	-	-	-	X	G	E	X	Х
Lactic Acid 5%	E	G	E					E	X	G	E	E	Х
Lactic Acid 5% Boiling	E	X	X	-	-			-	X	G	E	G	Х
Lactol		G	G	G	-			-	E	E	E	E	E
Lasso (Ag Spray)			-	-			-	E	-	E	E		-
Latex	E	E	E	-	-	-	-	E	E	E	E	E	E
Lead Acetate	E	X	X	-	E	X		-	G	G	G	X	E
Lead Arsenate (to 70°F)	E	G	G	-		G	E	-	E	E	E		-
Lead Nitrate (to 300°F)	E	G	G	-			-	-	E	G	G		-
Lead Sulfate (to 300°F)	E	E	E	-	E	E	E	-	E	E	E	-	-
Lead Sulphamate (to 125°F)	E	G	G	-		G	-	-	-		-		-
Lead Tetramethyl	E	X	G	X	-	X	E	-	-	-	-	-	-
Lead, Tetraethyl (Under 100°F)	E	X	G	X	-	X		-	-	-	-	-	-
Lecithin	E	G	X	-			-	-	-	E	E		-
Ligroin (Petroleum Ether,													
- Under 120°F)	E	х	E	-	-	Х		-	G	E	E	Х	-
Lime (Chlorinated Free													
Chlorine 20%)			E	-	Е		E	-	-		G		
Lime Bleach (Under 100°F)	-	X	G	X		X		-	X	G	E		-
Lime Sulphur			x	-				E	G	E	E	x	X
Lime Sulphur (Under 135°F)	E		X	x		G	-	E	G	E	E	X	X
Lindane (Ag Sprav)		-	-	-		-	-	E	-	E	E	-	-
Lindol HF (to 200°F)	F												
Lindol, Hydraulic, Fluid													
(to 200°F)	E	х	х					-	E	E	E	E	-
	F		 G						- V		F	F	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

Blank = No Data

#### Rating Scale

<b>E</b> = Excellent resistance	X = Not recommended
<b>G</b> = Good resistance	<ul> <li>= Testing recommended</li> </ul>

	Hose						Fittings and Adapters						
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Linseed Oil	E	Х	E	-	-	-	-	E	E	E	E	G	G
Linseed Oil (Boiled)		G	G	E	E	E	E	-	G	E	E	E	G
LPG													
Lubricating Oil													
(Diester Under 135°F)		Х	G	Х	-	-	Х	E	E	E	E	E	Е
Lubricating Oil													
(Petroleum Base)	E	G	E	G	Е	G	G	E	E	E	E	E	Е
Lubricating Oil													
(SAE 10, 20, 30, 40, 50)	E	G	G	-	-	-		E	E	E	E	E	-
Machine Oil (Under 135°F)	E	E	E	G	-	G	G	-	E	E	E	E	E
Magnesium Carbonate	E	E	E	E	-	E	E	-	G	G	G	E	-
Magnesium Chloride	E	E	E	E	E	E	E	E	X	G	E	X	G
Magnesium Hydroxide	E	G	G	G	E	E	X	-	E	E	E	X	X
Magnesium Nitrate	E	G	G	G	-	E	-	-	G	G	G	X	E
Magnesium Sulfate	S	G	G	G	E	E	E	E	G	G	G	G	G
Malation (Ag Spray Dilute)		-	G	-	-	-	-	E	E	E	E	-	E
Maleic Acid	E	G	X	-	-	-	-	E	-	E	E	G	G
Manganese Salts ( to 70°F)	E	-	E	E	-	E	-	-	-	-	-	-	-
Maximul													
(Penzoil Hydraulic Fluid)		G	E	G	-	-		-	E		E		-
Mercuric Chloride	E	E	G	G	E	E	G	х	X	G	G	X	X
Mercuric Cyanide	E	E	G	G	-	E	-	-	G	G	G	Х	-
Mercurous Nitrate													
(Under 120°F)	E	E	G	G	-	Е	-	-	E	E	E	Х	-
Mercury	E	E	G	G	E	E	G	E	E	E	E	Х	X
Mesityl Oxide	E	X	X	Х	G	X	Х	-	E	E	E	E	E
Methane (Gas or Liquid )	E	G	E	-	-	-	-	-	-	E	E	-	-
Methanol													
Methoxychlor (Insecticide)		-	-	-	-	-	-	Х	E	E	E	-	
Methyl Acetate	E	X	X	X	E	X	-	-	E	E	E	E	E
Methyl Acrilate	E	X	X	X	-	X	-	-	E	E	E	E	E
Methyl Alcohol, Methanol	E												
Methyl Amine													
(25% Aqueous Solution	E	G	Х	-	-	-		-	E	E	E	E	-
Methyl Amine (60%)	·	G	G	-	-	-	-	G	E	E	E	E	G
Methyl Amine (99%)		X	X			-		-	E	E	E	E	X
Methyl Amyl Carbinol	E	-	-		E			-	E	E	E	-	
Methyl Bromide	E	X	X	X		X	X	X	E	E	E	X	E
Methyl Butyl Ketone (MBK)	E	X	X	X	G	X		-		E	E	E	E

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### Continental S Contilech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Methyl Cellusolve													
(Under 100°F)	E	G	Х		Е	Х		-	G	G	G	G	E
Methyl Chloride		X	X	X	X	Х		E	G	E	E	X	E
Methyl Ethyl Ketone (MEK)	E	X	X	X	G	Х	X	E	E	E	E	G	E
Methyl Formate	E	G	X	X	-	Х	-	-	G	E	E	E	E
Methyl Isobutyl Ketone													
(MIBK, 100°F)	E	Х	Х	Х	G	Х	Х	G	G	G	G	G	E
Methyl Isopropyl Ketone	E	X	X	X	G	Х	Х	-	G	E	E	E	E
Methyl Methacrilate	E	X	X	X	G	G		-	G	G	G	-	-
Methyl Methyl Ketone					-								
Methyl Salicylate	E	G	G	G	-	-		-	E	E	E	E	E
Methyl Sulfate													
(Dinethyl, Under 100°F)	E	Х	Х	Х		Х	E	-	-		-		-
Methylene Chloride	E	X	X	X	X	X		G	G	G	G	Х	E
Methylene Dichloride	E	X	X	X	-		-	E	E	E	E	X	E
Methylhalides													
MIL-F-7083													
MIL-H 5606													
MIL-H-83282													
MIL-L-2104 & 2104B													
MIL-L-7808	·												
MIL-O-6083													
Mine Guard FR													
Mineral Oil (Under 120°F)	·												
Mineral Spirit	·	-	E	G	-	X	-	-	E	E	E	G	E
MLO.8220 Hydr.o		E	G	-				-	E	E	E	E	-
MLO-7277 Hvdro.	·	X	X	-				-	E		E	E	-
MLO-7557		E	X	-			-	-	E	E	E	E	-
MLO-8515		E	G	-				E	E	E	E	E	-
Mobil DTE	·												
Mobil HFA													
Mobil Rarus 824, 826, 827													
Mobil SHC 600 Series	·												
Mobil SHC 800 Series	·												
Mobil Vectra Oil	·												
Mobile Hydraulic Oils		-	E	-			G		E	E	E	E	
Mobile Therm 603	·	-	E	-			-		E	E	E	E	E
Mobilfluid 423													
Mobilmet S122		-	E	-	-		G		-	-		-	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

### **Rating Scale**

X = Not recommended Blank = No Data - = Testing recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Mobilrama 525													
Molasses (Under 120°F)	E	G	G	G	-	E	E	-	G	E	E	G	Х
Monochlorobenzene													
(Permiable)	E	х	Х	Х	Х	Х	Х	X-	E	E	E	Х	Е
Monoethanolamine	E	X	G	-	E	X	-	-	E	E	E	G	E
Morpholine (Pure Additive)	E												
Motor Oils (Under 135°F)	E	G	E	G	E	G	G	E	E	E	E	E	E
Mould Oil	·	-	-	-		-	-	-	E	E	E	-	-
Muriatic Acid (Permiable)	E	X	X	X	E	G	Х	х	X	X	Х	X	Х
Mustard	E	E	G	E	-	E	-	-	X	E	E	G	-
NaK													
Naphtenic Acid	E												
Naphtha (Low													
Aromatic Content)	E	х	G	Х	Е	Х	-	E	G	E	E	E	Е
Naphthalene	E	X	X	X	-	X	-	-	E	E	E	-	E
Naphthalene (Tar Camphor)	E	X	X	X	E	X	-	E	E	E	E	E	E
Natural Gas	E												
Neon Gas	E												
N-Hexaldehyde	E	G	X	G	-	-		-	E	E	E	E	E
Nickel Acetate	E	G	G	-	-	-		-	E	G	G	E	E
Nickel Chloride	E	G	G	G	E	G		E	X	G	G	X	Х
Nickel Nitrate	E	G	G	G	E	G		E	G	G	G	Х	-
Nickel Plating Solution		-	G	-	-	G	Х	-	-	E	E	-	-
Nickel Salts	E	G	-	E	-	-		-	-	-	-		-
Nickel Sulfate	E												
Nicotine Salts	E	-	-	-	-	-	E	-	E	Х	G	-	-
Nitric Acid	E	Х	Х	-	-	-		-	Х	E	E		Х
Nitric Acid &													
Hydrochloric Acid		-	Х	-	-	-		-	Х	Х	Х	Х	-
Nitric Acid, 20%	E	Х	Х	Х	E	G	Х	Х	Х	G	G	Х	Х
Nitric Acid, 3 M		Х	X		-	-	-	-	Х	E	E	-	Х
Nitric Acid, 5% to 10%	E	Х	Х	Х	E	G	Х	Х	Х	G	G	E	Х
Nitric Acid, 50% (Boiling)		Х	Х	Х	Х	Х	Х	Х	Х	G	G	Х	Х
Nitric Acid, 65% (Boiling)		Х	Х	Х	Х	Х	Х	Х	Х	G	G	Х	Х
Nitric Acid, Concentrated													
(Boiling)		X	X			-		Χ	X	G	G	X	<u>X</u>
Nitric Acid, Inhibited RED													
fuming (IRFNA)		x	X			-			Х	E	E	E	Х
Nitric Acid, Red Fuming													
(RNFA)	E	Х	Х	Х	-	Х	Х	Х	Х	G	G	G	Х

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon® is a registered trademark of Dupont.

#### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Nitrobenzene (Under 100°F)	E	Х	Х	Х	G	Х	х	-	G	G	G	G	E
Nitroethane	E	X	X	X	E	G	-	-	E	E	E	E	E
Nitrogen	E	E	E	G	E	E	E	E	E	E	E	E	E
Nitrogen Fertilizer Solution													
Nitrogen Oxide up to 50%													
(Under 100°F)		E	E	G	Е	E	-	E	E	E	E	-	Х
Nitromethane (Permiable)	E	X	X	X	-	-	-	E	E	E	E	E	E
Nitropropane		X	X	X		-	-	E	E	E	E	E	E
Nitrous Oxide (Gas)	E												
N-Octane		X	G	-	E	X		-	E	E	E		E
Nuto H													
Nyvac 20 (WG), 30 (WG)			E	-	-	-		-	E	E	E	E	E
Nyvac FR Fluid			E	-	-	-		-	E	E	E	E	E
Nyvac FR200 Fluid			E	-	-	-	-	-	E	E	E	E	E
0-148 (NATO)													
Octyl Alcohol	E												
Oil (SAE, Under 100°F)	E	E	E	E	E	G	E	E	E	E	E	E	E
Oil Synthetic Blends													
Oils Crude	E	X	G	-			-	-	-	E	E		-
Oleic Acid (Under 120°F)	E	G	G	G	E	G	E	E	G	G	E	E	G
Oleum 25%													
Oleum Spirits ( to 70°F)	E												
Olive Oil	E	X	G	G	G	X	-	-	G	E	E	E	G
Orthodichlorobenzene													
OS 45 Type III (OS45)	E	E	G	-	-	-		-	-		-	-	-
OS 45 Type IV (OS45-1)	E	E	G	-	-	-	-	-	-		-	-	-
OS 70		E	G	-			-	-	-	-			-
Oxalic Acid (5%, Hot and Cold)		G	G	-	-	-		G	X	G	E	E	X
Oxalic Acid	E	X	X	x	E	G	X	Х	X	G	E	G	X
Oxalic Acid (10% Boiling)		X	X	-	-	-			X	X	X	x	X
Oxalic Acid (10%)		G	G	-	-	-		G	X	G	E	E	X
Oxygen (200°-400°F)		X	x	-			-	-	-	-	-	-	
Oxygen Cold		E	G	-	E		-	E	G	E	E	E	E
Oxygen Gaseous	E	-	-	-		-			-	-		E	-
Ozone (Dry)	E	G	X	G	E	G	E	G	E	E	E	E	E
Ozone (Wet)	E		X	-	-	-		-	x	G	E	G	
Pacemaker Types 150T			<u> </u>						·			<u> </u>	
300T, 500T (Citao)		-	E	-					-	-			
Paint	F	x	-	-		x	X	G	-	F	F		F
	-						•	-		-	-	-	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

<b>E</b> = Excellent resistance	X = Not recommended	Blank = No Data
<b>G</b> = Good resistance	- = Testing recommended	

	Hose						Fittings and Adapters 						
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Paint Solvents (Oil Base)		Х	х	-	-	х	х	G	-	E	E	E	E
Paint Thinner, Duco	E	G	E	-	-	-	-	E	G	G	E	G	Х
Paints (Oil Base)	E	-	E	-	-	E	-	E	-	-	-	-	-
Palm Oil	E	G	E	G	-	G	-	-	E	E	E	E	E
Palmitic Acid	E	G	G	G	E	X	E	E	G	G	E	E	Х
Paradichlorobenzene													
Paraffin (Petroleum)		G	E	G	E	X	-	E	G	E	E	E	E
Paraformaldehyde	E	G	G	G	-	G	G	-	E	E	E	E	-
Peanut Oil (Under 100°F)	E	G	E	G	-			-	E	E	E	E	E
Pentane ( Gas or Liquid )	E												
Pentasol		G	G	G	-	G		-	E	E	E	E	E
Perchloric Acid	E	X	X	-	-	G	X	X	X	G	E	X	
Perchloroethylene													
(Tetrachloroethylene)	E	Х	Х	Х	G	Х		G	E	E	E	Х	Х
Petroleum Oil (Above 250°F)	E	X	X		-			-				-	-
Petroleum Oil (Crude)	E	G	E		-	-		-	-		-	-	-
Petroleum Oil (Under 250°F)		G	E	-	-	-		-	-		-	-	-
Petroleum Oils (Refined)		G	E	G	-	G	G	E	E	E	E	E	E
Petroleum Oils (Sour)	E	G	G		-	X	G	-	G	E	E	E	X
Petroleum Oils (Under 100°F)		G	E	G	-	G	G	-	E	E	E	E	E
Phenol (7030 Water)		X	X		-			-		E	E	E	
Phenol (85/15 Water)		X	X		-	-		-	-	E	E	E	-
Phenol (Carbolic Acid)	E	X	X	X	E	Х	Х	X	G	E	E	E	Х
Phenylamine													
Phorone													
(Diisopropylidene Acetone)	E	Х	Х		-	Х	Х	-	E	E	E		Е
Phosphate Esters (3 Molar)		X	X		G	G	X	G				-	
Phosphate Esters													
(Concentrated)	E	х	Х		Х	Х	Х	G	-		-		
Phosphate Esters (Dilute)	E	x	X	-	E	E	X	G	-		-	-	-
Phosphoric Acid	E	G	G		-	-		-	-		G	-	-
Phosphoric Acid (1%)		G	-	-	-	-		-	-	E	E	-	Х
Phosphoric Acid (10% Hot)		G	X	-		-		-	X		E	X	X
Phosphoric Acid (10%)		G	X	-	-	-	-	-	X		E	X	X
Phosphoric Acid (3 Molar)		x	X	-			-	-	-	-	-	-	
Phosphoric Acid (5%)		G	X	-			-	-	-	E	E	-	X
Phosphoric Acid (50% Hot)		G	X	-				-	X	X	G	X	Х
Phosphoric Acid (50%)		G	G	G	E	E	X	X	X	G	E	X	G
Phosphoric Acid (85% Hot)			X						x	X	x	X	X

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No Data- = Testing recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Phosphoric Acid (85%)		G	Х		E	E	х	Х	Х	G	G	х	X
Phosphoric Acid (Aerated)		-	-	-	-	-	-	-	X	-	G	-	-
Phosphoric Acid													
(Concentrated)	E	Х	Х	-	-		-	-	-	-			-
Phosphoric Acid Air Free		-	-	-	-	-	-	-	X		-	Х	-
Phosphorous Trichlor	E												
Photographic Developers	E	E	E	-	-		-	-	X	E	E	-	-
Photographic, Emulsions	E	-	-	-	-	-	-	-	-	-	-	-	-
Photographic, Fixing													
Solutions	E	G	-	-	-	G		-	-	E	E	-	-
Phthalic Acid		-	-	-	-	-		-	G	G	E	G	-
Picric Acid (Water													
Solution 100°F)	E	G	G	G	-	G	G-	Х	Х	E	E	Х	Х
Picric Acid Molten													
Pine Oil	E	X	G	-	G	X	-	E	E	E	E	E	-
Pinene	E	X	G	-	G			-	E	E	E	E	E
Piperazine Hydrochloride													
Solution (34%)		-	G					-	-			-	-
Pitch		G	E	-		G	G	E	-		-	-	-
Plating Solutions (Chrome)	E	X	X				Х	X	-	Х	Х		-
Plating Solutions (Other)	E	-	E	-			-	-	-		-		-
Polyester Resin		-		-				G	-		-	-	-
Polyol Ester													
Polyurethane Foam													
(Under 125°F)		-	-					-	-		-		-
Potassium Acetate	E	G	G	-	E	G	X	-	G	E	E	X	-
Potassium Bicarbonate	E	E	E	-	-	E	-	E	E	G	G	E	-
Potassium Bisulfite	E	-	E	-	-	-	-	E	-	-	-	-	-
Potassium Bromate	E	-	-	-	-	-		-	-	-	-	-	-
Potassium Bromide	E	E	E	-		E	G	E	X	X	G	X	-
Potassium Carbonate													
(Potash)	E	E	E	E	Е	Е	G	Е	G	E	E	Х	Х
Potassium Chlorate	E	E	E				G	E	G	G	G	G	
Potassium Chloride (1% to 5%)	E	E	E	-	E	-	G	E	E	G	G	X	X
Potassium Chloride (Boiling)		-	-				-		-	G	G	-	Х
Potassium Cyanide	E	E	E	-	E		-	E	G	G	G	X	X
Potassium Dichromate	E	E	E	-	E	-	-	G	E	G	G	G	
Potassium Ferrocyanide	E	-	-	-			-		G	E	E	G	
Potassium Fluoride	E	-	-	-			-	-	-	-	-		-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

E = Excellent resistance X = Not recommended **G** = Good resistance

Blank = No Data - = Testing recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	CPE	СЅМ	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Potassium Fluoride	E	-	-	-	-	-	-	-	-	-	-	-	-
Potassium Hydroxide	E	G	G	-	-	-	-	-	E	E	E	-	-
Potassium Hydroxide													
(27%Boiling)		-	-	-	-	-		-	G	G	E	Х	Х
Potassium Hydroxide (5%)		E	E	-	-	-	-	E	G	G	G	X	Х
Potassium Hydroxide													
(50% Boiling)		-	-	-	-	-	-	-	G	G	G	Х	Х
Potassium Hydroxide													
(70% Hot)		-		-	-	-		-	Х	-	-	Х	Х
Potassium Hydroxide (70%)		-	E	-	-	-	-	-	-	-	-	X	Х
Potassium Hydroxide													
(30% Caustic Potash)		-	-	-	Е	-		-	-	-	-		-
Potassium lodide		E	E	-	-	E	-	E	E	G	G	-	-
Potassium Nitrate	E	E	E	-	E	-	E	E	E	E	G	G	G
Potassium Nitrate (1% to 5%)		E	E	-		-		-	E	E	E	E	G
Potassium Permanganate	E	E	G	-	-	-		G	E	G	G	G	-
Potassium Permanganate (5%)		E	E	-	-	-		E	E	E	E	E	-
Potassium Persulfate	E	-	-	-		-		-	-		-		
Potassium Phosphate	E	E	-	-	-	E		-	X	G	G	X	-
Potassium Sulfate	E	E	E	-	E	-	E	E	E	G	G	E	-
Potassium Sulfate 1% & 5%		E	E	-		-		E	E	E	E	E	Х
Potassium Sulfide		E	E	-	-	-	-	-	G	G	G	-	-
Potassium Sulfite (to 300°F)	E	E	E	-	E	-	-	-	E	E	E	E	-
Potassium Thiosulfate	E	E	-	-	-	E	-	-	-	-	-	-	-
Primatol A, S, P (Ag Spray)		-	-	-	-	-		-	-	-	-	-	-
PRL-High Temp Hydraulic Oil		G	E	-	-	-	-	-	E	E	E	E	-
Propane Gas	E	X	X	-	-	-	X	X	X	E	E	E	-
Propionic Acid	E	X	X	-	-	-	-	-	E	-	G	G	-
Propyl Acetate	E	X	X	-	G	-	-	-	E	-	-	-	-
Propylene (Liquid or Gas,													
Ambient)	E	Х	Х	-	Е	-		G	E	E	E	E	
Propylene Dichloride	E	-	-	-	-	-	-	-	E	G	E	X	-
Propylene Glycol		E	X	-	E	E	E	G	E	G	G	E	-
Propylene Oxide (Permiable)	E	X	X	-		-	-	-	G	E	E	G	-
Purina Insecticide	·	X	X	-		-	-	G	E	E	E	E	G
Puropale RX Oils		-	E	-	-	-	G	E	E	E	E	E	E
Pydraulic		X	X	-		-	-		-		-	-	-
Pydraulic 10E,29E-													
LT,30E,60,65E,115E		х	х	-	G	-		-	E	E	E	E	E
Pydraulic 135 ( to 70°F)	F	-	X	-	G			G	F	F	F	-	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

#### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose		1						Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Pydraulic 150		х	Х	Х	G	х	G	G	E	E	E	E	E
Pydraulic 280 (at 400°F)	G	X	Х	Х	G	Х	G	G	E	E	E	-	-
Pydraulic 312 (to 70°F)	E	X	X	X	G	-	G	E	E	E	E	-	-
Pydraulic 50E		-	-	-	G	-	G	E	E	E	E	-	-
Pydraulic 540 (to 70°F)	E	X	Х	X	G	Х	Х	X	E	E	E	-	-
Pydraulic 625		X	X	X	G	X	G	G	E	E	E	-	-
Pydraulic A-200		X	X	X	G	X	Х	G	E	E	E	-	-
Pydraulic F-9		X	Х	X	G	Х	G	E	E	E	E	-	-
Pyranol, Transformer Oil													
(to 70°F)	E	G	E	-	-	-	-	-	E	E	E	E	-
Pyridine	E	x	X	-	-	X	E	-	E	E	E	E	E
Pyrogard 160, 230, 630		-	-	-	-	-	-	-	E	E	E	-	-
Pyrogard 51, 53, 55		-	X	-	-	-	-	-	E	E	E	-	-
Pyrogard C, D	E	-	E	-	-	-	G	E	E	E	E	E	E
Pyrolube		E	X	-	-	-	-	-	-	-	-	-	-
Quench Oil	E	G	G	-	-	-		-	-	E	E	E	-
Quintolubric 700													
Quintolubric 822		X	E	-	-	-	-	-	E	E	E	E	E
Quintolubric 957, 958													
Ramrod (Ag Spray)		-	-	-	-	-	-	E	E	E	E	E	E
Rando Oils		-	E	-	-	-	G	E	E	E	E	E	E
Rape Seed Oil		G	Х	-	-	Х	-	G	E	E	E	E	E
Red Line 100 Oil	E	G	E	-	-	-	-	-	-	-	-	-	-
Red Oil (Comm. Oleic Acid,													
MIL-H-5606)	E	G	G	G	Е	G	-	E	G	G	E	E	G
Refined Wax (Petroleum)		G	E	G	-	-	G	E	E	E	E	-	E
Refrigerant Freon 113													
(see Freon)	Use Freon H	Hose Only											
Refrigerant Freon 114													
(see Freon)	Use Freon H	Hose Only											
Refrigerant Freon 12													
(see Freon)	Use Freon H	Hose Only											
Refrigerant Freon 22													
(see Freon)	Use Freon H	Hose Only											
Refrigerant Freon 502													
(see Freon)	Use Freon H	Hose Only											
Refrigerant HFC 134A													
(see Freon)	Use Freon H	Hose Only											
Regal Oils R&O			E	-	-	-	G	E		-	-		-
Resorcinol													

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the ube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

396

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### Rating Scale

<b>E</b> = Excellent resistance	X = Not recommended	Blank = No Data
<b>G</b> = Good resistance	- = Testing recommended	

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Richfield Weed Killer		Х	G	-	-	Х	-	-		-	-	-	-
Round Up		G	G	-	-	-	-	E	G	E	E	E	E
Rubilene Oils		-	E	-	-		G	E	-	-	-	-	-
SAE N° 10 Oil	E												
Safco-Safe T10, T20													
Safetytex 215		-	X	-	-			-	-		-		
Salicilic Acid ( to 400°F)	E	E	X	-	-			E	E	E	E	G	
Salt Water (See Water)	E	G	G	G	-	G	E	E	G	E	E	X	G
Santo Safe 300		X	X	-	-			-	E	E	E	E	
Santosafe W-G15,												·	
W-G20, W-G30		-	E		-		G	E	E	E	E	E	E
SCC 7204 (Stauffer)		-	-		-	-		-					-
Sevin		-	-	-	-			E	-		-		-
Sewage	E	G	G	G	E	G		E	X	E	E	G	G
Shell IRUS 902	E												
Shell IRUS 905	E											·	
Shell Pella-A													
Shell Tellus													
Shellac (to 400°F)		G	E		-			E	E	E	E	E	-
Shellac (Bleached) (to 400°F)	E	G	E		-	-		E	E	E	E	E	G
Shellac (Orange) (to 400°F)	E	G	E		-	-		E	E	E	E	E	G
Silicate Ester (to 400°F)	E											· · · · · · · · · · · · · · · · · · ·	
Silicone Greases	E	G	G	G	-	G		E	E	E	E	E	E
Silicone Oils	E	G	G	G	-	G		E	E	E	E	E	E
Silver Cyanide	E	E	-	-	-		-	-	E	E	E	X	-
Silver Nitrate	E	E	E	E	E	E		E	G	E	E	E	G
Skelly, Solvent B, C, E		X	E	-	-		-	-	-	-	-	-	-
Skydrol 500A & 7000													
(to 200°F)	E	Х	Х	Х	G	Х	-	Е	E	E	E	E	-
Soap oil	E	X	X	-	-	X	-	-	E	E	E	-	-
Soap Solutions	E	G	E	G	E	E	E	E	E	E	E	E	E
Soda Ash (Sodium Carbonate)	E	E	E	E	E	E	E	E	E	E	E	X	G
Soda Water	E	-	-	-			E	E	-		-	-	
Sodium Dichromate		G	E	-	E	G	E	E	-		-	-	-
Sodium Hypochlorite -													
100% (to 200°F)	E	E	Х	-		-	-	-	Х	Х	Х	Х	-
Sodium Hypochlorite 20%													
(to 400°F)	E	Х	Х	Х	Е	Е	Х	E	Х	Х	G	Х	Х
Sodium Hypochlorite 5%	E	-	X	X	E	E	X	E	X	X	G	X	Х
Sodium Hyposulfate	F	X				-		-	X	F	F	x	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Sodium Metaphosphate	E	G	G	G	E	G	-	E	Х	E	E	E	Х
Sodium Nitrate	E	х	х	-	E	G	E	E	E	G	G	G	G
Sodium Perborate	E	Х	X	-		Х		G	X	E	E	E	Х
Sodium Peroxide													
(Sodium Dioxide)	E	E	G	E	G	Е		Х	Х	E	E	E	Х
Sodium Phosphate	E	X	E	-	E	-	E	E	G	E	E	X	Х
Sodium Phosphate (Dibasic)	E	G	E	-	-	-	-	-	-	-	-	-	-
Sodium Phosphate (Mono)	E	E	E	-	-	-	-	-	-	-	-	-	-
Sodium Phosphate (Tribasic)		G	E	-			-	-	G	G	G	-	
Sodium Silicate		E	E	-	E	E	G	E	G	G	G	X	Х
Sodium Silicate (Hot)	E	E	E	-	-		-	-	G	G	G	X	Х
Sodium Sulfate	E	E	E	-	E	E	E	E	G	E	E		G
Sodium Sulfide	E	E	E	-	E	E	E	E	X	X	G	X	Х
Sodium Sulfide Saturated													
- 100%	E	E	E	-	-		-	E	G	G	E	Х	Х
Sodium Sulfite		G	G	G	E	G	E	G		E	E		X
Sodium Sulfite 10% @ 150°F		E	E	-			-	-	G	G	G	G	
Sodium Sulfite 5%			E	-				-		E	E	E	
Sodium Thiosulfate													
(hpo, Antichlor)	E	E	Е	E	Е	Е	E	Е	х	E	E	G	Х
Sodium Tripolyphosphate												·	
(STPP) (to 70°F)	F		-					-		F	F	х	Х
Sodium Acetate	 E	X	X	X	E	X	G	E		E	E	E	E
Sodium Benzoate	F						F	-	-				
Sodium Bicarbonate	 F		F	F	F	F	 F	F	G	F	F	G	G
Sodium Bisulfate (Niter Cake)		 F	F	 F	 F	 F	 F	 F		 G	F	- <u>-</u>	X
Sodium Bisulfite	F	 F	F	 F	 F	 F	 F	 F	G	 F	F	G	
Sodium Borate	 F	 F	F	 F	 F	 F	 F	 F	 F	 F	 F		
Sodium Carbonate	 F	 F	 F	 F	 F	 F	 F	 F	<u> </u>	G	G	x	G
Sodium Chlorate	 F	<u> </u>		-		F		 F	<u> </u>	<u> </u>	G	x	-
Sodium Chloride	E				F	F	E	 F	<u> </u>	<u> </u>	<u>Б</u>	× ×	X
Sodium Chloride - 2%	 F	F		-	-	-		 F	<u> </u>	<u> </u>	F	- <del>x</del>	X
Sodium Chloride - 5%	E									<u> </u>		· <del>x</del>	X
Sodium Chloride - 5%		<u> </u>										<u>~</u>	
@ 150°F	F	F	F					F		G	F		x
Sodium Chlorido Saturated	<u> </u>	E	<u>г</u>					<u>г</u>			<u> </u>	- <u>-</u>	
Sodium Chloride Saturated	<u> </u>	L	<u> </u>				-	<u> </u>	-	L	L	<u>^</u>	
(Roiling)	F									G	F	v	
	E								-		L	^	
Souidm Chionde Siurry		-	-	-	-	-	-	-	-	-	-	-	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

<b>E</b> = Excellent resistance	X = Not recommended	Blank = No Data
<b>G</b> = Good resistance	- = Testing recommended	

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Sodium Cyanide	E	E	E	E	E	E	E	E	G	E	E	х	х
Sodium Ferricyanide	E	-	-	-	-	-	-	-	G	G	G	-	-
Sodium Ferrocyanide	E	-	-		-	-		-	-		-		-
Sodium Fluoride	E	-	E	-	-	-		-	G	G	G		-
Sodium Fluoride (5%)	E	-	E	-	-	-		E	G	G	G	-	-
Sodium Fluoride (70%)	E	-	-		-	-		-	-		G		-
Sodium Hydrosulfide - 100%													
(to 70°F)	E	E	Х	-	-	-		-	-		-		-
Sodium Hydrosulfide - 45%													
(to 500°F)	E	E	Х	-	-	-	-	-	-		-	-	
Sodium Hydrosulfite	E	-	-	-	-	-	-	-	-	-	-	-	-
Sodium Hydroxide	E	G	G	-	-		-	-	G	-	-	-	Х
Sodium Hydroxide (10%)	E	-	-	-	E	-	-	-	-	-	-		
Sodium Hydroxide											-		
(20% Cold)	E	E	G		-	-		E	E	E	E	Х	Х
Sodium Hydroxide (20% Hot)	E	E	X	-	-	-		-	G	E	E	X	Х
Sodium Hydroxide (3M)		G	G	-	-	-		-	-	-	-		Х
Sodium Hydroxide (40%)	E	E	G	G	E	E		G	G	E	E	X	Х
Sodium Hydroxide													
(50% Cold)	E	G	Х	Х	Е	Е		G	G	G	G	Х	Х
Sodium Hydroxide (50%Hot)	E	-	-	-	E	G		X	X	G	G	X	Х
Sodium Hydroxide (60%)	E	G	X	X	E	G		X	X	G	G	X	Х
Sodium Hydroxide (70%Cold)	E	E	G		-	-		-	-		G	X	Х
Sodium Hydroxide (70%Hot)	E	-	-		-			-	-		-		-
Sodium Hydroxide (80%Hot)	E	E	X	-	-	-		-	X	X	X	X	Х
Sole													
Solnus Oils		-	E		-	-	G	E	E	E	E	E	E
Solvac 1535 G		-	-	-	G	-		E	-		-		-
Sour Crude Oil		-	-		-	-		-	-				-
Soybean Oil	E	G	G	G	-	G		E	E	E	E	E	-
Spent Acid		-	-	-	-	G		-	-	E	E	-	-
SR-10 Fuel		X	G	-	-	-		-	-		-	-	-
SR-6 Fuel		x	E	-		-		-	-		-	-	-
SRF Fluid B (Shell)		-	X	-	-	-	-	-	-		-	-	
SRF Fluid C (Shell)		-	X	-		-	-	-	-	-		-	
Stannic Chloride	E	x	G	G	E	X		x	X	X	X	x	X
Stannic Chloride, 50%	E	x	 E	-				-	X	X	X	x	
Stannous Chloride												·	
(Under 150°E)	F	F	F		F	F	-	х	-	х	G	x	-

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### **Ontinental** ContiTech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose					_			Fittings	and Adapte	rs		
Chemical Name Stannous Chloride, 15% Stanoil N° 15, 18, 25, 31, 35, 51 Starch Staysol FR Steam-Water up to 250°F Stearic Acid Stearin Stoddard Solvent Styrene (Monomer) Styrene (Vinyl Benzene) Sucrose Solutions Sulfamic Acid (10% Under 170°F) Sulfate Black Liquor Sulfare Green Liquor Sulfur Chloride Sulfur Dioxide (Dry) Sulfur Dioxide (Dry) Sulfur Dioxide (Dry) Sulfur Trioxide (Dry) Sulfur Trioxide (Dry) Sulfur Chloride Sulfur Trioxide (Dry) Sulfur Acid (10%) Sulfur Acid (30%) Sulfuric Acid (50%) Sulfuric Acid (55%) Sulfuric Acid, 85% Sulfuric Acid, Arrated, No Velocity Sulfuric Acid, Fuming, Oleum (Permiable )	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Stannous Chloride, 15%	E	E	E	-		-	-	-	Х	х	-	Х	-
Stanoil N° 15, 18, 25, 31, 35, 51		-	E	-	-	-	G	E	E	E	E	E	E
Starch	E	G	G	-	-	E	E	E	X	E	E	E	-
Staysol FR		-	E	-	-		G	E	E	E	E	E	E
Steam-Water up to 250°F	E												
Stearic Acid	E	G	G	G	E	G	E	E	X	G	E	X	Х
Stearin		-	-	-	-		E	G	-	-	-		-
Stoddard Solvent	E	G	G	X	E		X	E	G	E	E	E	E
Styrene (Monomer)	E	-	X	-	G			G	G	X	G	X	G
Styrene (Vinyl Benzene)		x	X	-				E	E	E	E	E	E
Sucrose Solutions	E	E	E	E	-	E		-	E	E	E		-
Sulfamic Acid (10%													
Under 170°F)	E	-	-		Е	G		-					
Sulfate Black Liquor	E	E	E			-		E	G	G	G	Х	
Sulfate Green Liquor	E	E	E					E	G	G	G	X	
Sulfur	E	-	-	-				-	-				-
Sulfur (Molten)		x	X			-		-	-				
Sulfur Chloride	E	x	X	X		G		G	X	X	G	X	Х
Sulfur Dioxide (Dry)	E	x	X	X		G		X	G	E	E	E	E
Sulfur Dioxide (Liquid)	E	G	X	-	-	G		-	-		-	-	-
Sulfur Dioxide (Moist)	E	G	X			G		E	-	G	E	E	Х
Sulfur Hexafluoride (Gas)													
(to 70°F)	E	E	G	-		G		Х	-				
Sulfur Trioxide (Dry)	E	x	X	X	X	X		E	G	G	G	G	Х
Sulfuric Acid (10%)	E	E	G	G	E	E		X	-	X	Х	G	Х
Sulfuric Acid (30%)	E	E	-	-	E	E		X	X	X	G	Х	Х
Sulfuric Acid (50%)	E	G	X	X	E	E	-	x	X	X	G	X	Х
Sulfuric Acid (75%)	E	x	X	X	-	G	-	X	X	X	G	X	Х
Sulfuric Acid (93%)	E	x	X	X	-	X	-	X	G	X	G	Х	Х
Sulfuric Acid (98%)	E	x	X	X	X	X		Х	G	X	G	X	Х
Sulfuric Acid, 3 Molar		x	X	-	-	-	-		-	-	-	-	-
Sulfuric Acid, 85%	E	x	X	-	-	-	-	-	X	G	E	Х	-
Sulfuric Acid, Aerated,													
No Velocity	E	-	-	-	-	-	-		G	G	G	Х	-
Sulfuric Acid, Air Free,													
No Velocity	E	-	-	-					х	Х	G	Х	
Sulfuric Acid, Concentrated	E	x	X	-	-	-	-		-	E	E	-	-
Sulfuric Acid, Fuming, Oleum													
(Permiable )	E	х	-	-		-	-		G	E	E	G	
Sulfurous Acid	F		G	-			-	x	X	X	G	G	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the ube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

ContiTech

**Ontinental** 

Fittings

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

= No Data

#### **Rating Scale**

E = Excellent resistance	X = Not recommended	Blank
<b>G</b> = Good resistance	- = Testing recommended	

	Hose					Fittings and Adapters							
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Sulfurous Acid (10%)	E		х	-	E	E	-	-	-	х	G	E	х
Sulfurous Acid (75%)	E	X	X	X	E	E	-	Х	X	Х	G	Х	Х
Sulphuric Acid 10%		-	G	-	-	-	-	X	X	G	E	Х	Х
Sulphuric Acid 5%		-	E	-	-	-		Х	G	G	E	Х	Х
Sulphuric Acid 5% Boiling		X	-	-	-	-	-	Х	X	Х	-	Х	Х
Sulphuric Acid 50%		X	X	-	-		-	X	X	X	X	X	X
Sulphuric Acid, Concentrated		X	X	-	-		-	X	-	E	E	X	Х
Sulphuric Acid, Concentrated													
@ 300%		Х	Х		-			-	Х	Х	Х	Х	Х
Sulphuric Acid, Concentrated													
Boiling		Х	Х		-			-	Х	Х	Х	Х	Х
Sulphuric Acid, Fuming		X	-		-			-	G	G	G	X	
Sulphuric Acid 10% Boiling		X	X	-	-			X	X	X	-	X	Х
Sulphurous Acid, saturated		X	X		-	-		G	-	E	E	X	Х
Sun Minesafe, Sunsafe													
Sun R&O Oils		-	E	-	-		G	E	E	E	E	E	E
Sunsafe (Fire Resist.Hydr.													
Fluid) to 70°F	E	G	E	-	-		G	E	E	E	E	E	
Suntac HP Oils		-	E	-	-		G	E	E		E	E	-
Suntac WR Oils		-	E	-	-	-	G	E	E		E	E	-
Sunvis Oils 700, 800, 900			E	-			G	E	E	E	E	-	
Super Hydraulic Oils													
(Conoco)		-	E	-	-		G	E	E	E	E	E	
Sutan Plus, Herbicide		X	X	X	E			E	E	E	E	E	
Sutazine Plus, Herbicide		X	X	-	E		-	E	X	E	E	E	-
Synesstic													
Synthetic Oil (Citgo)			-	-			G	E	E	E	E	-	
Syrup	E	G	E	G	-		-	E	-	E	E	E	-
Tall Oil (Under 100°F)	E	G	G	G	-	X		-	G	X	G	X	
Tallow	E	G	G	G			-	E	G	G	G	E	G
Tannic Acid (10%)	E	G	X	-	E	G	-	X	G	E	E	G	X
Tannin		E	E	-	-			E	-		-	-	
Tar (Bituminous, Under 100°F)	E	G	G	G	X			-	E	E	E	E	G
Tar and Tar Oil		G		-			G	E	E	E	E	E	G
Tartaric Acid	E	G	G	G	E	E		E	X	G	G	G	X
Tellus Oils (to 70°F)	E	-	E	-			G	E	E	E	E	E	E
Tenol Oils		-	E	-			G	E	E	E	E		-
Tergitol		-		-				-	G	E	E	-	G
Ternineol	F	×	G		F	G		G	F	F	F	F	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

### Continental S Contilech

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommended- = Testing recommended

Blank = No Data

d resistance - = Testing re

	Hose								Fittings	and Adapte	rs		
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Terresstic			E	-	-	-	-	E	E	E	E	-	-
Tertiary Butyl Alcohol													
Tetra Chloro Benzene													
Tetra Chloro Ethane	E												
Tetra Chloro Ethylene													
(Permiable)	E												
Tetra Chloro Methane	E												
Tetra Chloro Naphthalene													
Tetra Ethylene Glycol													
Tetraethyl Lead		G	G	-		-	-	G	-	-	-	-	-
Tetraethyl Lead Blench		X	G	-		-	-	-	-	-	-	-	-
Tetrahydrofuran (THF)		X	X	-	-	X	G	E	G	E	E		-
Tetralin		X	X	-	-	Х		G	E	E	E	E	-
Texaco 760 Hydrafluid													
Texaco 766, 763 (200-300)													
Thiopen (to 70°F)	E	X	X	-	-	-		-	-		-	-	-
Tim-Sol													
Titanium Tetrachloride	E	X	X	X		-	-	-	E	G	G	X	X
Toluene (Toluol)	E	X	X	X	X	X		E	E	E	E	E	E
Toluene Diisocyanate													
(Under 150°F)	E	х	-	-			-	-	E	E	E		
Transformer Oil													
(Askarel Types)		Х	Х	Х	Е	Х		-	E	E	E	E	
Transformer Oil													
(Petroleum Type)	E	G	E	G	Е	Х	G	E	E	E	E	E	E
Transmission Fluid Type A	E	G	E	G	E	G	-	G	E	E	E	E	E
Tributil Phosphate	E	X	X	X	G	X		-	E		-	x	
Tributoxyethyl Phosphate	E	X	X	X	X	X	-	G	E	-	-	x	-
Tributyl Phosphate	E											·	
Trichloro Acetic Aci	E											·	
Trichloro Etane (Permiable)	E											·	
Trichloroethylene													
(Permiable)	E	х	х	х	G	Х		G	х	G	E	Х	E
Trichloromonofluoroethane			<u> </u>	·					·				
(Freon 113) (to 200°F)	E	-	E						E	E	E	х	-
Trichloromonofluoroethane									<u> </u>				
(Freon 17) (to 200°F)	F	-	-	-			-	-	F	F	F	х	
Tricresyl Phosphate		x	×	×	F	X		F	– F	<u> </u>	<u> </u>	x	_
	F	<u> </u>	<u> </u>	-		<u> </u>		– F			F	F	F

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

Equipment & Accessories

Assemblies

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### Rating Scale

X = Not recommendedBlank = No DataTesting recommended

	Hose			Fittings and Adapters										
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass	
Triphenyl Phosphate														
Tripolyphosphate (STPP)		X	E	-	-	-	-	-	-	G	E	Х		
Trisodium Phosphate E														
Tung Oil ( to 400°F)	E	G	G	-	-	G		E	E	E	E	E	E	
Turbine Oil #15														
(MIL-L-7808A) (to 70°F)	E	Х	E	-	-	-		-	E	E	E	E		
Turbine Oil (to 250°F)	E	Х	E	-	-	-	-	-	E	E	E	E	-	
Turbo Oil #35		X	G	-	-	-	-	-	E	E	E	E	-	
Turpentine	E	x	G		G	Х	E	E	X	E	E	E	G	
Tycol A Turbo 37, 50, 58, 60		-	E	-	-	-	G	E	E	E	E	-	-	
Tycol Avalon 50, 57, 60		-	E	-	-	-	G	E	E	E	E	-	-	
Type I Fuel (MIL-S-3136)														
ASTM Fuel A (to 300°F)	E	G	E	-	-		-	-	E	E	E	E		
Type II Fuel (MIL-S-3136)		X	G	-	-	-	-	-	E	E	E	E		
Type III Fuel (MIL-S-3136)														
ASTM Fuel B (to 300°F)	E	Х	E	-	-		-	-	E	E	E	E		
Ucon Hydrolube Types														
150CP, 200CP		-	E	-	-	-	G	E	E	E	E	E	Е	
Ucon Hydrolube Types														
275CP, 300CP, 550CP														
(to 70°F)	E	-	-	-	-		-	-	-		-			
Ucon M1		-	E	-	-		G	E	E	E	E	E	E	
Union ATF Dexron		-	E	-	-	-	G	E	E	E	E	E	E	
Union ATF Type F		-	E	-	-	-	G	E	E	E	E	E	E	
Union C-2 Fluid		-	E	-	-		G	E	E	E	E	E	E	
Union C-P Oil		-	E	-	-	-	G	E	E	E	E	E	E	
Union Hydraulic Oil AW		-	E	-	-	-	G	E	E	E	E	E	E	
Union Hydraulic Tractor Fluid		-	E	-	-		G	E	E	E	E	E	E	
Univis 40, Hydraulic Fluidon		G	E	-	-	-	-	-	E	E	E	E	-	
Unleaded Gasoline	E													
Urea Solution	E	E	G	-	E	E	G	E	E	E	E	G	-	
Urethane Formulatons														
Uric Acid 100% (to 250°F)	E													
Uric Acid 75% (to 400°F)	E													
Varnish	E	X	X	X	X	X	-	E	G	E	E	E	G	
Vaseline	E													
Vegetable Oils	E	G	E	G	E	-	G	E	E	E	E	E	G	
Vegetable Oils (Hot)	-	-	-	-		-	E	G	G	G	E	G		
Versilube	E	E	E	-		-		-	E	E	E	E		

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the socover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### **Rating Scale**

**E** = Excellent resistance **G** = Good resistance X = Not recommendedBlank = No DataTesting recommended

	Hose								Fittings	and Adapte	rs	5				
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass			
Versilube F-50, F-44																
(to 70°F)	E	G	G	G	-	G	G	E	E	E	E	E	Е			
Vinyl Acetate	E	X	X	X	E	X	-	-	G	E	G	E	G			
Vinyl Chloride																
(Chloroethylene, Monomer)																
(Permiable )	E	Х	Х	Х	Х	Х		-	G	E	E	G	Х			
Vital 4300, 5310																
Vitrea Oils		-	E		-	-	G	E	E	E	E					
Volt Esso 35																
Water	E	E	E	E	E	E	E	E	E	E	E	E	E			
Water Glycols	E															
Water in Oil Emulsion		-	-	-			G	E	-	-		-				
Water, (Under 150°F)	E															
Water, (Up to 200°F)	E											·				
Water. Acid Mine	E	G	X	-				E	X	G	G	x	X			
Water. Brine		G	G	-		E	E			G	G					
Water. Demineralized	<u>—</u>	-	-	-	-			-	-	-	-		E			
Water, Distilled	F	G	F			F	F		x	F	F	F				
Water, Fresh	 F	 F	 F	-				 F	X	 F	F	- <u>-</u> F				
Water, Potable									· · · · · · · · · · · · · · · · · · ·							
EDA Tube Only)	F		Use FDA	Hose only					F							
Water, Salt	F	G	F	-				F	x	G	G	x				
Whiskey	 F								· · · · · · · · · · · · · · · · · · ·		-	X				
White & Baglev N° 2190																
Cuttina Oil		G	F					-	-							
White Oil (to 70°F)	F	<u> </u>														
White Pine Oil												x				
Wines			Use FDA	Hose only					·			· · · · · · · · · · · · · · · · · · ·				
Wood Alcohol									·			·				
Wood Oil (to 400°E)				-	F	G		F			F	 F				
Kenon	 F				<u> </u>											
(vlene Xvlol	F	×		-	x		G	G	G		G					
(vlidine		<u> </u>							<u> </u>							
Zeric												·				
Zinc Acetate	F		<u>к</u>			x	-	<u> </u>	F	F	F					
Zinc Carbonate (to 200°E)	<u>г</u>		<u>~</u>						<u> </u>			<u> </u>				
Zinc Caliboriate (10 200 F)	<u>–</u> F		F	F	F	F		F	×	G	F	x				
Zinc Chlonice Solutions	L	L	<u> </u>	L	L	E	-	<u> </u>	<u>^</u>		L	<u>^</u>				
	-				г	г				F	F					
コロ キロロ ドナ	Г	-	-	-	F	F	-	-	-	Г	Г	-				

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.

Hoses

Fittings

Equipment & Accessories

# **Chemical Resistance Tables**

The following is a representative list of fluids and manufacturers and a general guideline for the use and compatibility of Continental ContiTech hose and fittings.

#### Rating Scale

 E = Excellent resistance
 X = Not recommended
 Blank = No Data

 G = Good resistance
 - = Testing recommended

	Hose				Fittings and Adapters								
Chemical Name	PTFE (Teflon®)	CR (Polychloropene)	NBR (Nitrile)	Nitrile/ PVC	СРЕ	CSM	Urethane	Nylon	Carbon Steel	Stainless Steel 304	Stainless Steel 316	Aluminum	Brass
Zinc Hydrate Zinc Sulfate Solutions							G					-	
(to 300°F)	E	G	G	G	E	G	-	G	Х	G	E	Х	

Underline is cover compound rating only. Many factors, such as temperature, concentration and length of exposure, are relevant to how chemical exposure affects the tube and cover or fitting material. The fluid manufacturers recommended maximum operating temperature should be carefully observed. Exceeding the manufacturer's recommended maximum temperature can result in fluid breakdown and cause harm or shorten life of tube and cover materials. There may be instances where the hose cover could be adversely affected by fluids which would not chemically affect the hose tube. Conversely, some fluids with an adverse affect on the tube of the hose may not have a deteriorating effect on the hose cover. It is recommended that the user test the hose/fluid compatability to their own standards. Since no industry standards exist for chemical resistance, the Compass Chemical Resistance Guide for Elastomers is used whenever possible. Teflon\* is a registered trademark of Dupont.