

O-Ring Chemical Compatibility

buna-n | capfe | chemraz® | epdm | fetfe | kalrez® | silicone | viton® a





ACE GLASS
INCORPORATED

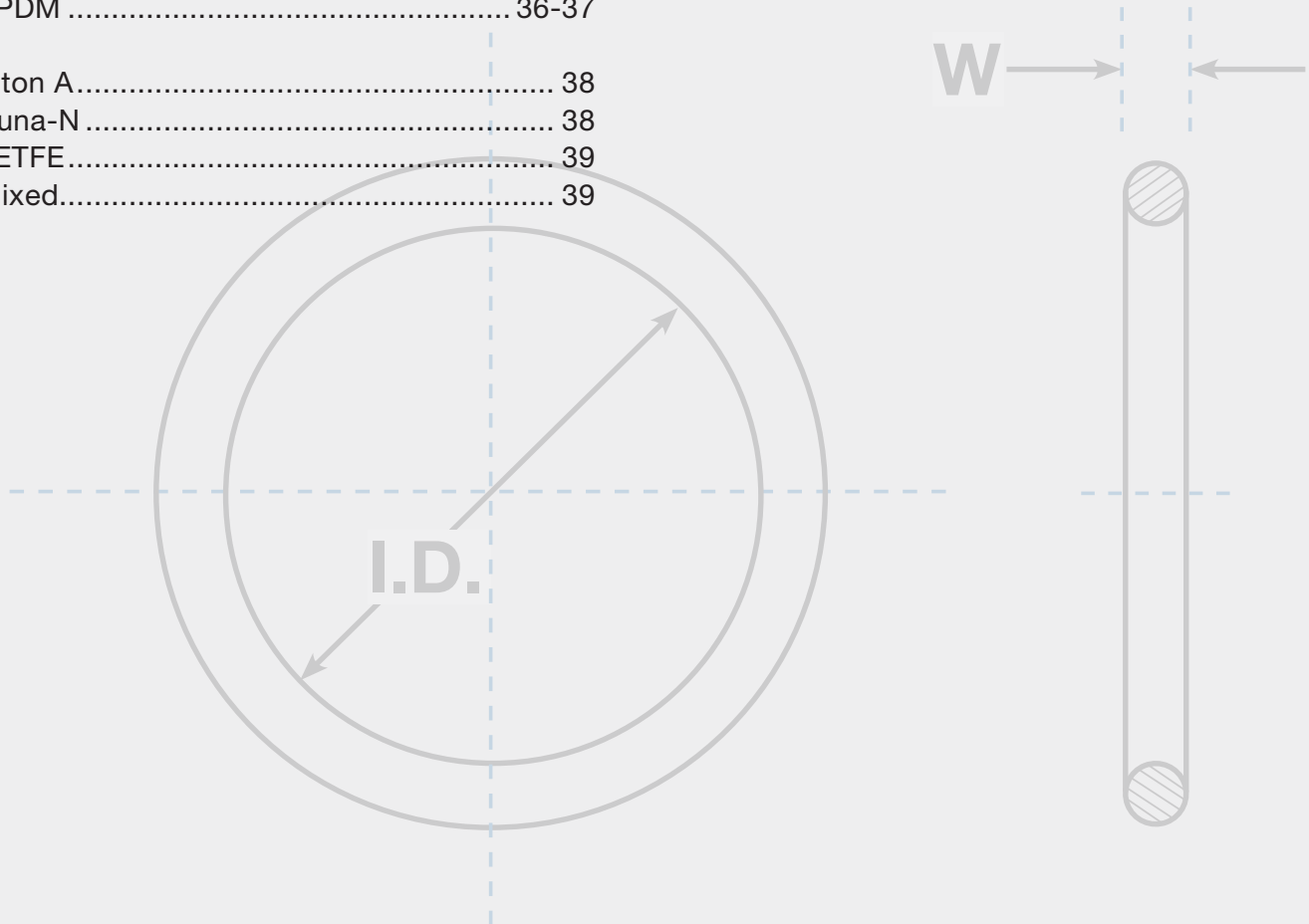
www.aceglass.com

The information in this document is intended to be for general reference purposes only and is not intended to be a specific recommendation for any individual application. Any reliance on information is therefore at the user's own risk. In no event will Ace Glass Incorporated be liable for any loss, damage, claim or expense directly or indirectly arising or resulting from the use of any information provided in this document. While every effort is made to ensure the accuracy of information contained herewith, Ace Glass Incorporated cannot warrant the accuracy or completeness of information.

Specifications are subject to change without prior notice. Although they are represented to be accurate, it is best to verify product specifications with ACE prior to purchase in the event they have been changed since publication of this catalog.

Table of Contents

Elastomers	4-5
Chemical Compatibility	6-20
Cross Reference.....	21
Size Reference	22-31
O-Rings	
Kalrez	32
Chemraz	33
CAPFE	34
Viton A.....	36-37
Silicone.....	36-37
Buna-N	36-37
FETFE.....	36-37
EPDM	36-37
Kits	
Viton A.....	38
Buna-N	38
FETFE.....	39
Mixed.....	39



ELASTOMERS

Viton® A Registered Trademark of E.I. DuPont & Co.

ASTM D1418: FKM (FPM)

Temperature range: -26 to 204 °C

Durometer: 75

Resistance to compression set: 1

Color: Black

The Viton® A is a fluoroelastomer dipolymer comprised of vinylidene fluoride and hexafluoropropylene. Provides good chemical resistance to petroleum products and solvents. Avoid polar solvents, amines, anhydrous ammonia, hydrazine and hot acids. Refer to the Elastomer Chemical Compatibility Chart for a more detailed list of chemical interactions.

Chemraz® 514 Registered Trademark of Green, Tweed & Co.

ASTM D1418: FFKM (FEPM)

Temperature range: -30 to 220 °C

Durometer: 70

Resistance to compression set: 2

Color: White

The Chemraz® 514 A is a white perfluoroelastomer with the broadest chemical resistance of any elastomeric material. Avoid acids, aldehydes, ethylene oxide and propylene oxide. Refer to the Elastomer Chemical Compatibility Chart for a more detailed list of chemical interactions.

Kalrez® 4079 Registered Trademark of E.I. Dupont & Co.

ASTM D395B: FFKM (FFPM)

Temperature range: -15 to 316°C

Durometer: 75

Resistance to compression set: 2

Color: Black

A low compression set compound for general-purpose use in O-rings, diaphragms, seals, and other parts used in the process and aircraft industries. It is a carbon black-filled compound with excellent chemical resistance, good mechanical properties, and outstanding hot air aging properties. It exhibits low swell in organic and inorganic acids and aldehydes and has good response to temperature cycling effects. A maximum operating temperature of 316°C (600°F) is recommended, with short excursions to higher temperatures possible. This compound is not recommended for use in hot water/steam applications or in contact with certain hot aliphatic amines, ethylene oxide and propylene oxide. Refer to the Elastomer Chemical Compatibility Chart for a more detailed list of chemical interactions.

CAPFE (Teflon FEP Encapsulated Silicone)

Temperature range: -60 to 204 °C

Durometer: 70

Resistance to compression set: 3

Color: Red

CAPFE O-rings have a clear Teflon FEP outer covering with a red silicone inner core. CAPFE o-rings offer excellent chemical compatibility and compression set.

FETFE

FKM + PTFE as an internal lubricant

Temperature range: -18 to 204 °C

Durometer: 70

Resistance to compression set: 2

Color: Generally Black

An ACE Glass exclusive fluoroelastomer compound with TFE additives. It has good compression set along with good temperature and chemical compatibility.

Buna-N

ASTM D1418 XNBR

Temperature range: -40 to 120 °C

Durometer: 70

Resistance to compression set: 2

Color: Black or Brown

Also known as nitrile rubber and is a synthetic blend of acrylonitrile and butadiene. Generally resists fuels and oils. Avoid highly polar solvents such as acetone, MEK, etc., and direct exposure to ozone and sunlight.

EPDM

ASTM D1418 EPDM

Temperature range: -55 to 150 °C

Durometer: 70

Resistance to compression set: 2

Color: Black or Brown

Excellent resistance to water, steam, and polar solvents, as well as ozone and sunlight. Also resistant to alcohols, glycol and phosphate ester hydraulic fluid. Avoid non-polar solvents, petroleum oil, and aromatic fuels.

Silicone

ASTM D1418 VMQ

Temperature range: -115 to 200 °C

Durometer: 70

Resistance to compression set: 2

Color: Red

Excellent material for extreme temperatures. Very good with ozone and UV radiation. Avoid chlorinated solvents, aliphatic and aromatic hydrocarbons and petroleum oils. Silicone is generally permeable to gases.



O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
ABIETIC ACID	1						
ACETALDEHYDE	2	4	4	2	2	4	1
ACETAMIDE	1	2	1	1	2	1	1
ACETANILIDE	1	3	3	1	2	1	-
ACETIC ACID AMIDE	1	3	1	1	2	1	1
ACETIC ACID ETHYL ESTER	1	4	4	2	-	-	1
ACETIC ACID METHYL ESTER	1	4	4	2	4	4	1
ACETIC ACID, 25% TO 60%	1	3	2	1	1	2	1
ACETIC ACID, 5%	1	1	2	1	1	2	-
ACETIC ACID, 85%	1	3	4	-	-	-	1
ACETIC ACID, GLACIAL	1	4	2	2	1	4	1
ACETIC ALDEHYDE	2	4	4	2	2	4	1
ACETIC ANHYDRIDE	1	4	4	2	3	4	1
ACETIC ESTER	1	4	4	2	2	4	1
ACETOACETIC ACID	1	4	3	1	2	1	-
ACETOL	1	4	4	1	4	4	1
ACETONE	1	4	4	1	4	4	1
ACETONE CYANOHYDRIN	1	4	3	1	2	1	-
ACETONITRILE	1	4	3	1	2	1	-
ACETOPHENETIDINE	1	1	2	4	-	2	-
ACETOPHENONE	1	4	4	1	4	4	1
ACETOTOLUIDIDE	1	1	2	4	-	2	-
ACETYL ACETONE	1	4	4	1	4	4	-
ACETYL BENZENE	1	4	4	1	4	4	1
ACETYL BROMIDE	1	1	4	1	4	4	-
ACETYL CHLORIDE	1	1	4	4	3	1	1
ACETYLENE	1	1	1	1	2	1	1
ACETYLENE DICHLORIDE	1	2	2	4	-	2	-
ACETYLENE TETRABROMIDE	1	1	4	1	4	2	-
ACETYLENE TETRACHLORIDE	1	1	4	1	4	2	1
ACETYLSALICYLIC ACID	1	1	2	4	-	2	-
ACROLEIN	1	4	3	1	2	1	-
ACRYIMIDE	1	3	1	1	2	1	1
ACRYLIC ACID, ETHYL ESTER	1	4	2	3	4	4	1
ACRYLONITRILE	1	4	4	4	4	4	1
ADIPIC ACID	1	2	1	2	-	1	1
ALIPHATIC DICARBOXYLIC ACID	1	1	2	4	-	2	-
ALKANES	1	1	1	4	2	1	-
ALKANESULFONIC ACID	1	1	1	4	2	1	-
ALKAZENE	1	2	4	4	4	2	1
ALKENES	1	1	2	4	-	2	-
ALKYL ACETONE	1	4	3	1	2	1	-
ALKYL ALCOHOL	1	4	1	4	2	1	-
ALKYL AMINE	1	4	1	4	2	1	-
ALKYL ARYL SULFONATES	1	1	1	4	2	1	-
ALKYL ARYL SULFONICS	1	1	1	4	2	1	-
ALKYL BENZENE	1	2	2	4	-	2	-
ALKYL CHLORIDE	1	2	2	4	-	2	-
ALKYL NAPHTHALENE SULFONIC ACID	1	1	1	4	2	1	-
ALKYL SULFIDE	1	1	2	4	-	2	-
ALLYL ALCOHOL	1	4	2	1	-	-	1
ALLYL CHLORIDE	1	2	2	1	-	-	-
ALLYLIDENE DIACETATE	1	3	3	1	2	1	-
ALPHA PICOLINE	1	3	3	1	2	1	-
ALUM POTASH	1	4	2	1	3	3	-
ALUMINUM ACETATE	1	4	2	1	4	4	1
ALUMINUM BROMIDE	1	1	1	1	1	1	-
ALUMINUM CHLORATE	1	3	3	1	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
ALUMINUM CHLORIDE	1	1	1	1	2	1	1
ALUMINUM FLUORIDE	1	1	1	1	2	1	1
ALUMINUM FORMATE	1	4	3	1	2	1	-
ALUMINUM HYDRATE	1	2	2	2	2	-	-
ALUMINUM HYDROXIDE	1	1	2	2	2	-	-
ALUMINUM LINOLEATE	1	1	1	4	2	1	-
ALUMINUM NITRATE	1	1	1	1	2	-	1
ALUMINUM OXALATE	1	3	3	1	2	1	-
ALUMINUM PHOSPHATE	1	1	1	1	1	-	-
ALUMINUM POTASSIUM SULFATE	1	1	3	1	2	1	-
ALUMINUM SALTS	1	1	1	1	1	1	-
ALUMINUM SODIUM SULFATE	1	1	3	1	2	1	-
ALUMINUM SULFATE	1	1	1	1	1	1	1
ALUMS	1	1	1	1	1	4	1
AMINES MIXED (ALLYL, ETHYL, ETC.)	1	4	4	2	2	4	-
AMINO BENZENE	1	2	4	2	4	3	1
AMINOBENZOIC ACID	1	2	4	2	-	-	-
AMINOETHANOL (2-AMINOETHANOL)	1	4	4	2	2	4	-
AMINOMETHANE	1	4	4	1	2	1	1
AMINOPYRIDINE	1	4	4	2	-	-	-
AMMONIA	2	4	2	1	2	4	1
AMMONIA AND LITHIUM METAL IN SOLUTION	4	4	4	2	4	4	-
AMMONIA GAS, COLD	1	4	1	1	1	4	1
AMMONIA GAS, HOT	1	4	4	2	1	4	1
AMMONIA, ANHYDROUS LIQUID	1	4	2	1	2	4	-
AMMONIUM ACETATE	1	4	1	1	2	1	1
AMMONIUM ARSENATE	1	3	3	1	2	1	-
AMMONIUM BENZOATE	1	3	3	1	2	1	-
AMMONIUM BICARBONATE	1	4	3	1	2	1	-
AMMONIUM BISULFITE	1	3	3	1	2	1	-
AMMONIUM BROMIDE	1	1	1	1	-	-	-
AMMONIUM CARBAMATE	1	3	3	1	2	1	-
AMMONIUM CARBONATE	1	1	4	1	3	-	1
AMMONIUM CHLORIDE	1	1	1	1	3	4	1
AMMONIUM CITRATE, DIBASIC	1	3	3	1	2	1	-
AMMONIUM DICHROMATE	1	3	3	1	2	1	-
AMMONIUM DIPHOSPHATE	1	1	3	1	2	1	-
AMMONIUM FLUORIDE	1	1	1	1	-	-	1
AMMONIUM FORMATE	1	3	3	1	2	1	-
AMMONIUM HYDROXIDE, 3 Molar	2	3	1	1	1	1	-
AMMONIUM HYDROXIDE, CONCENTRATED	1	2	4	1	1	1	1
AMMONIUM HYDROXIDE, GRADE 2	1	2	3	1	-	-	-
AMMONIUM IODIDE	1	1	1	1	-	-	-
AMMONIUM LACTATE	1	3	3	1	2	1	-
AMMONIUM METAPHOSPHATE	1	3	3	1	2	1	-
AMMONIUM MOLYBDENATE	1	3	3	1	2	1	-
AMMONIUM NITRATE	1	1	1	1	2	3	1
AMMONIUM NITRITE	1	3	1	1	2	-	-
AMMONIUM OXALATE	1	3	3	1	2	1	-
AMMONIUM PERCHLORATE	1	3	3	1	2	1	-
AMMONIUM PERSULFATE	1	1	4	1	4	1	1
AMMONIUM PHOSPHATE	1	1	1	1	1	-	1
AMMONIUM PHOSPHATE, DIBASIC	1	1	1	1	1	-	-
AMMONIUM PHOSPHATE, MONO-BASIC	1	1	1	1	1	-	-
AMMONIUM PHOSPHATE, TRIBASIC	1	1	1	1	1	-	-
AMMONIUM PHOSPHITE	1	3	3	1	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
AMMONIUM PICRATE	1	3	3	1	2	1	-
AMMONIUM POLYSULFIDE	1	3	3	1	2	1	-
AMMONIUM SALICYLATE	1	3	3	1	2	1	-
AMMONIUM SALTS	1	3	1	1	1	3	-
AMMONIUM SULFAMATE	1	4	3	1	2	1	-
AMMONIUM SULFATE	1	2	1	1	1	1	1
AMMONIUM SULFATE NITRATE	1	4	1	1	-	-	-
AMMONIUM SULFIDE	1	2	1	1	-	-	1
AMMONIUM SULFITE	1	1	3	1	2	1	-
AMMONIUM THIOCYANATE	1	1	3	1	2	1	-
AMMONIUM THIOGLYCOLLATE	1	3	3	1	2	1	-
AMMONIUM THIOSULFATE	1	1	3	1	2	1	-
AMMONIUM TUNGSTATE	1	3	3	1	2	1	-
AMMONIUM VALERATE	1	3	3	1	2	1	-
AMYL ACETATE	1	4	4	1	4	4	1
AMYL ALCOHOL	1	2	2	1	4	1	1
AMYL BORATE	1	1	1	4	4	-	1
AMYL BUTYRATE	1	2	1	4	2	1	-
AMYL CHLORIDE	1	1	1	4	4	2	-
AMYL CHLORONAPHTHALENE	1	1	4	4	4	2	1
AMYL CINNAMIC ALDEHYDE	1	4	2	4	-	2	-
AMYL HYDRIDE	1	1	1	4	4	3	1
AMYL LAURATE	1	2	2	4	-	2	-
AMYL MERCAPTAN	1	1	2	4	-	2	-
AMYL NAPHTHALENE	1	1	4	4	4	1	-
AMYL NITRATE	1	3	3	1	2	1	-
AMYL NITRITE	1	3	3	1	2	1	-
AMYL PHENOL	1	1	4	-	-	-	1
AMYL PROPIONATE	1	2	1	4	2	1	-
ANILINE	1	2	4	2	4	3	1
ANILINE DYES	1	2	4	2	3	2	-
ANILINE HYDROCHLORIDE	1	2	4	3	4	2	1
ANILINE OIL	1	4	4	2	4	3	1
ANILINE SULFATE	1	3	3	1	2	1	-
ANILINE SULFITE	1	3	3	1	2	1	-
ANIMAL FATS	1	1	1	2	2	1	1
ANIMAL OIL	1	1	1	2	2	1	1
ANISOLE	1	3	4	-	-	-	1
ANON	1	-	4	4	-	-	1
ANSUL ETHER 161, 181	1	4	3	3	4	3	-
ANT OIL	2	4	4	2	4	4	1
ANTHRACENE	1	1	2	4	-	2	-
ANTHRAQUINONE SULPHONIC ACID	1	-	2	1	-	-	1
ANTIMONY CHLORIDE	1	2	1	1	1	1	1
ANTIMONY PENTACHLORIDE	1	2	1	4	4	1	-
ANTIMONY PENTAFLUORIDES	2	-	4	-	-	-	1
ANTIMONY TRIBROMIDE	1	1	1	4	4	1	-
ANTIMONY TRICHLORIDE	1	1	1	1	4	1	1
ANTIMONY TRIFLUORIDE	2	1	1	4	4	1	-
ANTIMONY TRIOXIDE	1	1	1	1	4	1	-
AQUA REGIA	2	2	4	3	4	3	1
ARGON	1	1	1	1	2	2	1
ARGON GAS	1	1	1	1	-	-	-
AROCLOR 1248	1	1	3	2	2	2	-
AROCLOR 1254	1	1	4	2	3	1	-
AROCLOR 1260	1	1	1	2	1	1	-
AROMATIC FUEL 50%	1	1	2	4	4	2	-
AROMATIC FUELS	1	2	2	4	4	2	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
ARSENIC ACID	1	1	1	1	1	1	1
ARSENIC TRICHLORIDE	1	4	1	4	-	-	-
ARSENIC TRIOXIDE	1	4	1	4	-	-	-
ARSENIC TRISULFIDE	1	4	1	4	-	-	-
ASCORBIC ACID	1	1	3	1	2	1	-
ASKAREL	1	1	2	4	4	2	1
ASPARTIC ACID	1	3	3	1	2	1	-
ASPHALT	1	1	2	4	4	2	1
ASTM FUEL A	1	1	1	4	4	1	1
ASTM FUEL B	1	1	2	4	4	1	1
ASTM FUEL C	1	1	2	4	4	2	1
ASTM FUEL D	1	1	2	4	4	-	-
ASTM OIL NO. 1	1	1	1	4	1	1	1
ASTM OIL NO. 2	1	1	1	4	4	1	1
ASTM OIL NO. 3	1	1	1	4	2	1	1
ASTM OIL NO. 4	1	1	2	4	4	2	-
ASTM OIL NO. 5	1	1	1	4	-	-	-
AZINE	1	4	4	2	4	4	1
BAKING SODA	1	1	1	1	1	1	1
BARIUM CARBONATE	1	1	3	1	2	1	-
BARIUM CHLORATE	1	1	3	1	2	1	-
BARIUM CHLORIDE	1	1	1	1	1	1	-
BARIUM CYANIDE	1	1	1	1	1	1	-
BARIUM HYDROXIDE	1	1	1	1	1	1	1
BARIUM IODIDE	1	1	1	1	1	1	-
BARIUM NITRATE	1	1	3	1	2	1	-
BARIUM OXIDE	1	1	1	1	1	1	-
BARIUM PEROXIDE	1	3	3	1	2	1	-
BARIUM POLYSULFIDE	1	3	3	1	2	1	-
BARIUM SALTS	1	1	1	1	1	1	1
BARIUM SULFATE	1	1	1	1	1	1	-
BARIUM SULFIDE	1	1	1	1	1	1	-
BEER	1	1	1	1	1	1	1
BEET SUGAR LIQUIDS	1	1	1	1	-	-	-
BEET SUGAR LIQUORS	1	1	1	1	1	1	-
BENZALDEHYDE	2	4	4	1	4	4	1
BENZAMIDE	1	1	2	4	-	2	-
BENZANTHRONE	1	2	2	4	-	2	-
BENZENE	1	2	4	4	4	2	1
BENZENE CARBONAL	2	4	4	1	4	4	1
BENZENE CARBOXYLIC ACID	1	1	4	4	4	2	1
BENZENE SULFONIC ACID	1	1	4	4	4	2	1
BENZIDINE	1	1	2	4	-	2	-
BENZIDINE 3 SULFONIC ACID	1	1	2	4	-	2	-
BENZIL	1	1	2	4	-	2	-
BENZILIC ACID	1	1	2	4	-	2	-
BENZINE	1	1	1	4	4	1	1
BENZOCATECHOL	1	1	2	4	-	2	-
BENZOCHLORIDE	1	1	4	1	-	1	-
BENZOIC ACID	1	1	4	4	4	2	1
BENZOIN	1	1	2	4	-	2	-
BENZONITRILE	1	3	3	1	2	1	-
BENZOPHENONE	1	2	4	2	4	1	-
BENZOQUINONE	1	1	-	2	-	-	-
BENZOTRICHLORIDE	1	1	4	1	-	-	-
BENZOTRIFLUORIDE	1	1	4	1	-	-	-
BENZOYL CHLORIDE	1	2	4	4	-	2	-
BENZOYL SULFONIC ACID	1	1	2	4	-	2	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
BENZYL ACETATE	1	4	3	1	2	1	-
BENZYL ALCOHOL	1	1	4	2	2	2	1
BENZYL BENZOATE	1	1	4	2	4	1	1
BENZYL BROMIDE	1	1	4	4	4	1	-
BENZYL BUTYL PHTHALATE	1	3	3	1	2	1	-
BENZYL CHLORIDE	1	1	4	4	4	1	1
BENZYL PHENOL	1	2	2	4	-	2	-
BENZYL SALICYLATE	1	1	2	4	-	2	-
BERYLLIUM CHLORIDE	1	1	1	1	3	3	-
BERYLLIUM FLUORIDE	1	1	1	1	3	3	-
BERYLLIUM OXIDE	1	1	1	1	3	3	-
BERYLLIUM SULFATE	1	3	3	1	2	1	-
BIPHENYL	1	1	4	4	4	2	1
BISMUTH CARBONATE	1	1	3	1	2	1	-
BISMUTH NITRATE	1	3	3	1	2	1	-
BISMUTH OXYCHLORIDE	1	3	3	1	2	1	-
BISULFITE LYE	2	-	2	1	-	-	1
BITUMEN	1	1	4	-	-	-	1
BLACK LIQUOR	3	1	2	2	-	-	-
BLACK LYE	1	1	2	1	-	-	1
BLEACH LIQUOR	1	1	3	1	2	2	1
BLEACH SOLUTIONS	1	1	-	1	-	-	-
BLEACHING LYE	1	2	4	1	-	-	1
BONE OIL	1	2	1	2	2	1	1
BORAX	1	1	2	1	2	2	-
BORAX SOLUTIONS	1	1	2	1	1	1	1
BORDEAUX MIXTURE	1	1	2	1	2	2	-
BORIC ACID	1	1	1	1	1	1	1
BORIC OXIDE	1	3	3	1	2	1	-
BORNEOL	1	2	2	4	-	2	-
BORNYL ACETATE	1	4	2	4	-	2	-
BORNYL CHLORIDE	1	1	2	4	-	2	-
BORNYL FORMATE	1	1	2	4	-	2	-
BORON FLUIDS	1	1	2	4	4	2	-
BORON TRICHLORIDE	1	1	2	4	-	-	-
BORON TRIFLUORIDE	1	1	2	4	-	-	-
BRINE	1	1	1	1	1	1	-
BROMIC ACID	1	3	3	1	2	1	-
BROMINE	1	1	4	4	4	2	1
BROMINE PENTAFLUORIDE	2	4	4	4	4	4	-
BROMINE TRIFLUORIDE	2	4	4	4	4	4	-
BROMINE WATER	1	1	4	2	4	2	1
BROMINE, ANHYDROUS	1	1	4	4	4	2	-
BROMINE, LIQUID	-	-	4	-	-	-	1
BROMOBENZENE	1	1	4	4	4	1	1
BROMOBENZENE CYANIDE	1	3	3	1	2	1	-
BROMOCHLOROMETHANE	1	4	4	2	4	2	-
BROMOCHLOROTRIFLUOROETHANE	1	1	4	4	4	2	-
BROMOETHANE	1	1	2	4	-	-	-
BROMOFORM	1	1	2	4	-	2	-
BROMOMETHANE	1	1	2	4	-	1	-
BROMOTRIFLUOROMETHANE	2	1	1	1	4	2	-
BRUCINE SULFATE	1	3	3	1	2	1	-
BUNKER OIL	1	1	1	4	2	1	1
BUNKER C FUEL OIL	1	1	1	4	-	-	-
BUTADIENE	1	3	4	4	4	1	1
BUTANE	1	1	1	4	4	1	1
BUTANE, 2, 2-DIMETHYL	1	1	1	4	4	3	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
BUTANE, 2, 3-DIMETHYL	1	1	1	4	4	3	-
BUTANEDIOL	1	3	1	1	2	1	1
BUTANOL	1	1	4	1	2	1	1
BUTENE 2-ETHYL	1	1	1	4	4	3	-
BUTTER	1	1	1	1	2	1	1
BUTYL ACETATE	1	4	4	2	4	4	1
BUTYL ACETYL RICINOLEATE	1	1	2	1	-	2	-
BUTYL ACRYLATE	1	4	4	4	2	4	-
BUTYL ALCOHOL	1	1	1	2	2	1	1
BUTYL BENZOATE	1	1	4	1	2	1	-
BUTYL BUTYRATE	1	1	4	1	-	1	-
BUTYL CARBITOL	1	3	4	1	4	4	1
BUTYL CELLOSOLVE	1	4	3	2	4	4	1
BUTYL CELLOSOLVE ACETATE	1	4	4	2	2	2	-
BUTYL CELLOSOLVE ADIPATE	1	2	4	2	2	2	-
BUTYL CHLORIDE	1	1	1	4	2	1	-
BUTYL ETHER	1	4	3	3	4	3	-
BUTYL GLYCOLATE	1	3	3	1	2	1	-
BUTYL LACTATE	1	3	3	1	2	1	-
BUTYL LAURATE	1	2	3	1	2	1	-
BUTYL MERCAPTAN	1	4	4	4	4	-	-
BUTYL METHACRYLATE	1	4	3	1	2	1	-
BUTYL OLEATE	1	1	4	2	-	2	-
BUTYL OXALATE	1	3	3	1	2	1	-
BUTYL PHENOL	1	2	4	4	4	-	1
BUTYL STEARATE	1	1	2	4	-	2	-
BUTYLAMINE	1	4	3	4	4	4	-
BUTYLBENZOIC ACID	1	1	2	4	-	2	-
BUTYLENE	1	1	2	4	4	2	1
BUTYLENE GLYCOL	1	2	1	1	1	1	1
BUTYNE DIOL	2	2	1	1	-	-	1
BUTYRALDEHYDE	2	4	4	2	4	4	1
BUTYRIC ACID	1	3	4	2	-	-	1
BUTYRIC ANHYDRIDE	1	3	3	1	2	1	-
BUTYROLACETONE	1	3	3	1	2	1	-
BUTYRYL CHLORIDE	1	1	2	4	-	2	-
CADMIUM CHLORIDE	1	3	3	1	2	1	-
CADMIUM CYANIDE	1	1	1	1	2	1	-
CADMIUM NITRATE	1	2	3	1	2	1	-
CADMIUM OXIDE	1	3	3	1	2	1	-
CADMIUM SULFATE	1	3	3	1	2	1	-
CADMIUM SULFIDE	1	3	3	1	2	1	-
CALCINE LIQUORS	1	1	1	1	-	1	-
CALCIUM ACETATE	1	4	2	1	4	4	-
CALCIUM ARSENATE	1	1	1	1	2	1	-
CALCIUM BENZOATE	1	1	2	4	-	2	-
CALCIUM BICARBONATE	1	2	3	1	2	1	-
CALCIUM BISULFIDE	1	1	3	1	2	1	-
CALCIUM BISULFITE	1	1	1	4	3	3	1
CALCIUM BROMIDE	1	1	1	1	1	1	-
CALCIUM CARBONATE	1	1	1	1	1	1	1
CALCIUM CHLORATE	1	1	3	1	2	1	-
CALCIUM CHLORIDE	1	1	1	1	1	1	1
CALCIUM CHROMATE	1	3	3	1	2	1	-
CALCIUM CYANIDE	1	1	1	1	1	-	-
CALCIUM FLUORIDE	1	1	1	1	1	1	-
CALCIUM GLUCONATE	1	3	3	1	2	1	-
CALCIUM HYDRIDE	1	1	1	1	1	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
CALCIUM HYDROGEN SULFITE	1	1	4	4	1	1	-
CALCIUM HYDROSULFIDE	1	3	3	1	2	1	-
CALCIUM HYDROXIDE	1	1	1	1	1	1	1
CALCIUM HYPOCHLORITE	1	1	2	1	2	2	1
CALCIUM HYPOPHOSPHITE	1	3	3	1	2	1	-
CALCIUM LACTATE	1	3	3	1	2	1	-
CALCIUM NITRATE	1	1	1	1	2	1	1
CALCIUM OXALATE	1	3	3	1	2	1	-
CALCIUM OXIDE	1	1	1	1	1	1	-
CALCIUM PHENOLSULFONATE	1	3	3	1	2	1	-
CALCIUM PHOSPHATE	1	1	1	1	1	1	1
CALCIUM PHOSPHATE ACID	1	3	3	1	2	1	-
CALCIUM PROPIONATE	1	3	3	1	2	1	-
CALCIUM SALTS	1	1	1	1	2	1	-
CALCIUM SILICATE	1	1	1	1	-	-	-
CALCIUM STEARATE	1	1	2	4	-	2	-
CALCIUM SULFAMATE	1	1	2	4	-	2	-
CALCIUM SULFATE	1	2	3	1	2	1	-
CALCIUM SULFIDE	1	1	1	1	2	1	1
CALCIUM SULFITE	1	1	1	1	1	1	-
CALCIUM THIOCYANATE	1	3	3	1	2	1	-
CALCIUM THIOSULFATE	1	1	2	1	1	1	-
CALCIUM TUNGSTATE	1	3	3	1	2	1	-
CALICHE LIQUORS	1	1	1	1	2	1	-
CAMPHERE	1	2	2	4	-	2	-
CAMPHOR	1	2	1	1	-	2	1
CAMPHORATED OIL	1	2	1	4	-	-	1
CAMPHORIC ACID	1	2	2	4	-	2	-
CANE SUGAR LIQUORS	1	1	1	1	1	1	-
CAPRIC ACID	1	2	1	4	2	1	-
CAPROIC ACID	1	2	1	4	2	1	-
CAPROIC ALDEHYDE	1	4	-	2	2	4	-
CAPROLACTAM	1	4	1	1	2	1	-
CAPRONALDEHYDE	1	1	1	4	2	1	-
CARBAMATE	1	1	3	2	-	1	-
CARBITOL	1	3	2	2	2	2	-
CARBITOL 2	1	2	2	2	2	2	1
CARBOLIC ACID	1	1	4	2	4	1	1
CARBOLINEUM	1	1	4	4	4	1	1
CARBON BISULFIDE	1	1	4	4	4	1	-
CARBON DIOXIDE	1	1	1	1	1	1	-
CARBON DIOXIDE, DRY	1	1	1	2	2	2	1
CARBON DIOXIDE, WET	1	1	1	2	-	-	-
CARBON DISULFIDE	1	2	4	4	4	1	1
CARBON FLUORIDES	1	1	2	4	4	2	-
CARBON MONOXIDE	1	1	1	1	1	2	1
CARBON MONOXIDE, DRY	1	1	1	1	1	1	1
CARBON MONOXIDE, WET	1	1	1	1	1	1	1
CARBON TETRACHLORIDE	1	1	2	4	4	2	1
CARBON TETRAFLUORIDE	1	1	2	4	4	2	-
CARBONIC ACID	1	1	4	1	1	1	1
CASEIN	1	1	3	1	2	1	-
CASTOR OIL	1	1	1	2	1	1	1
CAUSTIC LIME	1	1	1	1	1	1	-
CAUSTIC POTASH	1	1	2	1	3	3	1
CAUSTIC SODA	1	4	2	1	2	2	1
CELLOSOLVE	1	4	4	2	4	4	1
CELLOSOLVE ACETATE	1	4	4	2	4	4	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
CELLOSOLVE BUTYL	4	4	4	2	4	4	-
CELLULOSE ACETATE	1	4	3	1	2	1	-
CELLULOSE ACETATE BUTYRATE	1	3	3	1	2	1	-
CELLULOSE ETHER	1	3	3	1	2	1	-
CELLULOSE NITRATE	1	3	3	1	2	1	-
CELLULOSE TRIPROPIONATE	1	3	3	1	2	1	-
CELLULUBE, PHOSPHATE ESTERS	1	1	4	1	1	3	-
CERIUM SULFATE	1	3	3	1	2	1	-
CEROUS CHLORIDE	1	3	3	1	2	1	-
CEROUS FLUORIDE	1	3	3	1	2	1	-
CEROUS NITRATE	1	3	3	1	2	1	-
CETANE (HEXADECANE)	1	1	1	4	4	3	-
CETYL ALCOHOL	1	1	1	4	2	1	-
CHLORACETIC ACID	1	4	4	2	-	4	1
CHLORAL	1	4	3	1	2	1	-
CHLORAL HYDRATE, AQUEOUS	1	2	4	2	-	-	1
CHLORAMINE	1	4	1	1	-	-	1
CHLORANTHRAQUINONE	1	1	2	4	-	2	-
CHLORDANE	1	1	2	4	4	2	-
CHLORETHANOL	2	4	4	2	-	-	1
CHLOREXTOL	1	1	2	4	4	2	-
CHLORIC ACID	1	2	4	2	2	1	1
CHLORIDE OF LIME, AQUEOUS	1	1	4	1	-	-	1
CHLORINATED NAPHTHALENE	1	2	4	4	4	2	-
CHLORINATED SALT BRINE	1	1	4	4	-	-	-
CHLORINATED SOLVENTS	1	1	4	4	4	1	1
CHLORINATED SOLVENTS, DRY	1	1	4	4	4	1	-
CHLORINATED SOLVENTS, WET	1	1	4	4	4	1	-
CHLORINE	1	1	2	4	-	2	-
CHLORINE DIOXIDE	2	1	4	3	3	2	1
CHLORINE DIOXIDE, 8% CL AS	1	1	4	4	-	2	-
CHLORINE TRIFLUORIDE	2	4	4	4	4	4	1
CHLORINE WATER	1	1	3	2	4	-	1
CHLORINE, DRY GAS	1	1	4	4	4	1	1
CHLORINE, LIQUID	2	2	4	2	-	-	1
CHLORINE, PLASMA	3	-	-	-	-	-	-
CHLORINE, WET	2	2	4	2	4	2	1
CHLORINE, WET GAS	2	2	4	2	-	-	1
CHLORO 1-NITRO ETHANE	1	4	4	4	4	4	-
CHLORO OXYFLUORIDES	2	-	-	-	-	-	-
CHLORO XYLENOLS	1	1	2	4	-	2	-
CHLOROACETALDEHYDE	2	4	3	1	2	1	-
CHLOROACETIC ACID	1	4	4	2	-	4	-
CHLOROACETONE	1	4	4	1	4	4	-
CHLOROAMINO BENZOIC ACID	1	3	3	1	2	1	-
CHLOROANILINE	1	3	4	2	2	1	-
CHLORO BENZALDEHYDE	1	4	3	1	2	1	-
CHLORO BENZENE	1	1	4	4	4	2	1
CHLORO BENZENE CHLORIDE	1	1	2	4	-	2	-
CHLORO BENZENE TRIFLUORIDE	1	1	2	4	-	2	-
CHLORO BENZOCHLORIDE	1	1	2	4	-	2	-
CHLORO BENZOTRIFLUORIDE	1	1	4	4	4	2	-
CHLOROBROMOMETHANE	1	1	4	2	4	2	1
CHLOROBROMOPROPANE	1	1	2	4	-	2	-
CHLOROBUTADIENE	1	1	4	4	4	2	-
CHLOROBUTANE	1	1	1	4	2	1	-
CHLORODODECANE	1	1	4	4	4	1	-
CHLOROETHANE	1	1	1	4	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
CHLOROETHANE SULFONIC ACID	1	3	3	1	2	1	-
CHLOROETHYLBENZENE	1	1	2	4	-	2	-
CHLOROFORM	1	2	4	4	4	3	1
CHLOROHYDRIN	1	1	1	1	2	1	-
CHLORONAPHTHALENE	1	1	4	4	4	2	-
CHLORONITROBENZENE	1	3	3	1	2	1	-
CHLORONITROETHANE	1	4	4	4	4	4	-
CHLOROPHENOL	1	1	4	4	4	2	-
CHLOROPHENOL, ORTHO	1	2	3	1	2	1	-
CHLOROPHENOL, PARA	1	2	3	1	2	1	-
CHLOROPICRIN	1	1	2	4	-	2	-
CHLOROPRENE	1	1	4	4	4	2	-
CHLOROSULFONIC ACID	1	4	4	4	4	4	1
CHLOROTOLUENE	1	1	4	4	4	2	-
CHLOROTOLUENE SULFONIC ACID	1	3	3	1	2	1	-
CHLOROTOLUIDINE	1	4	2	4	-	2	-
CHLOROTRIFLUOROETHYLENE	2	-	-	-	-	-	-
CHLOROX	1	1	2	2	-	1	-
CHLORSULPHONIC ACID	-	-	4	4	4	4	1
CHOLESTEROL	1	1	2	4	-	2	-
CHROME ALUM	1	1	1	1	1	-	-
CHROME PLATING SOLUTION	1	1	4	2	2	2	1
CHROMIC ACID	1	1	4	2	3	2	1
CHROMIC OXIDE	1	1	4	2	-	-	-
CHROMIUM POTASSIUM SULFATE	1	1	2	2	-	-	-
CINNAMIC ACID	1	1	2	4	-	2	-
CINNAMIC ALCOHOL	1	1	2	4	-	2	-
CINNAMIC ALDEHYDE	1	3	2	4	-	2	-
CIRCO LIGHT PROCESS OIL	1	1	1	4	4	1	-
CITRIC ACID	1	1	1	1	1	1	1
CLOPHEN	-	2	-	4	4	-	-
CLOPHEN-A TYPES	1	1	4	-	1	1	1
CLOROX	1	1	2	2	2	2	-
COAL TAR	1	1	1	4	4	1	-
COBALT CHLORIDE	1	1	1	1	2	1	-
COBALT CHLORIDE, 2N	1	1	1	1	1	1	-
COBALTOUS ACETATE	1	4	3	1	2	1	-
COBALTOUS BROMIDE	1	1	1	1	1	1	-
COBALTOUS CHLORIDE	1	1	1	1	2	1	-
COBALTOUS SULFATE	1	3	3	1	2	1	-
COCONUT FAT	1	1	1	4	1	1	1
COCONUT FATTY ALCOHOL	1	1	1	2	-	-	1
COCONUT OIL	1	1	1	3	1	1	1
COD LIVER OIL	1	1	1	1	2	1	1
CODEINE	1	1	2	4	-	2	-
COFFEE	1	1	1	1	1	1	-
COLICHE LIQUORS	-	-	2	2	-	-	-
CONVELEX 10	1	1	4	3	4	-	-
COOLANOL	1	1	1	4	4	1	-
COPPER ACETATE	1	4	2	1	4	4	-
COPPER AMMONIUM ACETATE	1	3	3	1	2	1	-
COPPER CARBONATE	1	1	3	1	2	1	-
COPPER CHLORIDE	1	1	1	1	1	1	1
COPPER CYANIDE	1	1	1	1	1	1	-
COPPER FLUORIDE	1	1	1	1	-	-	1
COPPER GLUCONATE	1	3	3	1	2	1	-
COPPER NITRATE	1	1	2	2	-	-	1
COPPER OXIDE	1	1	1	1	1	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
COPPER SALTS	1	1	1	1	1	1	-
COPPER SULFATE	1	1	1	1	1	1	1
COPPER SULFATE 10%	1	1	1	1	1	1	-
COPPER SULFATE 50%	1	1	1	1	1	1	-
CORN OIL	1	1	1	3	1	1	1
COTTONSEED OIL	1	1	1	3	1	1	1
CREOSOTE, COAL TAR	1	1	1	4	4	1	1
CREOSOTE, WOOD	1	1	1	4	4	1	-
CREOSYLIC ACID	1	1	4	4	-	-	-
CRESOL	1	1	4	4	4	2	1
CRESYLIC ACID	1	1	4	4	4	2	-
CROTONALDEHYDE	1	4	2	1	-	2	1
CROTONIC ACID	1	2	4	2	4	4	-
CRUDE OIL, ASPHALT BASE	1	1	2	4	4	2	1
CUMALDEHYDE	1	1	2	4	-	2	-
CUMENE	1	1	4	4	4	2	-
CUPRIC SULFATE	1	1	1	1	-	-	-
CUTTING OIL	1	1	1	4	4	1	-
CYANOGEN CHLORIDE	1	2	4	3	-	-	-
CYCLOHEXANE	1	1	1	4	4	2	1
CYCLOHEXANOL	1	1	1	4	4	1	1
CYCLOHEXANONE	1	4	4	2	4	4	1
CYCLOHEXENE	1	3	2	4	-	2	-
CYCLOHEXYLAMINE	1	4	4	4	2	1	1
CYCLOHEXYLAMINE LAURATE	1	1	1	4	2	1	-
CYCLOPENTADIENE	1	3	2	4	-	2	-
CYCLOPENTANE	1	1	1	4	4	1	-
CYCLOPOLYOLEFINS	1	3	1	4	4	1	-
CYMENE	1	1	4	4	4	2	-
DDT (Dichlorodiphenyltrichloroethane)	1	1	4	4	4	1	-
DECAHYDRONAPHTHALENE	1	1	4	4	4	1	-
DECALIN	1	1	4	4	4	1	-
DECANE	1	1	1	4	2	1	-
DEIONIZED WATER	1	1	2	2	2	1	-
DENATURED ALCOHOL	1	1	1	1	1	1	1
DESMODUR	-	-	-	4	4	-	4
DETERGENT SOLUTIONS	1	1	1	1	1	1	1
DETERGENTS	2	2	1	1	-	-	1
DEVELOPING FLUIDS	1	1	1	2	1	1	-
DEXRON	1	1	1	4	4	2	-
DEXTRIN	1	1	1	1	1	1	1
DEXTRO LACTIC ACID	1	3	3	1	2	1	-
DEXTRON	1	1	1	4	4	2	-
DEXTROSE	1	1	3	1	2	1	-
DIACETONE	1	4	4	1	4	4	1
DIACETONE ALCOHOL	1	4	4	1	4	4	1
DIALKYL SULFATES	1	3	3	1	2	1	-
DIAMYLAMINE	1	4	1	4	2	1	-
DIAZINON	1	2	3	4	4	2	-
DIBENZYL	1	2	2	4	-	2	-
DIBENZYL ETHER	1	4	4	2	-	-	1
DIBENZYL SEBACATE	1	2	4	2	3	3	-
DIBROMODIFLUOROMETHANE	1	-	4	2	4	-	-
DIBROMOETHANE	1	1	2	4	-	2	-
DIBROMOETHYLBENZENE	1	2	4	4	4	2	-
DIBROMOTETRAFLUOROETHANE	2	2	2	4	4	-	-
DIBUTYL CELLOSOLVE ADIPATE	1	3	3	1	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
DIBUTYL ETHER	1	3	4	3	4	3	1
DIBUTYL METHYLENEDITHIO GLYCOLATE	1	1	2	4	-	2	-
DIBUTYL PHTHALATE	1	3	4	2	2	3	1
DIBUTYL SEBACATE	1	4	4	2	2	2	1
DIBUTYL THIOGLYCOLATE	1	1	2	4	-	2	-
DIBUTYL THIOUREA	1	1	2	4	-	2	-
DIBUTYLAMINE	1	4	4	4	3	4	-
DICAPRYL PHTHALATE	1	2	4	2	3	2	-
DICHLOROBUTANE	1	1	2	4	-	-	-
DICHLORACETIC ACID	2	4	4	1	-	-	1
DICHLORETHANE	2	2	4	4	4	-	1
DICHLORETHYLENE	2	2	4	-	-	-	1
DICHLOROACETIC ACID	1	1	2	4	-	2	-
DICHLOROANILINE	1	4	3	1	2	1	-
DICHLOROBENZENE	1	1	4	4	4	2	1
DICHLOROBUTANE	1	1	2	4	4	2	1
DICHLOROBUTENE	1	2	4	4	-	2	1
DICHLORODIETHYL SULFIDE	1	-	-	1	1	-	-
DICHLORODIPHENYLDICHLOROETHANE	1	1	2	4	-	2	-
DICHLOROETHANE	1	1	2	4	-	2	-
DICHLOROETHYLENE	1	2	2	4	-	2	-
DICHLOROHYDRIN	1	3	3	1	2	1	-
DICHLOROISOPROPYL ETHER	1	3	4	3	4	3	-
DICHLOROMETHANE	1	3	4	4	4	2	1
DICHLOROPHENOL	1	2	2	4	-	2	-
DICHLOROPHENOXYACETIC ACID	1	1	2	4	-	2	-
DICHLOROPROPANE	1	1	2	4	-	2	-
DICHLOROPROPENE	1	2	2	4	-	2	-
DICYCLOHEXYLAMINE	1	4	3	4	2	4	-
DICYCLOHEXYLAMMONIUM NITRATE	1	3	3	1	2	1	-
DIELDRIN	1	4	2	4	-	2	-
DIESEL FUEL	1	1	1	4	2	1	1
DIESEL OIL	1	1	1	4	4	1	1
DI-ESTER SYNTHETIC LUBRICANTS	1	1	2	4	4	2	-
DIETHANOLAMINE	1	3	3	1	2	1	-
DIETHYL CARBONATE	1	1	3	1	2	1	-
DIETHYL ETHER	1	4	4	4	4	3	1
DIETHYL PHTHALATE	1	1	2	4	-	2	-
DIETHYL SEBACATE	1	2	4	2	2	2	1
DIETHYL SULFATE	1	3	4	1	2	-	-
DIETHYLAMINE	1	4	2	2	2	4	1
DIETHYLANILINE	1	3	3	1	2	1	-
DIETHYLBENZENE	1	1	4	4	4	3	-
DIETHYLENE GLYCOL	1	1	1	1	2	1	1
DIETHYLENE GLYCOL BUTYL ETHER	1	3	4	1	4	4	-
DIETHYLHEXYL PHTHALATE	1	2	4	2	3	2	-
DIETHYLHEXYL SEBACATE	1	1	4	2	3	3	-
DIFLUORODIBROMOMETHANE	1	-	4	2	4	-	-
DIFLUOROETHANE	1	4	2	4	-	2	-
DIFLUOROMONOCHLOROETHANE	1	1	2	4	-	2	-
DIGLYCOL CHLOROFORMATE	1	3	3	1	2	1	-
DIGLYCOLIC ACID	1	1	2	1	2	1	1
DIHEXYL PHTHALATE	2	4	4	-	-	-	1
DIHYDROXYDIPHENYLSULFONE	1	3	3	1	2	1	-
DIISOBUTYL KETONE	1	4	4	1	-	-	1
DIISOBUTYL CARBINOL	1	1	1	4	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
DIISOBUTYLENE	1	1	2	4	4	3	-
DIISOOCTYL SEBACATE	1	2	3	3	3	3	-
DIISOPROPYL ETHER	1	1	-	-	-	-	-
DIISOPROPYL KETONE	1	4	4	1	4	4	-
DIISOPROPYLBENZENE	1	1	4	4	-	2	-
DIISOPROPYLIDENE ACETONE	1	4	4	3	4	4	-
DIMETHYL ACETAMIDE	1	4	3	1	2	1	-
DIMETHYL ANILINE	1	4	2	4	-	2	-
DIMETHYL DISULFIDE	1	1	1	4	2	1	-
DIMETHYL ETHER	1	4	4	4	1	1	1
DIMETHYL FORMALDEHYDE	1	4	3	1	2	1	-
DIMETHYL FORMAMIDE	1	4	3	2	2	4	1
DIMETHYL HYDRAZINE	1	4	3	1	2	1	-
DIMETHYL PHENYL CARBINOL	1	1	2	4	-	2	-
DIMETHYL PHENYL METHANOL	1	1	2	4	-	2	-
DIMETHYL PHTHALATE	1	2	4	2	-	2	1
DIMETHYL SULFOXIDE	1	4	3	1	2	1	-
DIMETHYL TEREPHTHALATE	1	2	2	4	-	2	-
DIMETHYLAMINE	2	4	4	1	2	4	1
DIMETHYLANILINE	1	4	3	2	4	4	-
DIMETHYLETHER	1	4	4	4	-	-	-
DINITROCHLOROBENZENE	1	1	2	4	-	2	-
DINITROGEN TETROXIDE	2	-	-	-	-	-	-
DINITROTOLUENE	1	4	4	4	4	4	-
DINONYL PHTHALATE	2	4	4	-	-	-	1
DIOCTYL PHTHALATE	1	1	4	2	3	2	1
DIOCTYL SEBACATE	1	1	4	2	3	3	1
DIOCTYLAMINE	1	1	1	4	2	1	-
DIOXANE	1	4	4	2	4	4	1
DIOXOLANE	1	4	4	2	4	4	-
DIPENTENE	1	1	2	4	4	3	1
DIPHENYL	1	1	4	4	4	2	1
DIPHENYL OXIDES	1	1	4	4	3	2	1
DIPHENYLAMINE	1	4	2	4	-	2	-
DIPHENYLPROPANE	1	2	2	4	-	2	-
DISILANE	1	-	-	-	-	-	-
DODECYLBENZENE	1	1	2	4	-	2	-
DRINKING WATER	1	1	1	1	1	1	-
DRY CLEANING FLUIDS	2	1	3	4	4	2	-
DTE 20 SERIES	1	1	2	4	4	2	-
DTE LIGHT OIL	1	1	1	4	3	1	-
ELCO 28-EP LUBRICANT	1	1	1	4	2	1	-
ENGINE OILS	1	1	1	4	2	1	1
EPICHLOROHYDRIN	1	4	4	2	4	4	1
EPOXY RESINS	1	4	3	1	-	-	-
ESAM-6 FLUID	1	4	4	1	-	4	-
ESSENTIAL OILS	1	2	4	4	-	-	1
ETHANAL	2	4	4	2	2	4	1
ETHANE	1	1	1	4	4	2	1
ETHANETHIOL	1	2	4	3	3	-	-
ETHANOL	1	3	3	1	2	1	1
ETHANOLAMINE	1	4	4	2	2	4	-
ETHERS	1	4	4	4	4	3	-
ETHOXYETHYL ACETATE	1	3	3	1	2	1	-
ETHYL ACETATE	1	4	4	2	2	4	1
ETHYL ACETOACETATE	1	4	4	2	2	4	-
ETHYL ACRYLATE	1	4	4	2	2	4	1
ETHYL ALCOHOL	1	2	1	1	2	1	1

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
ETHYL BENZENE	1	1	4	4	4	1	1
ETHYL BENZOATE	1	1	4	4	4	1	1
ETHYL BROMIDE	1	1	2	4	-	1	-
ETHYL CELLULOSE	1	4	4	2	4	4	-
ETHYL CELLULOSE	1	4	2	2	3	4	1
ETHYL CHLORIDE	1	1	1	2	4	1	1
ETHYL CHLOROCARBONATE	1	1	4	4	4	2	1
ETHYL CHLOROFORMATE	1	4	4	2	4	4	-
ETHYL CYANIDE	1	4	1	4	-	-	-
ETHYL CYCLOPENTANE	1	1	1	4	4	1	-
ETHYL DIBROMIDE	1	1	4	3	-	-	-
ETHYL DICHLORIDE	1	1	4	3	-	-	-
ETHYL ETHER	1	4	4	3	4	4	1
ETHYL FORMATE	2	1	4	2	-	1	1
ETHYL HEXANOL	1	1	1	1	2	1	1
ETHYL LACTATE	1	3	3	1	2	1	-
ETHYL MERCAPTAN	1	2	4	-	3	-	1
ETHYL NITRITE	1	3	3	1	2	1	-
ETHYL OXALATE	1	1	4	1	4	2	1
ETHYL PENTACHLOROBENZENE	1	1	4	4	4	2	1
ETHYL PYRIDINE	1	1	2	4	-	2	-
ETHYL SILICATE	1	1	1	1	4	1	1
ETHYL STEARATE	1	1	2	4	-	2	-
ETHYL SULFATE	1	4	4	1	-	-	-
ETHYL T-BUTYL ETHER	1	1	3	3	-	-	-
ETHYL VALERATE	1	1	2	4	-	2	-
ETHYLACRYLIC ACID	-	-	4	2	4	4	-
ETHYLAMINE	1	4	3	1	2	1	-
ETHYLENE	1	1	1	2	4	1	1
ETHYLENE CHLORIDE	1	2	4	4	4	2	1
ETHYLENE CHLOROXYDRIN	1	1	4	2	3	2	-
ETHYLENE CYANOXYDRIN	1	1	2	4	-	2	-
ETHYLENE DIAMINE	2	4	4	1	4	4	1
ETHYLENE DIBROMIDE	1	2	4	3	4	3	-
ETHYLENE DICHLORIDE	1	1	4	3	4	3	1
ETHYLENE GLYCOL	1	1	1	1	1	1	1
ETHYLENE GLYCOL BUTYL ETHER	1	4	3	2	-	4	-
ETHYLENE GLYCOL BUTYL ETHER ACETATE	1	4	4	2	2	2	-
ETHYLENE GLYCOL ETHYL ETHER ACETATE	1	4	4	2	4	4	-
ETHYLENE HYDROCHLORIDE	1	1	4	3	4	3	-
ETHYLENE OXIDE	1	4	4	3	4	4	1
ETHYLENE OXIDE, 12% AND FREON 12, 80%	4	4	3	2	4	4	-
ETHYLENE TRICHLORIDE	1	1	4	3	4	3	1
ETHYLENEDIAMINE	2	4	1	1	1	4	-
ETHYLMORPHOLINE	1	1	2	4	-	2	-
ETHYLMORPHOLINESTANNOUS OCTOTATE	1	4	4	2	-	-	-
ETHYLSULFURIC ACID	1	3	3	1	2	1	-
FATTY ACIDS	1	1	2	3	3	-	1
FATTY ALCOHOL	1	1	1	2	1	-	1
FERMENTATION GAS	1	1	1	-	1	4	1
FERRIC ACETATE	1	4	3	1	2	1	-
FERRIC AMMONIUM SULFATE	1	3	3	1	2	1	-
FERRIC CHLORIDE	1	1	1	1	2	1	-
FERRIC FERROCYANIDE	1	3	3	1	2	1	-
FERRIC HYDROXIDE	1	1	3	1	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
FERRIC NITRATE	1	1	1	1	3	1	-
FERRIC PERSULFATE	1	1	1	1	-	-	-
FERRIC SULFATE	1	1	1	1	2	1	-
FERROUS AMMONIUM CITRATE	1	3	3	1	2	1	-
FERROUS AMMONIUM SULFATE	1	2	3	1	2	1	-
FERROUS CARBONATE	1	3	3	1	2	1	-
FERROUS IODIDE	1	3	3	1	2	1	-
FERROUS SULFATE	1	1	3	1	2	1	-
FERROUS TARTRATE	1	3	3	1	2	1	-
FISH OIL	1	1	1	4	1	1	1
FLUORINATED CYCLIC ETHERS	1	-	-	1	-	-	-
FLUORINE GAS	2	2	4	4	4	-	1
FLUORINE LIQUID	2	2	4	4	-	-	-
FLUOROBENZENE	1	1	4	4	4	2	1
FLUOROBORIC ACID	1	-	1	1	-	-	-
FLUOROCARBON OILS	2	-	-	1	1	-	1
FLUOROLUBE	2	2	1	1	1	2	-
FLUOROSILICIC ACID	1	1	1	2	4	4	1
FOMBLIN	1	1	-	-	-	-	-
FORMALDEHYDE	1	4	2	2	2	4	1
FORMAMIDE	1	3	3	1	2	1	1
FORMIC ACID	2	4	2	1	2	3	1
FRUIT JUICE	1	1	2	1	1	-	1
FUEL OIL	1	1	1	4	4	1	1
FUEL OIL NO. 6	1	1	2	4	1	1	-
FUEL OIL, 1 AND 2	1	1	1	4	4	1	-
FUEL OIL, ACIDIC	1	1	1	4	1	1	-
FUMARIC ACID	1	1	1	2	2	1	-
FURALDEHYDE	2	4	4	2	-	-	-
FURAN	1	4	4	4	4	-	1
FURANE	2	4	-	-	-	-	1
FURFURAL	2	4	4	2	4	4	1
FURFURYL ALCOHOL	1	2	4	2	4	4	1
FURNACE GAS, DRY	1	1	4	1	1	1	1
FURYL CARBINOL	1	4	4	2	4	4	-
GALDEN	4	1	-	-	-	-	-
GALLIC ACID	1	1	2	2	-	1	1
GAS LIQUOR	1	1	1	4	4	4	1
GAS OIL	1	1	1	4	2	1	1
GASOHOL	1	-	4	4	4	2	1
GASOLINE	1	1	1	4	4	1	1
GELATIN	1	1	1	1	1	1	1
GLAUBER'S SALT	1	1	4	2	-	1	1
GLUCONIC ACID	1	3	3	1	2	1	-
GLUCOSE	1	1	1	1	1	1	1
GLUTAMIC ACID	1	3	3	1	2	1	-
GLYCERIN	1	1	1	1	1	1	1
GLYCEROL CHLOROXYDRIN	2	-	4	2	-	-	1
GLYCEROL DICHLOROXYDRIN	1	3	3	1	2	1	-
GLYCEROL MONOCHLOROXYDRIN	1	3	3	1	2	1	-
GLYCEROL TRIACETATE	1	3	3	1	2	1	-
GLYCEROPHOSPHORIC ACID	1	3	3	1	2	1	-
GLYCERYL PHOSPHATE	1	3	3	1	2	1	-
GLYCIDOL	1	3	3	1	2	1	-
GLYCINE, AQUEOUS, 10%	1	1	2	1	-	-	1
GLYCOL MONOETHER	1	-	-	-	-	-	-
GLYCOLIC ACID	1	1	1	1	1	1	1
GLYCOLS	1	1	1	1	1	1	1

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
GLYCOXYLIC ACID	1	3	3	1	2	1	-
GREASE, PETROLEUM BASE	1	1	1	4	4	1	1
GREEN SULFATE LIQUOR	1	1	2	1	1	2	-
HALOTHANE	2	1	4	4	4	2	-
HALOWAX OIL	2	1	4	4	4	1	-
HEATING OIL, MINERAL-OIL BASED	1	1	1	4	2	1	1
HEAVY WATER	1	2	1	1	1	1	-
HELIUM	1	1	1	1	1	1	1
HEPTACHLOR	1	2	2	4	-	2	-
HEPTACHLOROBUTENE	1	1	2	4	-	2	-
HEPTALDEHYDE	1	4	1	4	2	1	-
HEPTANE	1	1	1	4	4	3	1
HEPTANOIC ACID	1	1	1	4	2	1	-
HEXACHLOROACETONE	1	4	4	1	2	1	-
HEXACHLOROBUTADIENE	1	1	4	4	-	2	1
HEXACHLOROBUTENE	1	1	2	4	-	2	-
HEXACHLOROCYCLOHEXANE	1	1	-	-	-	-	1
HEXACHLOROETHANE	1	2	2	4	-	2	-
HEXADECANE	1	1	1	4	4	3	-
HEXAFLUOROETHANE	2	2	1	1	-	-	-
HEXALDEHYDE	1	4	4	1	2	4	1
HEXAMETHYLENE	1	1	1	4	2	1	-
HEXAMETHYLENE DIAMMONIUM ADIPATE	1	1	2	4	-	2	-
HEXAMETHYLENEDIAMINE	2	4	3	1	2	1	-
HEXAMETHYLENETETRAMINE	2	4	3	1	2	1	-
HEXANE	1	1	1	4	4	1	1
HEXANE TRIOL	1	1	1	1	1	1	1
HEXENE-1	1	1	2	4	4	1	1
HEXONE	1	4	3	1	2	1	-
HEXYL ACETATE	1	4	1	4	2	1	-
HEXYL ALCOHOL	1	1	1	3	2	2	1
HEXYLENE GLYCOL	1	1	3	1	2	1	-
HEXYLRESORCINOL	1	2	2	4	-	2	-
HYDRAULIC OIL, PETROLEUM	1	1	1	4	2	1	1
HYDRAULIC OILS, SYNTHETIC BASE	1	3	2	4	-	2	-
HYDRAZINE	2	4	2	1	3	4	1
HYDRAZINE DIHYDROCHLORIDE	1	4	3	1	2	1	-
HYDRAZINE HYDRATE	1	4	2	1	2	2	1
HYDRAZINE, ANHYDROUS	1	4	4	2	-	4	-
HYDRIODIC ACID	1	1	2	4	-	2	-
HYDROBROMIC ACID	1	1	4	1	4	3	1
HYDROBROMIC ACID, 40%	1	1	4	1	4	3	-
HYDROBROMIC ACID, GAS	-	1	4	1	4	4	1
HYDROCARBONS, SATURATED	1	1	1	4	4	1	-
HYDROCHLORIC ACID	1	1	1	1	-	-	1
HYDROCYANIC ACID	1	1	2	1	3	2	1
HYDROFLUORIC ACID	1	1	4	4	4	4	1
HYDROFLUORIC ACID, ANHYDROUS	1	4	4	3	4	4	-
HYDROFLUORIC ACID, CONCENTRATED COLD	2	-	-	2	-	-	1
HYDROFLUORIC ACID, CONCENTRATED HOT	1	4	4	4	4	4	-
HYDROFLUOROSILICIC ACID	1	1	2	1	4	4	-
HYDROGEN BROMIDE	1	1	3	1	-	-	-
HYDROGEN CHLORIDE, ANHYDROUS	1	1	4	1	-	-	-
HYDROGEN CHLORIDE, GAS	1	1	4	1	-	-	1
HYDROGEN CYANIDE	1	2	1	1	-	-	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
HYDROGEN FLUORIDE	1	4	4	3	-	-	-
HYDROGEN FLUORIDE, ANHYDROUS	2	4	4	2	4	4	-
HYDROGEN GAS	1	1	1	1	3	3	1
HYDROGEN GAS, HOT	1	1	1	1	3	3	-
HYDROGEN PEROXIDE	1	1	2	1	2	2	1
HYDROGEN PEROXIDE, 90%	1	2	4	3	2	2	-
HYDROGEN SULFIDE, DRY COLD	1	4	1	1	3	3	1
HYDROGEN SULFIDE, DRY HOT	1	4	1	1	3	3	-
HYDROGEN SULFIDE, WET COLD	1	4	1	1	3	3	1
HYDROGEN SULFIDE, WET HOT	1	4	1	1	3	3	-
HYDROQUINOL	2	1	4	4	-	-	-
HYDROQUINONE	2	2	3	4	2	2	1
HYDROSULPHITE, AQUEOUS	2	-	2	1	-	-	1
HYDROXYACETIC ACID	1	3	3	1	2	1	-
HYDROXYCITRONELLAL	1	1	-	-	-	2	-
HYDROXYLAMINE SULFATE	2	-	1	1	1	1	1
HYPOCHLOROUS ACID	1	1	4	2	-	-	-
INDOLE	1	1	-	-	-	2	-
INK	1	2	1	1	1	1	1
INSULIN	1	3	3	1	2	1	-
IODIC ACID	1	3	3	1	2	1	-
IODINE	1	1	2	2	3	1	1
IODINE PENTAFLUORIDE	2	4	4	4	4	4	-
IODINE, TINCTURE	1	1	1	1	2	2	1
IODOFORM	1	3	-	1	-	2	1
IRON(III) CHLORIDE	1	1	1	1	-	-	1
ISOAMYL ACETATE	1	4	3	1	2	1	-
ISOAMYL BUTYRATE	1	4	3	1	2	1	-
ISOAMYL VALERATE	1	1	3	1	2	1	-
ISOBOREOL	1	1	-	-	-	2	-
ISOBUTANE	1	1	1	4	2	1	-
ISOBUTANOL	1	1	2	1	1	2	1
ISOBUTYL ACETATE	1	4	3	1	2	1	-
ISOBUTYL ALCOHOL	1	1	2	1	1	2	1
ISOBUTYL CHLORIDE	1	2	4	4	-	-	-
ISOBUTYL ETHER	1	4	2	4	-	-	-
ISOBUTYL METHYL KETONE	1	4	3	1	2	1	-
ISOBUTYL N-BUTYRATE	1	1	4	1	-	1	-
ISOBUTYL PHOSPHATE	1	3	3	1	2	1	-
ISOBUTYLENE	1	1	-	-	-	2	-
ISOBUTYRALDEHYDE	2	4	3	2	-	-	-
ISOBUTYRIC ACID	1	3	2	2	2	-	-
ISOCROTYL CHLORIDE	1	1	-	-	-	2	-
ISODECANOL	1	2	1	4	2	1	-
ISODODECANE	1	1	1	4	4	1	-
ISOEUGENOL	1	2	1	4	2	1	-
ISOCTANE	1	1	1	4	4	1	1
ISOPENTANE	1	1	1	4	2	1	-
ISOPHORONE	1	4	4	1	4	4	1
ISOPROPANOL	1	1	2	1	1	2	1
ISOPROPYL ACETATE	1	4	4	2	4	4	1
ISOPROPYL CHLORIDE	1	1	4	4	4	2	1
ISOPROPYL ETHER	1	4	2	4	4	3	1
ISOPROPYLACETONE	1	3	3	1	2	1	-
ISOPROPYLAMINE	1	3	3	1	2	1	-
KEROSENE	1	1	1	4	4	1	1
LACQUER SOLVENTS	1	4	4	4	4	4	1
LACQUERS	1	4	4	4	4	4	1

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
LACTAMS	1	2	4	2	-	4	1
LACTIC ACID, COLD	1	1	1	1	1	1	-
LACTIC ACID, HOT	1	1	4	4	2	2	-
LACTONES	4	4	4	2	2	4	-
LARD	1	1	1	2	2	1	1
LAURIC ACID	1	1	1	4	2	1	-
LAURYL ALCOHOL	1	1	1	2	-	-	1
LAVENDER OIL	1	1	2	4	4	2	1
LEAD ACETATE	1	4	2	1	4	4	1
LEAD ARSENATE	1	3	3	1	2	1	-
LEAD BROMIDE	1	3	3	1	2	1	-
LEAD CARBONATE	1	3	3	1	2	1	-
LEAD CHLORIDE	1	1	3	1	2	1	-
LEAD CHROMATE	1	3	3	1	2	1	-
LEAD DIOXIDE	1	2	3	1	2	1	-
LEAD LINOLEATE	1	3	3	1	2	1	-
LEAD NITRATE	1	1	1	1	2	1	1
LEAD OXIDE	1	2	1	1	2	1	-
LEAD SULFAMATE	1	1	2	1	2	1	-
LEMON JUICE, UNDILUTED	1	-	1	-	1	-	1
LIGHT GREASE	1	1	1	4	-	-	-
LIGROIN	1	1	1	4	4	1	-
LIME BLEACH	1	1	1	1	2	1	-
LIME SULFUR	1	1	4	1	1	1	-
LINDOL HYDRAULIC FLUID, PHOSPHATE ESTER TYPE	1	2	4	1	3	3	1
LINOLEIC ACID	1	2	2	4	2	-	1
LINSEED OIL	1	1	1	3	1	1	1
LIQUEFIED PETROLEUM GAS	1	1	1	4	3	3	1
LIQUID OXYGEN	2	4	4	4	4	4	-
LIQUIMOLY	1	1	1	4	4	1	-
LIQUOR	1	1	1	1	1	1	1
LITHIUM BROMIDE	1	2	1	1	1	1	1
LITHIUM CARBONATE	1	3	3	1	2	1	-
LITHIUM CHLORIDE	1	1	1	1	1	1	1
LITHIUM CITRATE	1	3	3	1	2	1	-
LITHIUM HYDROXIDE	1	3	2	1	2	1	-
LITHIUM HYPOCHLORITE	1	3	3	1	2	1	-
LITHIUM NITRATE	1	3	3	1	2	1	-
LITHIUM NITRITE	1	3	3	1	2	1	-
LITHIUM PERCHLORATE	1	3	3	1	2	1	-
LITHIUM SALICYLATE	1	3	3	1	2	1	-
LITHOPONE	1	3	3	1	2	1	-
LUBRICATING OILS, PETROLEUM	1	1	1	4	4	1	1
LUBRICATING OILS, SYNTHETIC	1	1	-	-	-	2	-
LYE	1	2	2	1	2	2	1
MACHINE OIL, MINERAL	1	1	1	4	2	1	1
MAGNESIUM CHLORIDE	1	1	1	1	1	1	1
MAGNESIUM HYDROXIDE	1	1	2	1	-	-	-
MAGNESIUM SALTS	1	1	1	1	1	1	-
MAGNESIUM SULFATE	1	1	1	1	1	1	1
MAGNESIUM SULFITE	1	2	1	1	1	1	-
MAIZE OIL	1	1	1	4	-	-	1
MALATHION	1	2	2	4	4	2	-
MALEIC ACID	1	1	4	4	4	-	1
MALEIC ANHYDRIDE	1	4	4	4	-	-	-
MALEIC HYDRAZIDE	1	3	3	1	2	1	-
MALIC ACID	1	1	1	4	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
MANDELIC ACID	1	4	3	1	2	1	-
MANGANESE ACETATE	1	4	3	1	2	1	-
MANGANESE CARBONATE	1	2	3	1	2	1	-
MANGANESE CHLORIDE	1	3	3	1	2	1	-
MANGANESE DIOXIDE	1	3	3	1	2	1	-
MANGANESE GLUCONATE	1	3	3	1	2	1	-
MANGANESE HYPOPHOSPHITE	1	3	3	1	2	1	-
MANGANESE LINOLEATE	1	3	3	1	2	1	-
MANGANESE PHOSPHATE	1	3	3	1	2	1	-
MANGANESE SULFATE	1	1	3	1	2	1	-
MANGANOUS CHLORIDE	1	3	3	1	2	1	-
MANGANOUS PHOSPHATE	1	3	3	1	2	1	-
MANGANOUS SULFATE	1	3	3	1	2	1	-
MANNITOL	1	3	3	1	2	1	-
MARGARINE	1	1	1	4	1	1	1
MENTHOL	1	2	4	4	-	-	1
MERCAPTAN	1	3	1	4	2	1	-
MERCAPTOBENZOTHAZOLE	1	1	3	1	-	2	-
MERCURIC ACETATE	1	4	3	1	2	1	-
MERCURIC CHLORIDE	1	1	1	1	1	1	1
MERCURIC CYANIDE	1	2	3	1	2	1	-
MERCURIC IODIDE	1	3	3	1	2	1	-
MERCURIC NITRATE	1	3	3	1	2	1	-
MERCURIC SULFATE	1	2	3	1	2	1	-
MERCURIC SULFITE	1	3	3	1	2	1	-
MERCUROUS NITRATE, HYDRATED	1	2	3	1	2	1	-
MERCURY	1	1	1	1	1	1	1
MERCURY CHLORIDE	1	3	3	1	2	1	-
MERCURY FULMINATE	1	3	3	1	2	1	-
MERCURY SALTS	1	1	1	1	1	1	1
MERCURY VAPOR	1	1	1	1	-	-	-
MESITYL OXIDE	1	4	4	2	4	4	1
METALDEHYDE	1	4	3	1	2	1	-
METHACRYLIC ACID	1	3	3	2	4	4	-
METHALLYL CHLORIDE	1	1	-	-	-	2	-
METHANE	1	1	1	4	4	2	1
METHANOL	1	4	1	1	1	1	1
METHOXY BUTANOL	1	1	1	2	-	-	1
METHOXYETHANOL	1	3	3	1	2	1	-
METHYL 2-PYRROLIDONE	1	2	-	2	2	2	-
METHYL ABETATE	1	2	-	-	-	2	-
METHYL ACETATE	1	4	4	2	4	4	1
METHYL ACETOACETATE	1	4	4	2	2	4	-
METHYL ACETOPHENONE	1	4	-	-	-	2	-
METHYL ACRYLATE	1	4	4	2	4	4	1
METHYL ACRYLIC ACID	1	3	4	2	4	4	1
METHYL AMYLKETONE	1	4	3	1	2	1	-
METHYL ANTHRANILATE	1	2	-	-	-	2	-
METHYL BENZOATE	1	1	4	4	4	1	-
METHYL BROMIDE	1	1	2	4	4	1	1
METHYL BUTANETHIOL	1	1	4	4	4	-	-
METHYL BUTANOL	1	1	2	1	4	1	1
METHYL BUTYL KETONE	1	4	4	1	4	4	1
METHYL BUTYRATE CELLOSOLVE	1	3	3	1	2	1	-
METHYL BUTYRATE CHLORIDE	1	3	3	1	2	1	-
METHYL CARBONATE	1	1	4	4	4	2	-
METHYL CELLOSOLVE	1	4	3	2	4	4	1
METHYL CELLULOSE	1	4	2	2	2	4	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
METHYL CHLORIDE	1	2	4	3	4	2	1
METHYL CHLOROACETATE	1	4	3	1	2	1	-
METHYL CHLOROFORM	1	2	4	4	4	2	-
METHYL CHLOROFORMATE	1	2	4	4	4	2	-
METHYL CYANIDE	1	2	3	1	2	1	-
METHYL CYCLOHEXANONE	1	4	1	4	2	1	-
METHYL DICHLORIDE	1	1	-	-	-	2	-
METHYL ETHER	1	4	1	2	1	1	1
METHYL ETHYL KETONE	1	4	4	1	4	4	1
METHYL ETHYL KETONE PEROXIDE	1	4	4	4	2	4	-
METHYL ETHYL OLEATE	1	1	-	-	-	2	-
METHYL FORMATE	1	4	4	2	-	-	-
METHYL HEXYL KETONE	1	4	3	1	2	1	-
METHYL IODIDE	1	1	1	4	2	1	-
METHYL ISOBUTYL KETONE	1	4	4	3	4	4	1
METHYL ISOCYANATE	1	4	3	1	2	1	-
METHYL ISOPROPYL KETONE	1	4	4	2	4	4	-
METHYL ISOVALERATE	1	1	-	-	-	2	-
METHYL LACTATE	1	3	3	1	2	1	-
METHYL MERCAPTAN	1	3	-	1	-	-	1
METHYL METHACRYLATE	1	4	4	4	4	4	1
METHYL OLEATE	1	2	4	2	-	2	1
METHYL PENTADIENE	1	1	-	-	-	2	-
METHYL PHENYLACETATE	1	4	-	-	-	2	-
METHYL PROPYL SALICYLATE	-	2	4	2	-	-	1
METHYL SALICYLATE	1	2	4	2	-	-	-
METHYL T-BUTYL ETHER	1	4	3	3	-	-	-
METHYL VALERATE	1	1	-	-	-	2	-
METHYLAMINE	1	4	4	1	2	1	1
METHYLAMYL ACETATE	1	3	3	1	2	1	-
METHYLCYCLOPENTANE	1	1	4	4	4	2	-
METHYLENE BROMIDE	1	3	2	4	-	1	-
METHYLENE CHLORIDE	1	3	4	4	4	2	1
METHYLENE DI-P-PHENYLENE ISOCY- ANATE	1	3	3	1	2	1	-
METHYLENE IODIDE	1	1	-	-	-	2	-
METHYLGLYCEROL	1	3	3	1	2	1	-
METHYLISOBUTYL CARBINOL	1	1	1	4	2	1	-
METHYLPYRROLIDINE	1	1	-	-	-	2	-
METHYLPYRROLIDONE	1	1	-	-	-	2	-
METHYLSULFURIC ACID	1	3	3	1	2	1	-
MILK	1	1	1	1	1	1	1
MILK OF LIME	1	1	4	-	-	-	1
MINERAL OILS	1	1	1	3	2	1	1
MINERAL WATER	1	1	1	1	1	1	1
MIXED ACID ETCHANTS	1	3	4	4	4	4	-
MIXED ACIDS	1	3	3	1	2	1	-
MOBILUX	1	1	1	4	-	-	-
MOLASSES	1	1	1	2	-	-	1
MOLYBDENUM DISULFIDE GREASE	1	2	1	4	-	-	-
MOLYBDENUM OXIDE	1	3	3	1	2	1	-
MOLYBDENUM TRIOXIDE	1	3	3	1	2	1	-
MOLYBDIC ACID	1	3	3	1	2	1	-
MONOBROMOBENZENE	1	2	4	4	4	4	1
MONOBROMOTOLUENE	1	1	-	-	-	2	-
MONOCHLORACETIC ACID	2	-	2	1	-	-	1
MONOCHLORACETIC ACID, ETHYL ESTER	1	2	4	2	4	4	1

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
MONOCHLORACETIC ACID, METHYL ESTER	1	2	4	1	4	4	1
MONOCHLOROACETIC ACID	1	4	3	1	2	1	-
MONOCHLOROBENZENE	1	2	4	4	4	2	-
MONOCHLOROBUTENE	1	1	-	-	-	2	-
MONOETHANOLAMINE	1	4	4	2	2	4	-
MONOETHYL AMINE	1	3	3	1	2	1	-
MONOISOPROPYLAMINE	1	3	3	1	2	1	-
MONOMETHYL ANILINE	1	2	4	1	2	1	-
MONOMETHYL ETHER	1	1	-	-	-	-	-
MONOMETHYL HYDRAZINE	2	4	2	1	4	-	-
MONOMETHYLAMINE	1	3	3	1	2	1	-
MONOMETHYLANILINE	1	3	4	4	-	-	-
MONONITROTOLUENE	1	3	3	1	2	1	-
MONONITROTOLUENE, 40% & DINI- TROTOLUENE, 60%	2	3	4	1	4	3	-
MONOVINYL ACETATE	-	-	4	2	4	1	1
MONOVINYL ACETYLENE	1	1	1	1	2	-	-
MOPAR BRAKE FLUID	1	4	3	1	3	4	-
MORPHOLINE	1	1	4	2	-	2	1
MOTOR OILS	1	1	1	4	2	1	-
MYRISTIC ACID	1	1	-	-	-	2	-
MYRISTYL ALCOHOL	1	1	1	1	-	-	1
NAFTOLEN ZD	1	1	2	4	-	-	1
NAPHTHA	1	1	2	4	4	2	1
NAPHTHALENE	1	1	4	4	4	1	1
NAPHTHALENE CHLORIDE	1	1	-	-	-	2	-
NAPHTHALENE SULFONIC ACID	1	1	-	-	-	2	-
NAPHTHALENIC	1	1	2	4	4	1	1
NAPHTHALENIC ACID	1	1	-	-	-	2	-
NAPHTHALONIC ACID	1	1	-	-	-	2	-
NAPHTHENIC ACID	1	1	2	4	4	1	-
NAPHTHOIC ACID	1	1	2	-	-	1	1
NAPHTHA	1	1	2	4	4	2	-
NATURAL GAS	1	1	1	4	2	3	1
NEATSFOOT OIL	1	1	1	2	2	1	1
NEON	1	1	1	1	1	1	-
NEVILLE ACID	1	1	4	2	4	2	-
NEVILLE-WINTER ACID	1	1	4	2	4	2	-
NICKEL ACETATE	1	4	2	1	4	4	1
NICKEL AMMONIUM SULFATE	1	2	1	1	2	1	-
NICKEL CHLORIDE	1	1	1	1	1	1	1
NICKEL CYANIDE	1	3	3	1	2	1	-
NICKEL NITRATE	1	1	3	1	2	1	-
NICKEL SALTS	1	1	1	1	1	1	-
NICKEL SULFATE	1	1	1	1	1	1	1
NICOTINAMIDE	1	1	-	-	-	2	-
NICOTINAMIDE HYDROCHLORIDE	1	3	3	1	2	1	-
NICOTINE	1	2	-	-	-	2	-
NICOTINE SULFATE	1	3	3	1	2	1	-
NITER CAKE	1	1	1	1	1	1	-
NITRIC ACID, 0 - 50%	1	1	4	3	2	2	1
NITRIC ACID, 50 - 100%	1	2	4	4	4	4	-
NITRIC ACID, CONCENTRATED	1	4	4	4	-	-	1
NITRIC ACID, RED FUMING	1	3	4	4	4	4	-
NITRIC ACID, WHITE FUMING	2	4	4	4	-	-	1
NITROANILINE	1	3	3	1	2	1	-
NITROANILINE, META	1	3	3	1	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
NITROBENZENE	1	3	4	4	4	4	1
NITROBENZOIC ACID	1	3	3	1	2	1	-
NITROCELLULOSE	1	3	3	1	2	1	-
NITROCHLOROBENZENE	1	3	3	1	2	1	-
NITROCHLOROFORM	1	3	3	1	2	1	-
NITRODIETHYLANILINE	1	3	3	1	2	1	-
NITROETHANE	1	4	4	2	4	4	1
NITROFLUOROBENZENE	1	3	3	1	2	1	-
NITROGEN	1	1	1	1	1	1	1
NITROGEN DIOXIDE	1	4	-	-	-	-	-
NITROGEN OXIDES	1	4	3	1	2	1	-
NITROGEN TETROXIDE	2	4	4	4	4	4	1
NITROGEN TRIFLUORIDE	1	-	-	-	-	-	-
NITROGLYCERINE	1	1	4	1	2	1	1
NITROGLYCOL	1	1	4	1	-	-	1
NITROGLYCEROL	1	3	3	1	2	1	-
NITROISOPROPYLBENZENE	1	3	3	1	2	1	-
NITROMETHANE	1	4	4	2	4	4	1
NITROPHENOL	1	4	3	1	2	1	-
NITROPROPANE	1	4	4	2	4	4	1
NITROTHIOPHENE	1	3	3	1	2	1	-
NITROTOLUENE	1	3	3	1	2	1	-
NITROTOLUENE, ORTHO	1	3	4	4	4	4	1
NITROUS ACID	1	3	3	1	2	1	-
NITROUS GASES	1	1	4	1	4	4	1
NITROUS OXIDE	1	1	1	1	1	1	1
NONANE	1	1	1	4	2	1	-
OCTACHLOROTOLUENE	1	1	4	4	4	2	-
OCTADECANE	1	1	1	4	4	1	-
OCTAFLUOROCYCLOBUTANE	2	2	-	1	-	-	-
OCTANAL	1	4	1	4	2	1	-
OCTANE	1	1	2	4	4	2	1
OCTYL ACETATE	1	4	3	1	2	1	-
OCTYL ALCOHOL	1	1	2	1	2	2	1
OCTYL CHLORIDE	1	2	1	4	2	1	-
OCTYL CRESOL	2	2	-	4	4	4	1
OCTYL PHTHALATE	1	3	-	-	-	2	-
OIL OF TURPENTINE	1	1	2	4	-	-	1
OLEFINS	1	1	-	-	-	2	-
OLEIC ACID	1	2	3	4	4	2	1
OLEUM	1	2	4	4	4	2	1
OLEUM SPIRITS	1	1	2	4	4	2	-
OLEYL ALCOHOL	1	1	1	1	1	1	1
OLIVE OIL	1	1	1	2	3	1	1
ORONITE 8200	1	1	2	4	4	1	-
ORONITE 8515	1	1	2	4	4	1	-
ORTHOCHLOROETHYL BENZENE	1	2	4	4	4	2	-
OXALIC ACID	1	1	2	1	2	1	1
OXYGEN, COLD	1	1	2	1	1	1	1
OXYGEN, HOT	1	2	4	4	2	1	1
OXYGEN, LIQUID	2	4	4	4	-	-	-
OZONATED DEIONIZED WATER	1	3	3	2	2	1	-
OZONE	1	1	4	1	1	1	1
PAINT THINNER	1	3	4	4	4	2	-
PALM KERNEL FATTY ACID	1	1	1	4	-	-	1
PALMITIC ACID	1	1	1	2	4	1	1
PARAFFIN EMULSIONS	1	1	1	4	1	1	1
PARAFFIN OIL	1	1	1	4	1	1	1

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
PARAFFINS	1	1	1	4	2	1	1
PARALDEHYDE	1	4	3	1	2	1	-
PAR-AL-KETONE	2	4	4	4	4	4	-
PARATHION	1	1	-	-	-	2	-
PEANUT OIL	1	1	1	3	1	1	1
PECTIN	1	1	1	1	1	1	1
PENICILLIN	1	1	-	-	-	2	-
PENTACHLORODIPHENYL	-	-	4	4	-	-	1
PENTACHLOROETHANE	1	2	-	-	-	2	-
PENTACHLOROPHENOL	1	2	3	1	2	1	-
PENTAERYTHRITOL	1	1	1	1	2	1	-
PENTAERYTHRITOL TETRANITRATE	1	3	3	1	2	1	-
PENTAFLUROETHANE	2	-	-	-	-	-	-
PENTANE	1	1	1	4	4	3	1
PENTYL PENTANOATE	1	1	1	4	2	1	-
PERACETIC ACID	1	3	3	1	2	1	-
PERACETIC ACID, < 1%	1	1	4	1	4	4	1
PERACETIC ACID, < 10%	1	-	4	2	4	4	1
PERCHLORIC ACID	1	1	4	2	4	1	1
PERCHLOROETHYLENE	1	1	2	4	4	2	1
PERFLUOROPROPANE	2	-	-	-	-	-	-
PERFLUOROTRIETHYLAMINE	2	-	-	-	-	-	-
PETROLATUM	1	1	1	4	4	1	-
PETROLATUM ETHER	1	2	1	4	2	1	-
PETROLEUM OIL, CRUDE	1	2	1	4	4	1	-
PHENETOLE	1	4	4	4	4	4	-
PHENOL	1	1	4	4	4	2	-
PHENOL, 70%	1	1	4	4	4	2	-
PHENOL, 85%	1	2	4	4	4	2	1
PHENOLIC SULFONATE	1	3	3	1	2	1	-
PHENOLSULFONIC ACID	1	1	3	1	2	1	-
PHENYL AMINE	1	2	4	2	4	3	1
PHENYL ETHYL ETHER	2	4	4	4	4	4	1
PHENYL HYDRAZINE	1	2	2	4	-	-	1
PHENYLACETAMIDE	1	1	-	-	-	2	-
PHENYLACETATE	1	4	3	1	2	1	-
PHENYLACETIC ACID	1	3	3	1	2	1	-
PHENYLBENZENE	1	1	4	4	4	2	-
PHENYLENEDIAMINE	1	4	-	-	-	-	-
PHENYLETHYL ALCOHOL	1	1	-	-	-	2	-
PHENYLETHYL ETHER	1	4	4	4	4	4	-
PHENYLETHYL MALONIC ESTER	1	1	-	-	-	2	-
PHENYLGLYCERINE	1	3	3	1	2	1	-
PHENYLHYDRAZINE	1	3	4	4	4	-	1
PHENYLHYDRAZINE CHLORHYDRATE	2	2	2	1	-	-	1
PHENYLHYDRAZINE HYDROCHLORIDE	1	3	3	1	2	1	-
PHENYLMERCURIC ACETATE	1	4	3	1	2	1	-
PHORONE	1	4	4	1	4	4	-
PHOSGENE	1	4	-	-	-	-	1
PHOSPHINE	1	2	4	1	-	-	1
PHOSPHORIC ACID	1	1	4	1	4	3	1
PHOSPHORIC ACID, 20%	1	1	4	1	3	2	-
PHOSPHORIC ACID, 80%	1	1	4	1	4	3	-
PHOSPHOROUS OXYCHLORIDE	1	-	4	-	-	-	1
PHOSPHOROUS TRICHLORIDE	1	1	4	1	-	1	1
PHOSPHOROUS TRICHLORIDE ACID	1	1	4	1	-	-	-
PHTHALIC ACID	1	2	1	1	2	1	1
PHTHALIC ANHYDRIDE	1	4	3	2	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
PICRIC ACID	1	1	2	2	4	2	1
PICRIC ACID, AQUEOUS	1	1	1	1	1	1	1
PICRIC ACID, MOLTEN	1	1	2	2	4	2	-
PINE NEEDLE OIL	1	1	2	4	2	1	1
PINE OIL	1	1	1	4	4	1	1
PINE TAR	1	1	1	4	2	1	-
PINENE	1	1	2	4	4	1	1
PIPERAZINE	1	1	-	-	-	2	-
PIPERIDINE	1	4	4	4	4	4	1
POLYETHYLENE GLYCOL	1	1	2	1	-	-	-
POLYGLYCEROL	1	3	3	1	2	1	-
POLYGLYCOL	1	3	3	1	2	1	-
POLYVINYL ACETATE EMULSION	1	3	1	1	-	-	-
POTASH, AQUEOUS	1	1	1	1	1	1	1
POTASSIUM ACETATE	1	4	2	1	4	4	1
POTASSIUM ACID SULFATE	1	3	3	1	2	1	-
POTASSIUM ALUM	1	3	3	1	2	1	-
POTASSIUM ALUMINUM SULFATE	1	3	3	1	2	1	-
POTASSIUM ANTIMONATE	1	3	3	1	2	1	-
POTASSIUM BICARBONATE	1	1	3	1	2	1	-
POTASSIUM BICHROMATE	1	3	3	1	2	1	-
POTASSIUM BIFLUORIDE	1	3	3	1	2	1	-
POTASSIUM BISULFATE	1	1	1	1	2	1	1
POTASSIUM BISULFITE	1	1	3	1	2	1	-
POTASSIUM BITARTRATE	1	3	3	1	2	1	-
POTASSIUM BORATE, AQUEOUS	1	1	1	1	-	-	1
POTASSIUM BROMATE, 10%	1	1	1	1	-	-	1
POTASSIUM BROMIDE	1	2	1	1	2	1	1
POTASSIUM CARBONATE	1	2	1	1	1	1	1
POTASSIUM CHLORATE	1	2	4	1	2	1	1
POTASSIUM CHLORIDE	1	1	1	1	1	1	1
POTASSIUM CHROMATE	1	2	2	1	2	1	1
POTASSIUM CITRATE	1	3	3	1	2	1	-
POTASSIUM COPPER CYANIDE	1	1	1	1	1	1	-
POTASSIUM CUPRO CYANIDE	1	1	1	1	1	1	-
POTASSIUM CYANATE	1	3	3	1	2	1	-
POTASSIUM CYANIDE	1	1	1	1	1	1	1
POTASSIUM DICHROMATE	1	1	1	1	1	1	1
POTASSIUM DIPHOSPHATE	1	3	3	1	2	1	-
POTASSIUM FERRICYANIDE	1	2	3	1	2	1	-
POTASSIUM FLUORIDE	1	1	3	1	2	1	-
POTASSIUM GLUCOCYANATE	1	3	3	1	2	1	-
POTASSIUM HYDROXIDE	1	4	2	1	3	3	-
POTASSIUM HYPOCHLORITE	1	4	3	1	2	1	-
POTASSIUM IODATE	1	3	3	1	2	1	-
POTASSIUM IODIDE	1	1	1	1	2	1	1
POTASSIUM METABISULFATE	1	3	3	1	2	1	-
POTASSIUM METACHROMATE	1	3	3	1	2	1	-
POTASSIUM MONOCHROMATE	1	3	3	1	2	1	-
POTASSIUM NITRATE	1	1	1	1	1	1	1
POTASSIUM NITRITE	1	3	3	1	2	1	-
POTASSIUM OXALATE	1	3	3	1	2	1	-
POTASSIUM PERCHLORATE	1	1	4	1	2	1	1
POTASSIUM PERFLUORO ACETATE	1	-	-	-	-	-	-
POTASSIUM PERMANGANATE	1	2	4	1	2	1	1
POTASSIUM PERSULFATE	1	1	4	1	2	1	1
POTASSIUM PHOSPHATE, ACIDIC	1	3	3	1	2	1	-
POTASSIUM PYROSULFATE	1	3	3	1	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPE
POTASSIUM SALTS	1	1	1	1	1	1	-
POTASSIUM SODIUM TARTRATE	1	3	3	1	2	1	-
POTASSIUM STANNATE	1	3	3	1	2	1	-
POTASSIUM STEARATE	1	2	3	1	2	1	-
POTASSIUM SULFATE	1	1	1	1	1	1	1
POTASSIUM SULFIDE	1	1	3	1	2	1	-
POTASSIUM SULFITE	1	1	1	1	1	1	-
POTASSIUM TARTRATE	1	3	3	1	2	1	-
POTASSIUM THIOCYANATE	1	3	3	1	2	1	-
POTASSIUM THIOSULFATE	1	3	3	1	2	1	-
POTASSIUM TRIPHOSPHATE	1	3	3	1	2	1	-
POTASSIUM, MOLTEN	4	-	-	-	-	-	-
PROPANE	1	1	1	4	4	2	1
PROPANOIC ACID NITRILE	1	3	4	4	4	4	1
PROPANOL	1	1	1	1	1	1	1
PROPANONE	1	4	4	1	4	4	1
PROPARGYL ALCOHOL	1	1	1	1	-	-	1
PROPIONALDEHYDE	1	4	3	1	2	1	-
PROPIONIC ACID	1	4	1	1	2	1	1
PROPIONITRILE	1	4	1	4	-	-	-
PROPYL ACETATE	1	4	4	2	4	4	4
PROPYL ACETONE	1	4	4	1	4	4	-
PROPYL NITRATE	1	1	4	2	4	4	-
PROPYL PROPIONATE	1	4	4	2	4	4	-
PROPYLAMINE	2	4	3	1	2	1	-
PROPYLBENZENE	1	1	-	-	-	2	-
PROPYLENE	1	1	4	4	4	2	1
PROPYLENE CHLORIDE	1	1	-	-	-	2	-
PROPYLENE CHLOROHYDRIN	1	1	-	-	-	2	-
PROPYLENE DICHLORIDE	1	2	-	-	-	2	-
PROPYLENE GLYCOL	1	1	1	1	2	1	1
PROPYLENE IMINE	1	1	-	-	-	2	-
PROPYLENE OXIDE	1	4	4	2	4	4	1
PYRIDINE	1	4	4	2	4	4	1
PYRIDINE OIL	4	4	4	2	4	4	-
PYRIDINE SULFATE	1	3	3	1	2	1	-
PYRIDINE SULFONIC ACID	1	3	3	1	2	1	-
PYROGALLOL	1	1	2	4	-	2	-
PYROLIGNEOUS ACID	1	4	4	2	-	4	-
PYROSULFURIC ACID	1	3	3	1	2	1	-
PYROSULFURYL CHLORIDE	1	1	2	4	-	2	-
PYRROLE	1	4	4	4	2	4	1
PYRUVIC ACID	1	3	3	1	2	1	-
QUINIDINE	1	1	2	4	-	2	-
QUININE	1	1	2	4	-	2	-
QUININE BISULFATE	1	3	3	1	2	1	-
QUININE HYDROCHLORIDE	1	3	3	1	2	1	-
QUININE SULFATE	1	3	3	1	2	1	-
QUININE TARTRATE	1	3	3	1	2	1	-
QUINIZARIN	1	1	2	4	-	2	-
QUINOLINE	1	1	2	4	-	2	-
QUINONE	1	2	2	4	-	2	-
RAFFINATE	1	1	2	4	-	2	-
RAPESEED OIL	1	1	2	1	4	1	1
RESORCINOL	1	1	4	4	2	1	-
RIBOFLAVIN	1	1	2	4	-	2	-
RICINOLEIC ACID	1	1	2	4	-	2	-
ROSIN	1	1	2	4	-	2	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
SACCHARIN SOLUTION	1	3	3	1	2	1	-
SAGROTAN	1	1	2	1	1	1	1
SAL AMMONIAC	1	1	1	1	2	1	-
SALICYLIC ACID	1	1	2	1	-	1	1
SALT WATER	1	1	1	1	1	1	1
SEA SALT	1	1	1	1	-	-	-
SEA WATER	1	1	1	1	1	1	1
SEBACIC ACID	1	2	3	1	2	1	-
SELENIC ACID	1	3	3	1	2	1	-
SELENIOS ACID	1	3	3	1	2	1	-
SHELLAC	1	2	3	1	2	1	-
SILICATE ESTERS	1	1	2	4	4	1	-
SILICIC ACID, AQUEOUS	1	1	1	1	-	-	1
SILICON TETRACHLORIDE	2	-	-	-	-	-	-
SILICON TETRAFLUORIDE	2	-	-	-	-	-	-
SILICONE GREASES	1	1	1	1	3	1	1
SILICONE OILS	1	1	1	1	4	1	1
SILVER BROMIDE	1	3	3	1	2	1	-
SILVER CHLORIDE	1	3	3	1	2	1	-
SILVER CYANIDE	1	2	3	1	2	1	-
SILVER NITRATE	1	1	2	1	1	1	1
SILVER SALTS, AQUEOUS	1	1	2	1	1	1	1
SILVER SULFATE	1	2	3	1	2	1	-
SKELLY, SOLVENT B, C, E	1	1	1	4	-	1	-
SODA ASH	1	1	1	1	1	1	-
SODA, AQUEOUS	1	1	1	1	1	1	1
SODIUM ACETATE	1	4	2	1	4	4	-
SODIUM ACID BISULFATE	1	3	3	1	2	1	-
SODIUM ACID FLUORIDE	1	3	3	1	2	1	-
SODIUM ACID SULFATE	1	3	3	1	2	1	-
SODIUM ALUMINATE	1	2	3	1	2	1	-
SODIUM ALUMINATE SULFATE	1	3	3	1	2	1	-
SODIUM ANTHRAQUINONE DISULFATE	1	3	3	1	2	1	-
SODIUM ANTIMONATE	1	3	3	1	2	1	-
SODIUM ARSENATE	1	2	3	1	2	1	-
SODIUM ARSENITE	1	3	3	1	2	1	-
SODIUM BENZOATE	1	2	1	1	2	1	1
SODIUM BICARBONATE	1	1	1	1	1	1	1
SODIUM BICHROMATE	1	3	3	1	2	1	-
SODIUM BIFLUORIDE	1	3	3	1	2	1	-
SODIUM BISULFATE	1	1	1	1	1	1	-
SODIUM BISULFIDE	1	3	3	1	2	1	-
SODIUM BISULFITE	1	1	1	1	1	1	1
SODIUM BITARTRATE	1	3	3	1	2	1	-
SODIUM BORATE	1	1	1	1	1	1	-
SODIUM BROMATE	1	3	3	1	2	1	-
SODIUM BROMIDE	1	2	3	1	2	1	-
SODIUM CARBONATE	1	1	1	1	1	1	1
SODIUM CHLORATE	1	2	4	1	2	1	1
SODIUM CHLORIDE	1	1	1	1	1	1	1
SODIUM CHLORITE	1	3	3	1	2	1	-
SODIUM CHLOROACETATE	1	3	3	1	2	1	-
SODIUM CHROMATE	1	2	3	1	2	1	-
SODIUM CITRATE	1	3	3	1	2	1	-
SODIUM CYANAMIDE	1	3	3	1	2	1	-
SODIUM CYANATE	1	3	3	1	2	1	-
SODIUM CYANIDE	1	1	1	1	1	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
SODIUM DIACETATE	1	4	3	1	2	1	-
SODIUM DIPHENYL SULFONATE	1	3	3	1	2	1	-
SODIUM DIPHOSPHATE	1	3	3	1	2	1	-
SODIUM DISILICATE	1	3	3	1	2	1	-
SODIUM ETHYLATE	1	3	3	1	2	1	-
SODIUM FERRICYANIDE	1	1	3	1	2	1	-
SODIUM FERROCYANIDE	1	1	3	1	2	1	-
SODIUM FLUORIDE	1	1	3	1	2	1	-
SODIUM FLUOROSILICATE	1	3	3	1	2	1	-
SODIUM GLUTAMATE	1	3	3	1	2	1	-
SODIUM HYDROGEN SULFATE	1	3	3	1	2	1	-
SODIUM HYDROSULFIDE	1	2	3	1	2	1	-
SODIUM HYDROSULFITE	1	3	3	1	2	1	-
SODIUM HYDROXIDE	1	2	2	1	2	2	-
SODIUM HYDROXIDE PELLETS	1	4	2	1	-	-	-
SODIUM HYPOCHLORITE	1	1	2	1	2	2	1
SODIUM HYPOPHOSPHATE	1	3	3	1	2	1	-
SODIUM HYPOPHOSPHITE	1	3	3	1	2	1	-
SODIUM HYPOSULFITE	1	3	3	1	2	1	-
SODIUM IODIDE	1	2	3	1	2	1	-
SODIUM LACTATE	1	3	3	1	2	1	-
SODIUM METAPHOSPHATE	1	1	1	1	-	1	-
SODIUM METASILICATE	1	2	3	1	2	1	-
SODIUM METHYLATE	1	3	3	1	2	1	-
SODIUM MONOPHOSPHATE	1	3	3	1	2	1	-
SODIUM NITRATE	1	1	2	1	4	-	1
SODIUM NITRITE	1	1	2	1	-	-	1
SODIUM OLEATE	1	3	3	1	2	1	-
SODIUM ORTHOSILICATE	1	3	3	1	2	1	-
SODIUM OXALATE	1	3	3	1	2	1	-
SODIUM PERBORATE	1	1	2	1	2	1	-
SODIUM PERCARBONATE	1	3	3	1	2	1	-
SODIUM PERCHLORATE	1	3	3	1	2	1	-
SODIUM PEROXIDE	1	2	2	1	4	1	-
SODIUM PERSULFATE	1	3	3	1	2	1	-
SODIUM PHENOLATE	1	3	3	1	2	1	-
SODIUM PHENOXIDE	1	3	3	1	2	1	-
SODIUM PHOSPHATE, DIBASIC	1	1	1	1	4	-	1
SODIUM PHOSPHATE, TRIBASIC	1	1	1	1	1	-	-
SODIUM PHOSPHATE, MONOBASIC	1	1	1	1	4	-	-
SODIUM PLUMBITE	1	3	3	1	2	1	-
SODIUM PYROPHOSPHATE	1	3	3	1	2	1	-
SODIUM RESINATE	1	3	3	1	2	1	-
SODIUM SALICYLATE	1	3	3	1	2	1	-
SODIUM SALTS	1	1	1	1	1	1	-
SODIUM SILICATE	1	1	1	1	-	-	1
SODIUM STANNATE	1	3	3	1	2	1	-
SODIUM SULFATE	1	1	1	1	1	1	1
SODIUM SULFATE DECAHYDRATE	1	1	4	2	-	1	-
SODIUM SULFATE, ANHYDROUS	1	1	1	1	1	1	-
SODIUM SULFIDE	1	1	2	1	1	1	1
SODIUM SULFITE	1	1	1	1	1	1	-
SODIUM SULFOCYANIDE	1	3	3	1	2	1	-
SODIUM TARTRATE	1	3	3	1	2	1	-
SODIUM TETRABORATE	1	3	3	1	2	1	-
SODIUM TETRAPHOSPHATE	1	3	3	1	2	1	-
SODIUM TETRASULFIDE	1	3	3	1	2	1	-
SODIUM THIOARSENATE	1	3	3	1	2	1	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
SODIUM THIOCYANATE	1	1	3	1	2	1	-
SODIUM THIOSULFATE	1	1	2	1	1	1	1
SODIUM TRICHLOROACETATE	1	3	3	1	2	1	-
SODIUM TRIPHOSPHATE	1	3	3	1	2	1	-
SODIUM TRIPOLYPHOSPHATE	1	2	4	1	-	-	-
SODIUM, MOLTEN	4	-	-	-	-	-	-
SORBITOL	1	2	3	1	2	1	-
SOUR CRUDE OIL	1	4	3	4	4	4	-
SOUR NATURAL GAS	1	4	3	4	4	4	-
SOYBEAN OIL	1	1	1	3	1	1	1
SPERMACETI	1	1	1	4	-	-	1
STANNIC AMMONIUM CHLORIDE	1	3	3	1	2	1	-
STANNIC CHLORIDE	1	1	1	1	2	1	-
STANNIC CHLORIDE, 50%	1	1	1	1	2	1	-
STANNIC TETRACHLORIDE	1	3	3	1	2	1	-
STANNOUS BISULFATE	1	3	3	1	2	1	-
STANNOUS BROMIDE	1	3	3	1	2	1	-
STANNOUS CHLORIDE	1	1	1	1	2	1	-
STANNOUS FLUORIDE	1	1	3	1	2	1	-
STANNOUS SULFATE	1	3	3	1	2	1	-
STARCH SYRUP	1	1	1	1	-	-	1
STARCH, AQUEOUS	1	1	1	1	1	1	1
STAUFFER 7700	1	1	2	4	4	2	-
STEAM	2	2	4	1	4	4	1
STEARIC ACID	1	1	2	2	2	1	1
STODDARD SOLVENT	1	1	1	4	4	1	1
STRONTIUM ACETATE	1	4	3	1	2	1	-
STRONTIUM CARBONATE	1	3	3	1	2	1	-
STRONTIUM CHLORIDE	1	3	3	1	2	1	-
STRONTIUM HYDROXIDE	1	3	3	1	2	1	-
STRONTIUM NITRATE	1	3	3	1	2	1	-
STYRENE	1	2	4	4	4	3	1
SUCCINIC ACID	1	2	1	1	2	1	1
SUCROSE SOLUTIONS	1	1	1	1	1	1	1
SUGAR SYRUP	1	1	1	1	-	-	1
SULFAMIC ACID	1	2	3	1	2	1	-
SULFANILIC ACID	1	3	3	1	2	1	-
SULFANILIC CHLORIDE	1	1	2	4	-	2	-
SULFANILIMIDE	1	1	2	4	-	2	-
SULFITE LIQUORS	1	2	2	2	4	2	-
SULFOLANE	1	2	2	1	-	-	-
SULFONATED OILS	1	1	2	4	-	2	-
SULFONIC ACID	1	3	3	1	2	1	-
SULFONYL CHORIDE	2	3	3	1	2	1	-
SULFUR	1	1	4	1	-	1	1
SULFUR (MOLTEN 250°F)	1	1	4	3	3	1	-
SULFUR CHLORIDE	1	1	4	4	3	1	1
SULFUR DIOXIDE	1	3	4	1	2	2	-
SULFUR DIOXIDE GAS, DRY	1	2	4	1	2	2	1
SULFUR DIOXIDE GAS, WET	1	2	4	1	2	2	1
SULFUR DIOXIDE, LIQUEFIED	1	2	4	1	2	2	1
SULFUR HEXAFLUORIDE	2	2	2	1	2	2	1
SULFUR LIQUORS	1	1	2	2	4	2	-
SULFUR MONOCHLORIDE	1	1	1	4	2	1	-
SULFUR TETRAFLUORIDE	2	3	-	-	-	-	-
SULFUR TRIOXIDE	1	1	4	2	2	2	1
SULFURIC ACID	1	1	2	1	1	1	1
SULFURIC CHLOROHYDRIN	1	3	3	1	2	1	-

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
SULFUROUS ACID	1	3	2	2	4	-	1
SULFURYL CHLORIDE	1	1	4	2	2	1	1
SULPHUR DIOXIDE, AQUEOUS	1	1	4	1	-	-	1
TALLOW	1	1	1	4	2	1	1
T-AMYL METHYL ETHER	1	4	-	-	-	-	-
TANNIC ACID	1	1	1	1	2	1	1
TANNING EXTRACT	1	1	1	1	1	1	1
TAR OIL	1	-	4	4	-	-	1
TAR, BITUMINOUS	1	1	2	4	2	1	1
TARTARIC ACID	1	2	1	2	1	1	1
T-BUTYL ALCOHOL	1	1	2	2	2	2	1
T-BUTYL CATECHOL	1	1	4	2	-	1	-
T-BUTYL MERCAPTAN	1	1	4	4	4	-	1
T-BUTYL CATECHOL	1	1	4	2	-	1	-
TEREPHTHALIC ACID	1	1	3	1	2	1	-
TERPINEOL	1	1	2	3	-	1	-
TERPINYL ACETATE	1	4	2	4	-	2	-
TETRABROMOETHANE	1	1	4	4	4	2	-
TETRABROMOMETHANE	1	1	4	4	4	2	-
TETRABUTYL TITANATE	1	1	2	1	4	4	1
TETRACHLOROETHANE	1	1	4	4	4	2	1
TETRACHLOROETHYLENE	1	1	4	1	4	2	1
TETRAETHYL LEAD	1	1	2	4	-	2	1
TETRAETHYL LEAD BLEND	1	1	2	4	-	2	-
TETRAETHYLOROTHOSILICATE	1	1	1	1	4	1	-
TETRAFLUOROMETHANE	1	1	1	1	4	-	-
TETRAHYDROFURAN	1	4	4	3	4	4	1
TETRAHYDRONAPHTHALENE	1	1	4	4	4	1	1
TETRAMETHYL AMMONIUM HYDROX- IDE	1	3	3	1	2	1	-
TETRAMETHYLDIHYDROPYRIDINE	1	1	2	4	-	2	-
TETRAPHOSPHOGLUCOSATE	1	3	3	1	2	1	-
THIOAMYL ALCOHOL	1	1	1	4	2	1	-
THIODIACETIC ACID	1	3	3	1	2	1	-
THIOETHANOL	1	3	3	1	2	1	-
THIOGLYCOLIC ACID	1	3	3	1	2	1	-
THIOL TP-90B	1	2	4	1	-	2	-
THIOL TP-95	1	2	4	1	-	2	-
THIONYL CHLORIDE	1	2	4	3	-	2	1
THIOPHENE	1	4	4	4	-	2	1
THIOPHOSPHORYL CHLORIDE	1	3	3	1	2	1	-
THIOUREA	1	3	3	1	2	1	-
THORIUM NITRATE	1	3	3	1	2	1	-
TIN AMMONIUM CHLORIDE	1	3	3	1	2	1	-
TIN CHLORIDE	1	1	1	1	2	1	1
TIN TETRACHLORIDE	1	1	1	4	2	1	-
TITANIC ACID	1	3	3	1	2	1	-
TITANIUM DIOXIDE	1	2	3	1	2	1	-
TITANIUM SULFATE	1	3	3	1	2	1	-
TITANIUM TETRACHLORIDE	2	1	2	4	4	2	1
TOLUENE	1	2	4	4	4	2	1
TOLUENE DIISOCYANATE	1	4	4	2	4	4	-
TOLUENE SULFONIC ACID	1	3	3	1	2	1	-
TOLUENE SULFONYL CHLORIDE	1	1	2	4	-	2	-
TOLUENESULFONIC ACID	1	3	3	1	2	1	-
TOLUIDINE	1	3	2	4	-	2	-
TOLUOL	1	3	3	1	2	1	-
TOLUQUINONE	1	1	2	4	-	2	-

O-Ring Chemical Compatibility

The following chemical compatibility chart is for reference only and Ace Glass assumes no responsibility for the accuracy of the following information and strongly suggests testing compatibility before usage.

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
TOLYLALDEHYDE, PARA	1	3	3	1	2	1	-
TOSYL ARGININE METHYL ESTER	1	4	4	3	-	-	-
TRIACETIN	1	4	2	1	-	4	1
TRIALLYL PHOSPHATE	1	1	4	1	3	2	-
TRIARYL PHOSPHATE	1	1	4	1	3	2	-
TRIBROMOMETHYLBENZENE	1	1	2	4	-	2	-
TRIBUTOXYETHYL PHOSPHATE	1	2	4	1	-	2	1
TRIBUTYL CITRATE	1	4	3	1	2	1	-
TRIBUTYL MERCAPTAN	1	2	4	4	4	3	-
TRIBUTYL PHOSPHATE	1	4	4	1	4	4	1
TRICHLOROACETIC ACID	1	4	2	2	-	4	1
TRICHLOROACETYL CHLORIDE	1	1	2	4	-	2	-
TRICHLOROENZENE	1	2	2	4	-	2	-
TRICHLOROETHANE	1	1	4	4	4	2	-
TRICHLOROETHANOLAMINE	1	3	3	1	2	1	-
TRICHLOROETHYL PHOSPHATE	2	4	4	-	-	-	1
TRICHLOROETHYLENE	1	1	3	4	4	2	1
TRICHLOROFLUOROMETHANE	2	2	2	4	4	2	-
TRICHLOROMETHANE	1	1	4	4	4	2	-
TRICHLORONITROMETHANE	1	3	3	1	2	1	-
TRICHLOROPROPANE	1	1	4	4	4	2	-
TRICHLOROSILANE	1	1	4	4	4	2	-
TRICHLOROTRIFLUOROETHANE	2	2	2	4	4	4	-
TRICRESYL PHOSPHATE	1	1	4	1	3	2	1
TRIETHANOLAMINE	2	4	3	2	4	4	1
TRIETHYL ALUMINIUM	1	2	4	3	-	-	1
TRIETHYL BORANE	1	1	4	3	-	-	1
TRIETHYL PHOSPHATE	1	1	2	4	-	2	-
TRIETHYLENE GLYCOL	1	2	3	1	2	1	-
TRIETHYLENETETRAMINE	1	4	3	1	2	1	-
TRIFLUOROACETIC ACID	2	3	3	1	2	1	-
TRIFLUOROETHANE	1	1	4	4	4	2	-
TRIFLUOROMETHANE	1	1	4	4	4	2	-
TRIFLUOROVINYLCHLORIDE	1	1	2	4	-	2	-
TRIGLYCOL	1	1	1	1	-	-	1
TRISOPROPYLBENZYLCHLORIDE	1	1	2	4	-	2	-
TRIMETHYL BORATE	1	1	2	4	-	2	-
TRIMETHYLAMINE	2	4	3	1	2	1	-
TRIMETHYLBENZENE	1	1	2	4	-	2	-
TRIMETHYLOLPROPANE	1	1	4	2	-	-	1
TRIMETHYLPENTANE	1	1	1	4	2	1	-
TRINITROTOLUENE	1	2	4	4	-	2	1
TRIOCTYL PHOSPHATE	1	2	4	2	3	2	1
TRIPHENYL PHOSPHITE	1	3	3	1	2	1	-
TRIPOLY PHOSPHATE	1	2	4	1	3	1	-
TRIPOTASSIUM PHOSPHATE	1	3	3	1	2	1	-
TRISODIUM PHOSPHATE	1	1	1	1	1	1	1
TUNG OIL	1	1	1	4	4	2	-
TUNGSTEN HEXAFLUORIDE	1	-	-	-	-	-	-
TURBINE OIL	1	1	1	4	4	1	1
TURPENTINE	1	2	1	4	4	2	1
ULTRA PURE DEIONIZED WATER	1	2	3	2	2	1	-
UNDECYLENIC ACID	1	1	2	4	-	2	-
UNDECYLIC ACID	1	1	2	4	-	2	-
UNSYMMETRICAL DIMETHYL HYDRAZINE	2	4	2	1	4	4	-
URANIUM HEXACHLORIDE	1	1	-	-	-	-	-
UREA	1	1	1	1	-	-	1

1= Excellent 2= Good 3 = Poor 4 = Not Recommended - = No Information	Chemraz Kalrez	Viton	Buna-N	EPDM	Silicone	FETFE	CAPEE
URIC ACID	1	3	3	1	2	1	-
VALERALDEHYDE	1	4	3	1	2	1	-
VALERIC ACID	1	1	3	1	2	1	-
VANADIUM OXIDE	1	1	1	4	2	1	-
VANADIUM PENTOXIDE	1	1	1	4	2	1	-
VARNISH	1	1	2	4	4	2	1
VASELINE	1	1	1	4	2	1	1
VASELINE OIL	1	1	1	4	2	1	1
VEGETABLE OILS	1	1	1	3	1	1	-
VINEGAR	1	1	2	1	3	3	1
VINYL ACETATE	1	4	4	2	-	-	1
VINYL BENZENE	1	1	2	4	-	2	-
VINYL BENZOATE	1	1	2	4	-	2	-
VINYL CHLORIDE	1	2	4	4	-	2	1
VINYL CYANIDE	1	3	4	4	4	4	1
VINYL FLUORIDE	1	2	2	4	-	2	-
VINYLDIENE CHLORIDE	1	1	2	4	-	2	-
VINYLPYRIDINE	1	1	2	4	-	2	-
VITRIOL, WHITE	1	3	3	1	2	1	-
WATER	1	1	1	1	2	1	1
WAX ALCOHOL	1	1	1	4	-	-	1
WHISKEY	1	1	1	1	1	1	1
WHITE LIQUOR	1	1	1	1	1	-	-
WHITE LYE	2	4	2	1	-	-	1
WHITE OIL	1	1	1	4	1	1	1
WHITE PINE OIL	1	1	2	4	4	1	-
WHITE PINE TAR	1	1	2	4	4	1	1
WHITE SPIRIT	1	1	1	4	-	-	1
WINE	1	1	1	1	1	1	1
WOLMAR SALTS	1	1	1	1	1	1	-
WOOD ALCOHOL	1	4	1	1	1	1	-
WOOD OIL	1	1	1	4	4	2	-
WOOL FAT	1	1	1	1	1	1	1
XENON	1	1	1	1	1	1	-
XYLAMON	1	2	4	4	-	-	1
XYLENE	1	2	4	4	4	1	1
XYLIDINE	1	4	3	4	4	4	-
XYLOL	1	1	4	4	4	1	-
YEAST, AQUEOUS	1	1	1	1	1	1	1
ZEOLITES	1	1	5	1	1	1	1
ZINC ACETATE	1	4	2	1	4	4	1
ZINC AMMONIUM CHLORIDE	1	3	3	1	2	1	-
ZINC CHLORIDE	1	1	1	1	1	1	-
ZINC CHROMATE	1	3	3	1	2	1	-
ZINC CYANIDE	1	3	3	1	2	1	-
ZINC DIETHYLDITHIOCARBAMATE	1	3	3	1	2	1	-
ZINC DIHYDROGEN PHOSPHATE	1	3	3	1	2	1	-
ZINC HYDROSULFITE	1	3	3	1	2	1	-
ZINC NITRATE	1	1	1	1	-	1	-
ZINC OXIDE	1	1	1	1	-	1	-
ZINC PHENOLSULFONATE	1	3	3	1	2	1	-
ZINC PHOSPHATE	1	1	1	1	1	1	-
ZINC SALTS	1	1	1	1	1	1	-
ZINC STEARATE	1	3	3	1	2	1	-
ZINC SULFATE	1	1	1	1	1	1	-
ZINC SULFIDE	1	3	3	1	2	1	-
ZIRCONIUM NITRATE	1	1	1	1	1	1	-

CROSS REFERENCES

Ace-Threds	CORRESPONDING O-RING SIZES FOR:		
	PTFE/Nylon Bushings	PTFE Plug/Front Seal	PTFE Plug/Back Seal
#7	-008	-009	-014
#11	-012	-012	-114
#15	-110	-110	-210
#18	-112	-113	-212
#25	-212	-212	-220
#36	-217	-125	-223
#50	-225	-225	-229
#80	-336	-235	-343

SPHERICAL JOINTS	to	O-Rings
12/5		-011
18/9		-014
28/15		-116
35/25		-118

ACE-SAFE CONNECTIONS	to	O-Rings
#7 Hose Connection		-009
#11 Hose Connection		-011
#15 Hose Connection		-013
#25 Hose Connection		-118

MICRO SCALE JOINTS	to	O-Rings
5/5		-006
7/10		-010
10/10		-011
14/10 & 14/20		-112

GLASS STD TAPER JOINT	to	O-Rings
14/10, 14/35 or 14/20		-012
19/22 or 19/38		-111
24/40		-115
29/32 or 29/42		-118

FLAT O-RING JOINTS	to	O-Rings
5		-110
7		-111
9		-112
15		-116
20		-214
25		-217
40		-226
50		-229
75		-341



O-RING SIZE REFERENCE

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-001	1/32	3/32	1/32	.029±.004	.040±.003	0.74±0.10	1.02±0.08
-002	3/64	9/64	3/64	.042±.004	.050±.003	1.07±0.10	1.27±0.08
-003	1/16	3/16	1/16	.056±.004	.060±.003	1.42±0.10	1.52±0.08
-004	5/64	13/64	1/16	.070±.005	.070±.003	1.78±0.13	1.78±0.08
-005	3/32	7/32	1/16	.101±.005	.070±.003	2.57±0.13	1.78±0.08
-006	1/8	1/4	1/16	.114±.005	.070±.003	2.90±0.13	1.78±0.08
-007	5/32	9/32	1/16	.145±.005	.070±.003	3.68±0.13	1.78±0.08
-008	3/16	5/16	1/16	.176±.005	.070±.003	4.47±0.13	1.78±0.08
-009	7/32	11/32	1/16	.208±.005	.070±.003	5.28±0.13	1.78±0.08
-010	1/4	3/8	1/16	.239±.005	.070±.003	6.07±0.13	1.78±0.08
-011	5/16	7/16	1/16	.301±.005	.070±.003	7.65±0.13	1.78±0.08
-012	3/8	1/2	1/16	.364±.005	.070±.003	9.25±0.13	1.78±0.08
-013	7/16	9/16	1/16	.426±.005	.070±.003	10.82±0.13	1.78±0.08
-014	1/2	5/8	1/16	.489±.005	.070±.003	12.42±0.13	1.78±0.08
-015	9/16	11/16	1/16	.551±.007	.070±.003	14.00±0.18	1.78±0.08
-016	5/8	3/4	1/16	.614±.009	.070±.003	15.60±0.23	1.78±0.08
-017	11/16	13/16	1/16	.676±.009	.070±.003	17.17±0.23	1.78±0.08
-018	3/4	7/8	1/16	.739±.009	.070±.003	18.77±0.23	1.78±0.08
-019	13/16	15/16	1/16	.801±.009	.070±.003	20.35±0.23	1.78±0.08
-020	7/8	1	1/16	.864±.009	.070±.003	21.95±0.23	1.78±0.08
-021	15/16	1-1/16	1/16	.926±.009	.070±.003	23.52±0.23	1.78±0.08
-022	1	1-1/8	1/16	.989±.010	.070±.003	25.12±0.25	1.78±0.08
-023	1-1/16	1-3/16	1/16	1.051±.010	.070±.003	26.70±0.25	1.78±0.08
-024	1-1/8	1-1/4	1/16	1.114±.010	.070±.003	28.30±0.25	1.78±0.08
-025	1-3/16	1-5/16	1/16	1.176±.011	.070±.003	29.87±0.28	1.78±0.08
-026	1-1/4	1-3/8	1/16	1.239±.011	.070±.003	31.47±0.28	1.78±0.08
-027	1-5/16	1-7/16	1/16	1.301±.011	.070±.003	33.05±0.28	1.78±0.08
-028	1-3/8	1-1/2	1/16	1.364±.013	.070±.003	34.65±0.33	1.78±0.08
-029	1-1/2	1-5/8	1/16	1.489±.013	.070±.003	37.82±0.33	1.78±0.08
-030	1-5/8	1-3/4	1/16	1.614±.013	.070±.003	41.00±0.33	1.78±0.08
-031	1-3/4	1-7/8	1/16	1.739±.015	.070±.003	44.17±0.38	1.78±0.08
-032	1-7/8	2	1/16	1.864±.015	.070±.003	47.35±0.38	1.78±0.08
-033	2	2-1/8	1/16	1.989±.018	.070±.003	50.52±0.46	1.78±0.08
-034	2-1/8	2-1/4	1/16	2.114±.018	.070±.003	53.70±0.46	1.78±0.08
-035	2-1/4	2-3/8	1/16	2.239±.018	.070±.003	56.87±0.46	1.78±0.08
-036	2-3/8	2-1/2	1/16	2.364±.018	.070±.003	60.05±0.46	1.78±0.08
-037	2-1/2	2-5/8	1/16	2.489±.018	.070±.003	63.22±0.46	1.78±0.08
-038	2-5/8	2-3/4	1/16	2.614±.020	.070±.003	66.40±0.51	1.78±0.08
-039	2-3/4	2-7/8	1/16	2.739±.020	.070±.003	69.57±0.51	1.78±0.08
-040	2-7/8	3	1/16	2.864±.020	.070±.003	72.75±0.51	1.78±0.08

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-041	3	3-1/8	1/16	2.989±.024	.070±.003	75.92±0.61	1.78±0.08
-042	3-1/4	3-3/8	1/16	3.239±.024	.070±.003	82.27±0.61	1.78±0.08
-043	3-1/2	3-5/8	1/16	3.489±.024	.070±.003	88.62±0.61	1.78±0.08
-044	3-3/4	3-7/8	1/16	3.739±.027	.070±.003	94.97±0.69	1.78±0.08
-045	4	4-1/8	1/16	3.989±.027	.070±.003	101.32±0.69	1.78±0.08
-046	4-1/4	4-3/8	1/16	4.239±.030	.070±.003	107.67±0.76	1.78±0.08
-047	4-1/2	4-5/8	1/16	4.489±.030	.070±.003	114.02±0.76	1.78±0.08
-048	4-3/4	4-7/8	1/16	4.739±.030	.070±.003	120.37±0.76	1.78±0.08
-049	5	5-1/8	1/16	4.989±.037	.070±.003	126.72±0.94	1.78±0.08
-050	5-1/4	5-3/8	1/16	5.239±.037	.070±.003	133.07±0.94	1.78±0.08

-102	1/16	1/4	3/32	.049±.005	.103±.003	1.24±0.13	2.62±0.08
-103	3/32	9/32	3/32	.081±.005	.103±.003	2.06±0.13	2.62±0.08
-104	1/8	5/16	3/32	.112±.005	.103±.003	2.84±0.13	2.62±0.08
-105	5/32	11/32	3/32	.143±.005	.103±.003	3.63±0.13	2.62±0.08
-106	3/16	3/8	3/32	.174±.005	.103±.003	4.42±0.13	2.62±0.08
-107	7/32	13/32	3/32	.206±.005	.103±.003	5.23±0.13	2.62±0.08
-108	1/4	7/16	3/32	.237±.005	.103±.003	6.02±0.13	2.62±0.08
-109	5/16	1/2	3/32	.299±.005	.103±.003	7.59±0.13	2.62±0.08
-110	3/8	9/16	3/32	.362±.005	.103±.003	9.19±0.13	2.62±0.08

-111	7/16	5/8	3/32	.424±.005	.103±.003	10.77±0.13	2.62±0.08
-112	1/2	11/16	3/32	.487±.005	.103±.003	12.37±0.13	2.62±0.08
-113	9/16	3/4	3/32	.549±.007	.103±.003	13.94±0.18	2.62±0.08
-114	5/8	13/16	3/32	.612±.009	.103±.003	15.54±0.23	2.62±0.08
-115	11/16	7/8	3/32	.674±.009	.103±.003	17.12±0.23	2.62±0.08
-116	3/4	15/16	3/32	.737±.009	.103±.003	18.72±0.23	2.62±0.08
-117	13/16	1	3/32	.799±.010	.103±.003	20.30±0.25	2.62±0.08
-118	7/8	1-1/16	3/32	.862±.010	.103±.003	21.89±0.25	2.62±0.08
-119	15/16	1-1/8	3/32	.924±.010	.103±.003	23.47±0.25	2.62±0.08
-120	1	1-3/16	3/32	.987±.010	.103±.003	25.07±0.25	2.62±0.08

-121	1-1/16	1-1/4	3/32	1.049±.010	.103±.003	26.64±0.25	2.62±0.08
-122	1-1/8	1-5/16	3/32	1.112±.010	.103±.003	28.24±0.25	2.62±0.08
-123	1-3/16	1-3/8	3/32	1.174±.012	.103±.003	29.82±0.30	2.62±0.08
-124	1-1/4	1-7/16	3/32	1.237±.012	.103±.003	31.42±0.30	2.62±0.08
-125	1-5/16	1-1/2	3/32	1.299±.012	.103±.003	32.99±0.30	2.62±0.08
-126	1-3/8	1-9/16	3/32	1.362±.012	.103±.003	34.59±0.30	2.62±0.08
-127	1-7/16	1-5/8	3/32	1.424±.012	.103±.003	36.17±0.30	2.62±0.08
-128	1-1/2	1-11/16	3/32	1.487±.012	.103±.003	37.77±0.30	2.62±0.08
-129	1-9/16	1-3/4	3/32	1.549±.015	.103±.003	39.34±0.38	2.62±0.08
-130	1-5/8	1-13/16	3/32	1.612±.015	.103±.003	40.94±0.38	2.62±0.08

O-RING SIZE REFERENCE ...continued

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-131	1-11/16	1-7/8	3/32	1.674±.015	.103±.003	42.52±0.38	2.62±0.08
-132	1-3/4	1-15/16	3/32	1.737±.015	.103±.003	44.12±0.38	2.62±0.08
-133	1-13/16	2	3/32	1.799±.015	.103±.003	45.69±0.38	2.62±0.08
-134	1-7/8	2-1/16	3/32	1.862±.015	.103±.003	47.30±0.38	2.62±0.08
-135	1-15/16	2-1/8	3/32	1.925±.017	.103±.003	48.90±0.43	2.62±0.08
-136	2	2-3/16	3/32	1.987±.017	.103±.003	50.47±0.43	2.62±0.08
-137	2-1/16	2-1/4	3/32	2.050±.017	.103±.003	52.07±0.43	2.62±0.08
-138	2-1/8	2-5/16	3/32	2.112±.017	.103±.003	53.64±0.43	2.62±0.08
-139	2-3/16	2-3/8	3/32	2.175±.017	.103±.003	55.25±0.43	2.62±0.08
-140	2-1/4	2-7/16	3/32	2.237±.017	.103±.003	56.82±0.43	2.62±0.08
-141	2-5/16	2-1/2	3/32	2.300±.020	.103±.003	58.42±0.51	2.62±0.08
-142	2-3/8	2-9/16	3/32	2.362±.020	.103±.003	59.99±0.51	2.62±0.08
-143	2-7/16	2-5/8	3/32	2.425±.020	.103±.003	61.60±0.51	2.62±0.08
-144	2-1/2	2-11/16	3/32	2.487±.020	.103±.003	63.17±0.51	2.62±0.08
-145	2-9/16	2-3/4	3/32	2.550±.020	.103±.003	64.77±0.51	2.62±0.08
-146	2-5/8	2-13/16	3/32	2.612±.020	.103±.003	66.34±0.51	2.62±0.08
-147	2-11/16	2-7/8	3/32	2.675±.022	.103±.003	67.95±0.56	2.62±0.08
-148	2-3/4	2-15/16	3/32	2.737±.022	.103±.003	69.52±0.56	2.62±0.08
-149	2-13/16	3	3/32	2.800±.022	.103±.003	71.12±0.56	2.62±0.08
-150	2-7/8	3-1/16	3/32	2.862±.022	.103±.003	72.69±0.56	2.62±0.08
-151	3	3-3/16	3/32	2.987±.024	.103±.003	75.87±0.61	2.62±0.08
-152	3-1/4	3-7/16	3/32	3.237±.024	.103±.003	82.22±0.61	2.62±0.08
-153	3-1/2	3-11/16	3/32	3.487±.024	.103±.003	88.57±0.61	2.62±0.08
-154	3-3/4	3-15/16	3/32	3.737±.028	.103±.003	94.92±0.71	2.62±0.08
-155	4	4-3/16	3/32	3.987±.028	.103±.003	101.27±0.71	2.62±0.08
-156	4-1/4	4-7/16	3/32	4.237±.030	.103±.003	107.62±0.76	2.62±0.08
-157	4-1/2	4-11/16	3/32	4.487±.030	.103±.003	113.97±0.76	2.62±0.08
-158	4-3/4	4-15/16	3/32	4.737±.030	.103±.003	120.32±0.76	2.62±0.08
-159	5	5-3/16	3/32	4.987±.035	.103±.003	126.67±0.89	2.62±0.08
-160	5-1/4	5-7/16	3/32	5.237±.035	.103±.003	133.02±0.89	2.62±0.08
-161	5-1/2	5-11/16	3/32	5.487±.035	.103±.003	139.37±0.89	2.62±0.08
-162	5-3/4	5-15/16	3/32	5.737±.035	.103±.003	145.72±0.89	2.62±0.08
-163	6	6-3/16	3/32	5.987±.035	.103±.003	152.07±0.89	2.62±0.08
-164	6-1/4	6-7/16	3/32	6.237±.040	.103±.003	158.42±1.02	2.62±0.08
-165	6-1/2	6-11/16	3/32	6.487±.040	.103±.003	164.77±1.02	2.62±0.08
-166	6-3/4	6-15/16	3/32	6.737±.040	.103±.003	171.12±1.02	2.62±0.08
-167	7	7-3/16	3/32	6.987±.040	.103±.003	177.47±1.02	2.62±0.08
-168	7-1/4	7-7/16	3/32	7.237±.045	.103±.003	183.82±1.14	2.62±0.08
-169	7-1/2	7-11/16	3/32	7.487±.045	.103±.003	190.17±1.14	2.62±0.08
-170	7-3/4	7-15/16	3/32	7.737±.045	.103±.003	196.52±1.14	2.62±0.08

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-171	8	8-3/16	3/32	7.987±.045	.103±.003	202.87±1.14	2.62±0.08
-172	8-1/4	8-7/16	3/32	8.237±.050	.103±.003	209.22±1.27	2.62±0.08
-173	8-1/2	8-11/16	3/32	8.487±.050	.103±.003	215.57±1.27	2.62±0.08
-174	8-3/4	8-15/16	3/32	8.737±.050	.103±.003	221.92±1.27	2.62±0.08
-175	9	9-3/16	3/32	8.987±.050	.103±.003	228.27±1.27	2.62±0.08
-176	9-1/4	9-7/16	3/32	9.237±.055	.103±.003	234.62±1.40	2.62±0.08
-177	9-1/2	9-11/16	3/32	9.487±.055	.103±.003	240.97±1.40	2.62±0.08
-178	9-3/4	9-15/16	3/32	9.737±.055	.103±.003	247.32±1.40	2.62±0.08

-201	3/16	7/16	1/8	.171±.005	.139±.004	4.34±0.13	3.53±0.10
-202	1/4	1/2	1/8	.234±.005	.139±.004	5.94±0.13	3.53±0.10
-203	5/16	9/16	1/8	.296±.005	.139±.004	7.52±0.13	3.53±0.10
-204	3/8	5/8	1/8	.359±.005	.139±.004	9.12±0.13	3.53±0.10
-205	7/16	11/16	1/8	.421±.005	.139±.004	10.69±0.13	3.53±0.10
-206	1/2	3/4	1/8	.484±.005	.139±.004	12.29±0.13	3.53±0.10
-207	9/16	13/16	1/8	.546±.007	.139±.004	13.87±0.17	3.53±0.10
-208	5/8	7/8	1/8	.609±.009	.139±.004	15.47±0.23	3.53±0.10
-209	11/16	15/16	1/8	.671±.009	.139±.004	17.04±0.23	3.53±0.10
-210	3/4	1	1/8	.734±.010	.139±.004	18.64±0.25	3.53±0.10

-211	13/16	1-1/16	1/8	.796±.010	.139±.004	20.22±0.25	3.53±0.10
-212	7/8	1-1/8	1/8	.859±.010	.139±.004	21.82±0.25	3.53±0.10
-213	15/16	1-3/16	1/8	.921±.010	.139±.004	23.39±0.25	3.53±0.10
-214	1	1-1/4	1/8	.984±.010	.139±.004	25.00±0.25	3.53±0.10
-215	1-1/16	1-5/16	1/8	1.046±.010	.139±.004	26.57±0.25	3.53±0.10
-216	1-1/8	1-3/8	1/8	1.109±.012	.139±.004	28.17±0.30	3.53±0.10
-217	1-3/16	1-7/16	1/8	1.171±.012	.139±.004	29.74±0.30	3.53±0.10
-218	1-1/4	1-1/2	1/8	1.234±.012	.139±.004	31.34±0.30	3.53±0.10
-219	1-5/16	1-9/16	1/8	1.296±.012	.139±.004	32.92±0.30	3.53±0.10
-220	1-3/8	1-5/8	1/8	1.359±.012	.139±.004	34.52±0.30	3.53±0.10

-221	1-7/16	1-1/16	1/8	1.421±.012	.139±.004	36.09±0.30	3.53±0.10
-222	1-1/2	1-3/4	1/8	1.484±.015	.139±.004	37.69±0.38	3.53±0.10
-223	1-5/8	1-7/8	1/8	1.609±.015	.139±.004	40.87±0.38	3.53±0.10
-224	1-3/4	2	1/8	1.734±.015	.139±.004	44.04±0.38	3.53±0.10
-225	1-7/8	2-1/8	1/8	1.859±.018	.139±.004	47.22±0.46	3.53±0.10
-226	2	2-1/4	1/8	1.984±.018	.139±.004	50.39±0.46	3.53±0.10
-227	2-1/8	2-3/8	1/8	2.109±.018	.139±.004	53.57±0.46	3.53±0.10
-228	2-1/4	2-1/2	1/8	2.234±.020	.139±.004	56.74±0.50	3.53±0.10
-229	2-3/8	2-5/8	1/8	2.359±.020	.139±.004	59.92±0.50	3.53±0.10
-230	2-1/2	2-3/4	1/8	2.484±.020	.139±.004	63.09±0.50	3.53±0.10

O-RING SIZE REFERENCE ...continued

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-231	2-5/8	2-7/8	1/8	2.609±.020	.139±.004	66.27±0.50	3.53±0.10
-232	2-3/4	3	1/8	2.734±.024	.139±.004	69.44±0.61	3.53±0.10
-233	2-7/8	3-1/8	1/8	2.859±.024	.139±.004	72.62±0.61	3.53±0.10
-234	3	3-1/4	1/8	2.984±.024	.139±.004	75.79±0.61	3.53±0.10
-235	3-1/8	3-3/8	1/8	3.109±.024	.139±.004	78.97±0.61	3.53±0.10
-236	3-1/4	3-1/2	1/8	3.234±.024	.139±.004	82.14±0.61	3.53±0.10
-237	3-3/8	3-5/8	1/8	3.359±.024	.139±.004	85.32±0.61	3.53±0.10
-238	3-1/2	3-3/4	1/8	3.484±.024	.139±.004	88.49±0.61	3.53±0.10
-239	3-5/8	3-7/8	1/8	3.609±.028	.139±.004	91.67±0.71	3.53±0.10
-240	3-3/4	4	1/8	3.734±.028	.139±.004	94.84±0.71	3.53±0.10
-241	3-7/8	4-1/8	1/8	3.859±.028	.139±.004	98.02±0.71	3.53±0.10
-242	4	4-1/4	1/8	3.984±.028	.139±.004	101.19±0.71	3.53±0.10
-243	4-1/8	4-3/8	1/8	4.109±.028	.139±.004	104.37±0.71	3.53±0.10
-244	4-1/4	4-1/2	1/8	4.234±.030	.139±.004	107.54±0.76	3.53±0.10
-245	4-3/8	4-5/8	1/8	4.359±.030	.139±.004	110.72±0.76	3.53±0.10
-246	4-1/2	4-3/4	1/8	4.484±.030	.139±.004	113.89±0.76	3.53±0.10
-247	4-5/8	4-7/8	1/8	4.609±.030	.139±.004	117.07±0.76	3.53±0.10
-248	4-3/4	5	1/8	4.734±.030	.139±.004	120.24±0.76	3.53±0.10
-249	4-7/8	5-1/8	1/8	4.859±.035	.139±.004	123.42±0.89	3.53±0.10
-250	5	5-1/4	1/8	4.984±.035	.139±.004	126.59±0.89	3.53±0.10
-251	5-1/8	5-3/8	1/8	5.109±.035	.139±.004	129.77±0.89	3.53±0.10
-252	5-1/4	5-1/2	1/8	5.234±.035	.139±.004	132.94±0.89	3.53±0.10
-253	5-3/8	5-5/8	1/8	5.359±.035	.139±.004	136.12±0.89	3.53±0.10
-254	5-1/2	5-3/4	1/8	5.484±.035	.139±.004	139.29±0.89	3.53±0.10
-255	5-5/8	5-7/8	1/8	5.609±.035	.139±.004	142.47±0.89	3.53±0.10
-256	5-3/4	6	1/8	5.734±.035	.139±.004	145.65±0.89	3.53±0.10
-257	5-7/8	6-1/8	1/8	5.859±.035	.139±.004	148.82±0.89	3.53±0.10
-258	6	6-1/4	1/8	5.984±.035	.139±.004	151.99±0.89	3.53±0.10
-259	6-1/4	6-1/2	1/8	6.234±.040	.139±.004	158.34±1.02	3.53±0.10
-260	6-1/2	6-3/4	1/8	6.484±.040	.139±.004	164.69±1.02	3.53±0.10
-261	6-3/4	7	1/8	6.734±.040	.139±.004	171.04±1.02	3.53±0.10
-262	7	7-1/4	1/8	6.984±.040	.139±.004	177.39±1.02	3.53±0.10
-263	7-1/4	7-1/2	1/8	7.234±.045	.139±.004	183.74±1.14	3.53±0.10
-264	7-1/2	7-3/4	1/8	7.484±.045	.139±.004	190.09±1.14	3.53±0.10
-265	7-3/4	8	1/8	7.734±.045	.139±.004	196.44±1.14	3.53±0.10
-266	8	8-1/4	1/8	7.984±.045	.139±.004	202.79±1.14	3.53±0.10
-267	8-1/4	8-1/2	1/8	8.234±.050	.139±.004	209.14±1.27	3.53±0.10
-268	8-1/2	8-3/4	1/8	8.484±.050	.139±.004	215.49±1.27	3.53±0.10
-269	8-3/4	9	1/8	8.734±.050	.139±.004	221.84±1.27	3.53±0.10
-270	9	9-1/4	1/8	8.984±.050	.139±.004	228.19±1.27	3.53±0.10

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-271	9-1/4	9-1/2	1/8	9.234±.055	.139±.004	234.54±1.40	3.53±0.10
-272	9-1/2	9-3/4	1/8	9.484±.055	.139±.004	240.89±1.40	3.53±0.10
-273	9-3/4	10	1/8	9.734±.055	.139±.004	247.24±1.40	3.53±0.10
-274	10	10-1/4	1/8	9.984±.055	.139±.004	253.59±1.40	3.53±0.10
-275	10-1/2	10-3/4	1/8	10.484±.065	.139±.004	266.29±1.40	3.53±0.10
-276	11	11-1/4	1/8	10.984±.065	.139±.004	278.99±1.65	3.53±0.10
-277	11-1/2	11-3/4	1/8	11.484±.065	.139±.004	291.69±1.65	3.53±0.10
-278	12	12-1/4	1/8	11.984±.065	.139±.004	304.39±1.65	3.53±0.10
-279	13	13-1/4	1/8	12.984±.065	.139±.004	329.79±1.65	3.53±0.10
-280	14	14-1/4	1/8	13.984±.065	.139±.004	355.19±1.65	3.53±0.10

-281	15	15-1/4	1/8	14.984±.065	.139±.004	380.59±1.65	3.53±0.10
-282	16	16-1/4	1/8	15.955±.075	.139±.004	405.26±1.91	3.53±0.10
-283	17	17-1/4	1/8	16.955±.080	.139±.004	430.66±2.03	3.53±0.10
-284	18	18-1/4	1/8	17.955±.085	.139±.004	456.06±2.16	3.53±0.10

-309	7/16	13/16	3/16	.412±.005	.210±.005	10.46±0.13	5.33±0.13
-310	1/2	7/8	3/16	.475±.005	.210±.005	12.07±0.13	5.33±0.13
-311	9/16	15-16	3/16	.537±.007	.210±.005	13.64±0.18	5.33±0.13
-312	5/8	1	3/16	.600±.009	.210±.005	15.24±0.23	5.33±0.13
-313	11-16	1-1/16	3/16	.662±.009	.210±.005	16.81±0.23	5.33±0.13
-314	3/4	1-1/8	3/16	.725±.010	.210±.005	18.42±0.25	5.33±0.13
-315	13/16	1-3/6	3/16	.787±.010	.210±.005	19.99±0.25	5.33±0.13
-316	7/8	1-1/4	3/16	.850±.010	.210±.005	21.59±0.25	5.33±0.13
-317	15/16	1-5/16	3/16	.912±.010	.210±.005	23.16±0.25	5.33±0.13
-318	1	1-3/8	3/16	.975±.010	.210±.005	24.77±0.25	5.33±0.13
-319	1-1/16	1-7/16	3/16	1.037±.010	.210±.005	26.34±0.25	5.33±0.13
-320	1-1/8	1-1/2	3/16	1.100±.012	.210±.005	27.94±0.30	5.33±0.13

-321	1-3/16	1-9/16	3/16	1.162±.012	.210±.005	29.51±0.30	5.33±0.13
-322	1-1/4	1-5/8	3/16	1.225±.012	.210±.005	31.12±0.30	5.33±0.13
-323	1-5/16	1-11/16	3/16	1.287±.012	.210±.005	32.69±0.30	5.33±0.13
-324	1-3/8	1-3/4	3/16	1.350±.012	.210±.005	34.29±0.30	5.33±0.13
-325	1-1/2	1-7/8	3/16	1.475±.015	.210±.005	37.47±0.38	5.33±0.13
-326	1-5/8	2	3/16	1.600±.015	.210±.005	40.64±0.38	5.33±0.13
-327	1-3/4	2-1/8	3/16	1.725±.015	.210±.005	43.82±0.38	5.33±0.13
-328	1-7/8	2-1/4	3/16	1.850±.015	.210±.005	46.99±0.38	5.33±0.13
-329	2	2-3/8	3/16	1.975±.018	.210±.005	50.17±0.46	5.33±0.13
-330	2-1/8	2-1/2	3/16	2.100±.018	.210±.005	53.34±0.46	5.33±0.13

O-RING SIZE REFERENCE ...continued

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-331	2-1/4	2-5/8	3/16	2.225±.018	.210±.005	56.52±0.46	5.33±0.13
-332	2-3/8	2-3/4	3/16	2.350±.018	.210±.005	59.69±0.46	5.33±0.13
-333	2-1/2	2-7/8	3/16	2.475±.020	.210±.005	62.87±0.51	5.33±0.13
-334	2-5/8	3	3/16	2.600±.020	.210±.005	66.04±0.51	5.33±0.13
-335	2-3/4	3-1/8	3/16	2.725±.020	.210±.005	69.22±0.51	5.33±0.13
-336	2-7/8	3-1/4	3/16	2.850±.020	.210±.005	72.39±0.51	5.33±0.13
-337	3	3-3/8	3/16	2.975±.024	.210±.005	75.57±0.61	5.33±0.13
-338	3-1/8	3-1/2	3/16	3.100±.024	.210±.005	78.74±0.61	5.33±0.13
-339	3-1/4	3-5/8	3/16	3.225±.024	.210±.005	91.92±0.61	5.33±0.13
-340	3-3/8	3-3/4	3/16	3.350±.024	.210±.005	85.09±0.61	5.33±0.13
-341	3-1/2	3-7/8	3/16	3.475±.024	.210±.005	88.27±0.61	5.33±0.13
-342	3-5/8	4	3/16	3.600±.028	.210±.005	91.44±0.71	5.33±0.13
-343	3-3/4	4-1/8	3/16	3.725±.028	.210±.005	94.62±0.71	5.33±0.13
-344	3-7/8	4-1/4	3/16	3.850±.028	.210±.005	97.79±0.71	5.33±0.13
-345	4	4-3/8	3/16	3.975±.028	.210±.005	100.97±0.71	5.33±0.13
-346	4-1/8	4-1/2	3/16	4.100±.028	.210±.005	104.14±0.71	5.33±0.13
-347	4-1/4	4-5/8	3/16	4.225±.030	.210±.005	107.32±0.76	5.33±0.13
-348	4-3/8	4-3/4	3/16	4.350±.030	.210±.005	110.49±0.76	5.33±0.13
-349	4-1/2	4-7/8	3/16	4.475±.030	.210±.005	113.67±0.76	5.33±0.13
-350	4-5/8	5	3/16	4.600±.030	.210±.005	116.84±0.76	5.33±0.13
-351	4-3/4	5-1/8	3/16	4.725±.030	.210±.005	120.02±0.76	5.33±0.13
-352	4-7/8	5-1/4	3/16	4.850±.030	.210±.005	123.19±0.76	5.33±0.13
-353	5	5-3/8	3/16	4.975±.037	.210±.005	126.37±0.94	5.33±0.13
-354	5-1/8	5-1/2	3/16	5.100±.037	.210±.005	129.54±0.94	5.33±0.13
-355	5-1/4	5-5/8	3/16	5.225±.037	.210±.005	132.72±0.94	5.33±0.13
-356	5-3/8	5-3/4	3/16	5.350±.037	.210±.005	135.89±0.94	5.33±0.13
-357	5-1/2	5-7/8	3/16	5.475±.037	.210±.005	139.07±0.94	5.33±0.13
-358	5-5/8	6	3/16	5.600±.037	.210±.005	142.24±0.94	5.33±0.13
-359	5-3/4	6-1/8	3/16	5.725±.037	.210±.005	145.42±0.94	5.33±0.13
-360	5-7/8	6-1/4	3/16	5.850±.037	.210±.005	148.59±0.94	5.33±0.13
-361	6	6-3/8	3/16	5.975±.037	.210±.005	151.77±0.94	5.33±0.13
-362	6-1/4	6-5/8	3/16	6.225±.040	.210±.005	158.12±1.02	5.33±0.13
-363	6-1/2	6-7/8	3/16	6.475±.040	.210±.005	164.47±1.02	5.33±0.13
-364	6-3/4	7-1/8	3/16	6.725±.040	.210±.005	170.82±1.02	5.33±0.13
-365	7	7-3/8	3/16	6.975±.040	.210±.005	177.17±1.02	5.33±0.13
-366	7-1/4	7-5/8	3/16	7.225±.045	.210±.005	183.52±1.14	5.33±0.13
-367	7-1/2	7-7/8	3/16	7.475±.045	.210±.005	189.87±1.14	5.33±0.13
-368	7-3/4	8-1/8	3/16	7.725±.045	.210±.005	196.22±1.14	5.33±0.13
-369	8	8-3/8	3/16	7.975±.045	.210±.005	202.57±1.14	5.33±0.13
-370	8-1/4	8-5/8	3/16	8.225±.050	.210±.005	208.92±1.27	5.33±0.13

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-371	8-1/2	8-7/8	3/16	8.475±.050	.210±.005	215.27±1.27	5.33±0.13
-372	8-3/4	9-1/8	3/16	8.725±.050	.210±.005	221.62±1.27	5.33±0.13
-373	9	9-3/8	3/16	8.975±.050	.210±.005	227.97±1.27	5.33±0.13
-374	9-1/4	9-5/8	3/16	9.225±.055	.210±.005	234.32±1.40	5.33±0.13
-375	9-1/2	9-7/8	3/16	9.475±.055	.210±.005	240.67±1.40	5.33±0.13
-376	9-3/4	10-1/8	3/16	9.725±.055	.210±.005	247.02±1.40	5.33±0.13
-377	10	10-3/8	3/16	9.975±.055	.210±.005	253.37±1.40	5.33±0.13
-378	10-1/2	10-7/8	3/16	10.475±.060	.210±.005	266.07±1.52	5.33±0.13
-379	11	11-3/8	3/16	10.975±.060	.210±.005	278.77±1.52	5.33±0.13
-380	11-1/2	11-7/8	3/16	11.475±.065	.210±.005	291.47±1.65	5.33±0.13
-381	12	12-3/8	3/16	11.975±.065	.210±.005	304.17±1.65	5.33±0.13
-382	13	13-3/8	3/16	12.975±.065	.210±.005	329.57±1.65	5.33±0.13
-383	14	14-3/8	3/16	13.975±.070	.210±.005	354.97±1.78	5.33±0.13
-384	15	15-3/8	3/16	14.975±.070	.210±.005	380.37±1.78	5.33±0.13
-385	16	16-3/8	3/16	15.955±.075	.210±.005	405.26±1.91	5.33±0.13
-386	17	17-3/8	3/16	16.955±.080	.210±.005	430.66±2.03	5.33±0.13
-387	18	18-3/8	3/16	17.955±.085	.210±.005	456.06±2.16	5.33±0.13
-388	19	19-3/8	3/16	18.955±.090	.210±.005	481.41±2.29	5.33±0.13
-389	20	20-3/8	3/16	19.955±.095	.210±.005	506.81±2.41	5.33±0.13
-390	21	21-3/8	3/16	20.955±.095	.210±.005	532.21±2.41	5.33±0.13
-391	22	22-3/8	3/16	21.955±.100	.210±.005	557.61±2.54	5.33±0.13
-392	23	23-3/8	3/16	22.940±.105	.210±.005	582.68±2.67	5.33±0.13
-393	24	24-3/8	3/16	23.940±.110	.210±.005	608.08±2.79	5.33±0.13
-394	25	25-3/8	3/16	24.940±.115	.210±.005	633.48±2.92	5.33±0.13
-395	26	26-3/8	3/16	25.940±.120	.210±.005	658.88±3.05	5.33±0.13
-425	4-1/2	5	1/4	4.475±.033	.275±.006	113.67±0.84	6.99±0.15
-426	4-5/8	5-1/8	1/4	4.600±.033	.275±.006	116.84±0.84	6.99±0.15
-427	4-3/4	5-1/4	1/4	4.725±.033	.275±.006	120.02±0.84	6.99±0.15
-428	4-7/8	5-3/8	1/4	4.850±.033	.275±.006	123.19±0.84	6.99±0.15
-429	5	5-1/2	1/4	4.975±.037	.275±.006	126.37±0.94	6.99±0.15
-430	5-1/8	5-5/8	1/4	5.100±.037	.275±.006	129.54±0.94	6.99±0.15
-431	5-1/4	5-3/4	1/4	5.225±.037	.275±.006	132.72±0.94	6.99±0.15
-432	5-3/8	5-7/8	1/4	5.350±.037	.275±.006	135.89±0.94	6.99±0.15
-433	5-1/2	6	1/4	5.475±.037	.275±.006	139.07±0.94	6.99±0.15
-434	5-5/8	6-1/8	1/4	5.600±.037	.275±.006	142.24±0.94	6.99±0.15
-435	5-3/4	6-1/4	1/4	5.725±.037	.275±.006	145.42±0.94	6.99±0.15
-436	5-7/8	6-3/8	1/4	5.850±.037	.275±.006	148.59±0.94	6.99±0.15
-437	6	6-1/2	1/4	5.975±.037	.275±.006	151.77±0.94	6.99±0.15
-438	6-1/4	6-3/4	1/4	6.225±.040	.275±.006	158.12±1.02	6.99±0.15
-439	6-1/2	7	1/4	6.475±.040	.275±.006	164.47±1.02	6.99±0.15
-440	6-3/4	7-1/4	1/4	6.725±.040	.275±.006	170.82±1.02	6.99±0.15

O-RING SIZE REFERENCE ...continued

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-441	7	7-1/2	1/4	6.975±.040	.275±.006	177.17±1.02	6.99±0.15
-442	7-1/4	7-3/4	1/4	7.225±.045	.275±.006	183.52±1.14	6.99±0.15
-443	7-1/2	8	1/4	7.475±.045	.275±.006	189.87±1.14	6.99±0.15
-444	7-3/4	8-1/4	1/4	7.725±.045	.275±.006	196.22±1.14	6.99±0.15
-445	8	8-1/2	1/4	7.975±.045	.275±.006	202.57±1.14	6.99±0.15
-446	8-1/2	9	1/4	8.475±.055	.275±.006	215.27±1.40	6.99±0.15
-447	9	9-1/2	1/4	8.975±.055	.275±.006	227.97±1.40	6.99±0.15
-448	9-1/2	10	1/4	9.475±.055	.275±.006	240.67±1.40	6.99±0.15
-449	10	10-1/2	1/4	9.975±.055	.275±.006	253.37±1.40	6.99±0.15
-450	10-1/2	11	1/4	10.475±.060	.275±.006	266.07±1.52	6.99±0.15
-451	11	11-1/2	1/4	10.975±.060	.275±.006	278.77±1.52	6.99±0.15
-452	11-1/2	12	1/4	11.475±.060	.275±.006	291.47±1.52	6.99±0.15
-453	12	12-1/2	1/4	11.975±.060	.275±.006	304.17±1.52	6.99±0.15
-454	12-1/2	13	1/4	12.475±.060	.275±.006	316.87±1.52	6.99±0.15
-455	13	13-1/2	1/4	12.975±.060	.275±.006	329.57±1.52	6.99±0.15
-456	13-1/2	14	1/4	13.457±.070	.275±.006	342.27±1.78	6.99±0.15
-457	14	14-1/2	1/4	13.975±.070	.275±.006	354.97±1.78	6.99±0.15
-458	14-1/2	15	1/4	14.475±.070	.275±.006	367.67±1.78	6.99±0.15
-459	15	15-1/2	1/4	14.975±.070	.275±.006	380.37±1.78	6.99±0.15
-460	15-1/2	16	1/4	15.475±.070	.275±.006	393.07±1.78	6.99±0.15
-461	16	16-1/2	1/4	15.955±.075	.275±.006	405.26±1.91	6.99±0.15
-462	16-1/2	17	1/4	16.455±.075	.275±.006	417.96±1.91	6.99±0.15
-463	17	17-1/2	1/4	16.955±.080	.275±.006	430.66±2.03	6.99±0.15
-464	17-1/2	18	1/4	17.455±.085	.275±.006	443.36±2.16	6.99±0.15
-465	18	18-1/2	1/4	17.955±.085	.275±.006	456.06±2.16	6.99±0.15
-466	18-1/2	19	1/4	18.455±.085	.275±.006	468.76±2.16	6.99±0.15
-467	19	19-1/2	1/4	18.955±.090	.275±.006	481.46±2.29	6.99±0.15
-468	19-1/2	20	1/4	19.455±.090	.275±.006	494.16±2.29	6.99±0.15
-469	20	20-1/2	1/4	19.955±.095	.275±.006	506.86±2.41	6.99±0.15
-470	21	21-1/2	1/4	20.955±.095	.275±.006	532.26±2.41	6.99±0.15
-471	22	22-1/2	1/4	21.955±.100	.275±.006	557.66±2.54	6.99±0.15
-472	23	23-1/2	1/4	22.940±.105	.275±.006	582.68±2.67	6.99±0.15
-473	24	24-1/2	1/4	23.940±.110	.275±.006	608.08±2.79	6.99±0.15
-474	25	25-1/2	1/4	24.940±.115	.275±.006	633.48±2.92	6.99±0.15
-475	26	26-1/2	1/4	25.940±.120	.275±.006	658.88±3.05	6.99±0.15

AS568	NOMINAL SIZE			ACTUAL SIZE IN INCHES		ACTUAL IN MILLIMETER	
	ID	OD	CS	Inside Diameter	Cross Section	Inside Diameter	Cross Section
-901		3/32		.185±.005	.056±.003	4.70±0.13	1.42±0.08
-902		1/8		.239±.005	.064±.003	6.07±0.13	1.63±0.08
-903		3/16		.301±.005	.064±.003	7.65±0.13	1.63±0.08
-904		1/4		.351±.005	.072±.003	8.92±0.13	1.83±0.08
-905		5/16		.414±.005	.072±.003	10.52±0.13	1.83±0.08
-906		3/8		.468±.005	.078±.003	11.89±0.13	1.98±0.08
-907		7/16		.530±.007	.082±.003	13.46±0.18	2.08±0.08
-908		1/2		.644±.009	.087±.003	16.36±0.23	2.21±0.08
-909		9/16		.706±.009	.097±.003	17.93±0.23	2.46±0.08
-910		5/8		.755±.009	.097±.003	19.18±0.23	2.46±0.08
-911		11/16		.863±.009	.116±.004	21.92±0.23	2.95±0.10
-912		3/4		.924±.009	.116±.004	23.47±0.23	2.95±0.10
-913		13/16		.986±.010	.116±.004	25.04±0.26	2.95±0.10
-914		7/8		1.047±.010	.116±.004	26.59±0.26	2.95±0.10
-916		1		1.171±.010	.116±.004	29.74±0.26	2.95±0.10
-918		1-1/8		1.355±.012	.116±.004	34.42±0.30	2.95±0.10
-920		1-1/4		1.475±.014	.116±.004	37.47±0.36	3.00±0.10
-924		1-1/2		1.720±.014	.116±.004	43.69±0.36	3.00±0.10
-928		1-3/4		2.090±.018	.116±.004	53.09±0.46	3.00±0.10
-932		2		2.337±.018	.116±.004	59.36±0.46	3.00±0.10



KALREZ® 4079

Offer the resilience and sealing force of an elastomer with chemical inertness and thermal stability similar to PTFE fluorocarbon resin.



Sealing Performance

- Compared with other elastomers, KALREZ is normally more resistant to swelling and embrittlement and will retain these properties for a longer period of time.
- Compared with metal seals, KALREZ is easily installed and conforms to the sealing surface despite irregularities due to improper assembly or wear.
- Compared with PTFE seals, KALREZ is not likely to creep or cold flow.

Chemical Resistance

KALREZ has excellent chemical resistance, far above that of other commercial elastomers. KALREZ should be considered for service in hot, corrosive environments, including:

- Polar solvents (ketones, esters, ethers)
- Strong organic solvents (benzene, dimethyl formamide, perchloroethylene, tetrahydrofuran (THF))
- Inorganic and organic acids (hydrochloric, nitric, sulfuric, trichloroacetic) and bases (hot caustic soda)
- Strong oxidizing agents (dinitrogen tetroxide, fuming nitric acid)
- Metal halogen compounds (titanium tetrachloride, diethylaluminum chloride)
- Hot mercury/caustic soda
- Chlorine, wet or dry
- Inorganic salt solutions
- Fuels (ASTM Reference Fuel C, JP-5 Jet Fuel, aviation gas, kerosene)
- Hydraulic fluids (SKYDROL1, 500A, PYDRAUL1 312, ANDEROL2 L-774, and transmission fluids)
- Heat transfer fluids (DOWTHERM3A)
- Oil well sour gas (methane, hydrogen sulfide/carbon dioxide/steam)
- Steam

Thermal Stability

KALREZ O-Rings retain their elastic properties in long-term service at temperatures as high as 316°C and in intermittent service up to 327°C.

®Registered DUPONT Trademark

¹ U.S. Trademark of Solutia Co., ²U.S. Trademark of Tenneco Chemicals,

³ U.S. Trademark of Dow Chemical Co.

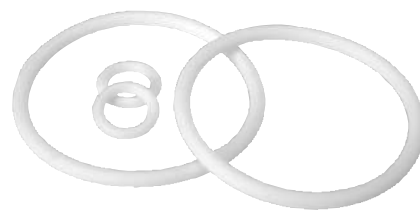
USE REFERENCE CODES

T= Ace-Threds S= Stopcocks C= Chromatographic Fittings
G= Gaskets J= O-Ring Joints O= Special

Size	Dimensions, mm		Order Code	(Use)
	I.D.	W		
-006	2.6	1.78	7855-601	★
-007	2.9	1.78	7855-602	★ (S)
-008	3.7	1.78	7855-604	★ (T,C,S)
-009	4.5	1.78	7855-607	★
-010	5.3	1.78	7855-605	★
-011	6.1	1.78	7855-606	★ (T,J,S)
-012	7.7	1.78	7855-608	★ (C,T,J)
-013	9.3	1.78	7855-610	★ (C,T)
-014	10.8	1.78	7855-612	★ (O)
-015	12.4	1.78	7855-613	★ (O,G)
-016	15.6	1.78	7855-614	★ (T,J)
-018	18.8	1.78	7855-615	★ (J,S)
-110	9.2	2.6	7855-616	★ (J,S)
-021	23.5	1.78	7855-617	★ (C,T,G)
-111	10.8	2.6	7855-618	★ (C,T,S)
-022	25.1	1.78	7855-619	★ (C,T,G)
-112	12.4	2.6	7855-620	★
-113	13.9	2.6	7855-621	★
-114	15.5	2.6	7855-622	★ (J,S)
-115	17.1	2.6	7855-623	★
-116	18.7	2.6	7855-626	★ (C,T,G)
-121	26.6	2.6	7855-627	★ (C,T,G)
-136	50.5	2.6	7855-629	★ (C,T,G)
-210	18.6	3.5	7855-630	★
-211	20.2	3.5	7855-632	★ (T,G)
-212	21.8	3.5	7855-634	★ (T)
-217	29.7	3.5	7855-640	★ (C,T,G)
-220	34.5	3.5	7855-642	★ (T,G,J)
-225	47.2	3.5	7855-644	★ (C,T,G,J)
-229	59.9	3.5	7855-648	★ (C,T,G,J)
-105	3.6	2.6	7855-650	★ (C,T,G)
-108	6.0	2.6	7855-653	★ (T,G)
-118	21.9	2.6	7855-655	★ (O)
-122	28.2	2.6	7855-657	★ (C,T,J)
-123	29.8	2.6	7855-658	★ (C,T)
-125	33.0	2.6	7855-659	★ (O)
-127	36.2	2.6	7855-670	★ (T,J)
-128	37.8	2.6	7855-671	★ (J,S)
-213	23.3	3.5	7855-675	★ (C,T,G)
-214	25.0	3.5	7855-676	★ (T,G)
-216	28.2	3.5	7855-677	★ (C,T,G)
-223	40.9	3.5	7855-680	★ (C,T,G,J)
-226	50.4	3.5	7855-684	★ (C,T,G,J)
-227	53.6	3.5	7855-685	★
-228	56.7	3.5	7855-686	★
-230	63.1	3.5	7855-689	★
-235	78.9	3.5	7855-687	★
-327	43.8	5.3	7855-690	★
-341	88.3	5.3	7855-691	★
-348	110.0	5.3	7855-692	★
-349	113.7	5.3	7855-693	★
-359	145.4	5.3	7855-694	★
-	75.5	4.0	7855-695	★
-	110.0	5.0	7855-696	★
-	150.0	5.0	7855-697	★
-	215.0	5.0	7855-698	★

CHEMRAZ® 514 *white*

Molded of a perfluoroelastomer polymer, CHEMRAZ has the broadest chemical resistance of any elastomeric material. Combines the resilience and sealing force of an elastomer with chemical resistance approaching that of PTFE.



Sealing Performance

- Compared with other elastomers, CHEMRAZ is normally more resistant to swelling and embrittlement and will retain these properties for a longer period of time.
- Compared with metal seals, CHEMRAZ is easily installed and conforms to the sealing surface despite irregularities due to improper assembly or wear.
- Compared with PTFE seals, CHEMRAZ is not likely to creep or cold flow.

Chemical Resistance

CHEMRAZ has excellent chemical resistance, far above that of other commercial elastomers. CHEMRAZ should be considered for service in hot, corrosive environments including:

- Polar solvents (ketones, esters, ethers)
- Strong organic solvents (benzene, dimethyl formamide, perchloroethylene, tetrahydrofuran (THF))
- Inorganic and organic acids (hydrochloric, nitric, sulfuric, trichloroacetic) and bases (hot caustic soda)
- Strong oxidizing agents (dinitrogen tetroxide, fuming nitric acid)
- Metal halogen compounds (titanium tetra-chloride, diethylaluminum chloride)
- Hot mercury/caustic soda
- Chlorine, wet or dry
- Inorganic salt solutions
- Fuels (ASTM Reference Fuel C, JP-5 Jet Fuel, aviation gas, kerosene)
- Hydraulic fluids (SKYDROL1, 500A, PYDRAUL1 312, ANDEROL2 L-774, and transmission fluids)
- Heat transfer fluids (DOWTHERM3A)
- Oil well sour gas (methane, hydrogen sulfide/carbon dioxide/steam)
- Steam

Thermal Stability

CHEMRAZ O-Rings retain their elastic properties longer in harsh chemical environments at temperatures from -30°F to higher than 220°C.

®Chemraz is a Registered Trademark of Greene Tweed & Co.

¹U.S. Trademark of Solutia Co., ²U.S. Trademark of Tenneco Chemicals,

³U.S. Trademark of Dow Chemical Co.

Size	Dimensions, mm		Order Code	(Use)	
	I.D.	W			
-006	2.6	1.78	7859-501	★	(O)
-007	2.9	1.78	7859-502	★	(S)
-008	3.7	1.78	7859-504	★	(T,C,S)
-009	4.5	1.78	7859-507	★	(O)
-010	5.3	1.78	7859-505	★	(T,J,S)
-011	6.1	1.78	7859-506	★	(T,J,S)
-012	7.7	1.78	7859-508	★	(C,T,J)
-013	9.3	1.78	7859-510	★	(C,T)
-014	10.8	1.78	7859-512	★	(O)
-015	12.4	1.78	7859-513	★	(J,S)
-016	14.0	1.78	7859-514	★	(T,J)
-018	17.7	1.78	7859-515	★	(J,S)
-021	22.0	1.78	7859-519	★	(C,T,G)
-022	23.5	1.78	7859-517	★	(C,T,G)
-105	3.6	2.6	7859-503	★	(C,T,G)
-108	6.0	2.6	7859-511	★	(T,G)
-110	9.2	2.6	7859-516	★	(J,S)
-111	10.8	2.6	7859-518	★	(C,T,S)
-112	12.4	2.6	7859-520	★	(T,G,J)
-113	13.9	2.6	7859-521	★	(C,T,G,J)
-114	15.5	2.6	7859-522	★	(J,S)
-115	17.1	2.6	7859-524	★	(S)
-116	18.7	2.6	7859-526	★	
-118	21.9	2.6	7859-570	★	(O)
-121	26.6	2.6	7859-527	★	(C,T,G)
-122	28.2	2.6	7859-571	★	(C,T,J)
-123	29.8	2.6	7859-528	★	(C,T)
-125	33.0	2.6	7859-572	★	(O)
-127	36.2	2.6	7859-576	★	(T,J)
-128	37.8	2.6	7859-573	★	(J,S)
-136	50.5	2.6	7859-529	★	(C,T,G)
-210	18.6	3.5	7859-530	★	(J,S)
-211	20.2	3.5	7859-532	★	(T,G)
-212	21.8	3.5	7859-534	★	(T)
-213	23.4	3.5	7859-536	★	(C,T,G)
-214	25.0	3.5	7859-538	★	(T,G)
-216	28.2	3.5	7859-539	★	(C,T,G)
-217	29.7	3.5	7859-540	★	(T,G,J)
-220	34.5	3.5	7859-542	★	(T,G,J)
-223	40.9	3.5	7859-574	★	(C,T,G,J)
-225	47.2	3.5	7859-544	★	(C,T,G,J)
-226	50.4	3.5	7859-546	★	
-227	53.6	3.5	7859-545	★	
-228	56.7	3.5	7859-547	★	
-229	59.9	3.5	7859-548	★	(C,T,G,J)
-230	63.1	3.5	7859-575	★	
-327	43.8	5.3	7859-578	★	
-341	88.3	5.3	7859-550	★	
-348	110.5	5.3	7859-579	★	

USE REFERENCE CODES

T= Ace-Threds S= Stopcocks C= Chromatographic Fittings
G= Gaskets J= O-Ring Joints O= Special

CAPFE

A totally different O-Ring having a resilient rubber core encased in a continuous, thick, non-porous FEP/PTFE encapsulation. This unique O-Ring solves the sealing problems where the chemical inertness of PTFE is a MUST and where maintenance-free dependability and long service life are required.

Sealing Performance

- Continuous encapsulation of thick, pure PTFE offers no seams or weak spots to break and leak.
- Thick PTFE encapsulation permits wide application without leakage.
- Low compression set compared to solid PTFE O-Rings
- Extreme slipperiness of PTFE reduces friction in dynamic applications.

Chemical Resistance

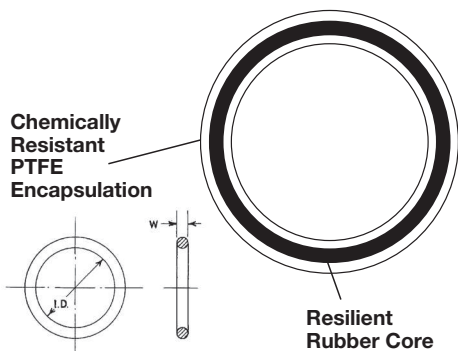
- CAPFE offers both resilience and chemical resistance.
- Thick PTFE encapsulation permits wide application without deterioration.
- Resistant to all chemicals except molten alkali metals, hot fluorine and certain complex halogenated compounds.
- Low gas and water vapor permeability compared to “flash” coated O-Rings.

Thermal Stability

CAPFE O-Rings range from -60°C to +204°C, deterioration vacuum to 10,000 psi.



Size	Dimensions, mm		Order Code	
	I.D.	W		
-010	6.1	1.78	7855-805	♠
-011	7.7	1.78	7855-806	♠
-012	9.3	1.78	7855-808	♠
-013	10.8	1.78	7855-810	♠
-015	14.0	1.78	7855-813	♠
-018	18.8	1.78	7855-815	♠
-021	23.5	1.78	7855-819	♠
-022	25.1	1.78	7855-817	♠
-110	9.2	2.6	7855-816	♠
-111	10.8	2.6	7855-818	♠
-112	12.4	2.6	7855-820	♠
-113	13.9	2.6	7855-821	♠
-114	15.5	2.6	7855-822	♠
-115	17.1	2.6	7855-824	♠
-116	18.7	2.6	7855-826	♠
-118	21.9	2.6	7855-870	♠
-121	26.6	2.6	7855-827	♠
-122	28.2	2.6	7855-871	♠
-123	29.8	2.6	7855-828	♠
-125	33.0	2.6	7855-872	♠
-127	36.2	2.6	7855-876	♠
-128	37.8	2.6	7855-873	♠
-136	50.5	2.6	7855-829	♠
-210	18.6	3.5	7855-830	♠
-211	20.2	3.5	7855-832	♠
-212	21.8	3.5	7855-834	♠
-213	23.4	3.5	7855-836	♠
-214	25.0	3.5	7855-838	♠
-217	29.7	3.5	7855-840	♠
-220	34.5	3.5	7855-842	♠
-223	40.9	3.5	7855-874	♠
-225	47.2	3.5	7855-844	♠
-226	50.4	3.5	7855-846	♠
-227	53.6	3.5	7855-845	♠
-228	56.7	3.5	7855-847	♠
-229	59.9	3.5	7855-848	♠
-230	63.1	3.5	7855-875	♠
-232	69.4	3.5	7855-877	♠
-235	79.0	3.5	7855-864	♠
—	134.37	3.5	7855-885	♠
-317	23.2	5.3	7855-860	♠
-329	50.2	5.3	7855-883	♠
-341	88.3	5.3	7855-850	♠
-348	110.5	5.3	7855-879	♠
-349	113.7	5.3	7855-887	♠
-359	145.4	5.3	7855-889	♠
-361	151.8	5.3	7855-861	♠
—	75.0	4.0	7855-878	♠
—	110.0	5.0	7855-880	♠
—	150.0	5.0	7855-881	♠
—	215.0	5.0	7855-884	♠

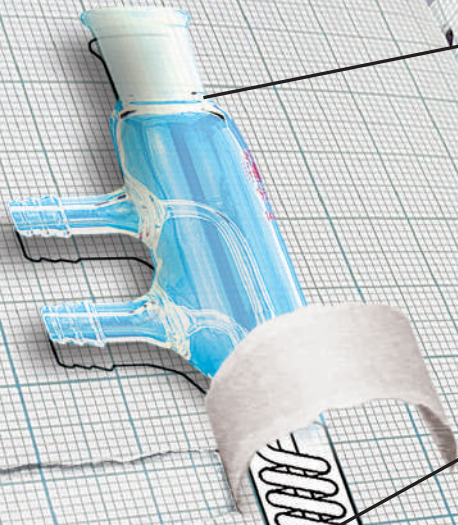


TYPE OF SEAL	BEFORE COMPRESSION	DURING COMPRESSION	AFTER COMPRESSION	EFFECT
CAPFE O-RING				CAPFE “bounces” back—retains sealing capability like elastomeric ring.

**Don't see what you're looking for?
We can help.**

**LET YOUR IDEAS
COME TO LIFE**

...with help from Ace Glass



**We can provide just one piece or
as many as you need**

**Reproduction of
competitive products**

**User designed
specialized glassware**

**Modification of
existing stock products**

VITON A / SILICONE / BUNA-N / FETFE® / EPDM

VITON A — A linear copolymer of Vinylidene Fluoride and Hexafluoropropylene.

SILICONE — A group of elastomeric materials made from Silicone, Hydrogen and Carbon.

BUNA-N — A copolymer of Butadiene and Acrylonitrile.

FETFE® — A fluoroelastomer with special TFE Additives.

EPDM (ETHYLENE-PROPYLENE) — An elastomer prepared from Ethylene and Propylene Monomers.



Size	Dimensions, mm I.D. W	Qty.	VITON Order Code	SILICONE Order Code	BUNA-N Order Code	FETFE Order Code	EPDM Order Code
-006	2.9 1.78	12	7855-01	7855-201	7855-401	7855-701	—
-007	3.7 1.78	12	7855-02	7855-202	7855-402	7855-702	—
-008	4.5 1.78	12	7855-04	7855-204	7855-404	7855-704	7855-904
-009	5.3 1.78	12	7855-07	7855-207	7855-407	7855-707	—
-010	6.1 1.78	12	7855-05	7855-205	7855-405	7855-705	—
-011	7.7 1.78	12	7855-06	7855-206	7855-406	7855-706	7855-906
-012	9.3 1.78	12	7855-08	7855-208	7855-408	7855-708	7855-908
-013	10.8 1.78	12	7855-10	7855-210	7855-410	7855-710	7855-910
-014	12.4 1.78	12	7855-12	7855-212	7855-412	7855-712	7855-912
-015	14.0 1.78	12	7855-13	7855-213	7855-413	7855-713	—
-016	15.6 1.78	12	7855-14	7855-214	7855-414	7855-714	7855-914
-018	18.8 1.78	12	7855-15	7855-215	7855-415	7855-715	—
-021	23.5 1.78	12	7855-19	7855-219	7855-419	7855-719	—
-022	25.1 1.78	12	7855-17	7855-217	7855-417	7855-717	—
-105	3.6 2.6	12	7855-03	7855-203	7855-403	7855-703	—
-107	5.2 2.6	12	7855-09	7855-209	7855-409	7855-709	—
-108	6.0 2.6	12	7855-11	7855-211	7855-411	7855-711	—
-110	9.2 2.6	12	7855-16	7855-216	7855-416	7855-716	7855-916
-111	10.8 2.6	12	7855-18	7855-218	7855-418	7855-718	—
-112	12.4 2.6	12	7855-20	7855-220	7855-420	7855-720	—
-113	13.9 2.6	12	7855-21	7855-221	7855-421	7855-721	—
-114	15.5 2.6	12	7855-22	7855-222	7855-422	7855-722	7855-922
-115	17.1 2.6	12	7855-24	7855-224	7855-424	7855-724	—
-116	18.7 2.6	12	7855-26	7855-226	7855-426	7855-726	7855-926
-118	21.9 2.6	12	7855-70	7855-270	7855-470	7855-770	—
-121	26.6 2.6	12	7855-27	7855-227	7855-427	7855-727	7855-927
-122	28.2 2.6	6	7855-71	7855-271	7855-471	7855-771	—
-123	29.8 2.6	6	7855-28	7855-228	7855-428	7855-728	7855-928
-125	33.0 2.6	6	7855-72	7855-272	7855-472	7855-772	—
-127	36.2 2.6	6	7855-76	7855-276	7855-476	7855-776	—
-128	37.8 2.6	6	7855-73	7855-273	7855-473	7855-773	—
-136	50.5 2.6	6	7855-29	7855-229	7855-429	7855-729	7855-929
-210	18.6 3.5	6	7855-30	7855-230	7855-430	7855-730	7855-930
-211	20.2 3.5	6	7855-32	7855-232	7855-432	7855-732	7855-932
-212	21.8 3.5	6	7855-34	7855-234	7855-434	7855-734	7855-934
-213	23.4 3.5	6	7855-36	7855-236	7855-436	7855-736	—
-214	25.0 3.5	6	7855-38	7855-238	7855-438	7855-738	7855-938
-215	26.6 3.5	6	7855-37	—	7855-437	—	—
-216	28.2 3.5	6	7855-39	7855-239	7855-439	7855-739	7855-939
-217	29.7 3.5	6	7855-40	7855-240	7855-440	7855-740	—
-218	31.3 3.5	6	7855-41	—	7855-441	—	—
-219	32.9 3.5	6	7855-43	—	7855-443	—	—
-220	34.5 3.5	6	7855-42	7855-242	7855-442	7855-742	7855-942
-221	36.1 3.5	6	7855-51	—	7855-451	—	—
-222	37.7 3.5	6	7855-52	—	7855-452	—	—
-223	40.9 3.5	3	7855-74	7855-274	7855-474	7855-774	—

Continued on following page

Size	Dimensions, mm		Qty.	VITON		SILICONE		BUNA-N		FETFE		EPDM	
	I.D.	W		Order Code		Order Code	Order Code	Order Code	Order Code	Order Code	Order Code	Order Code	
-225	47.2	3.5	3	7855-44	♠	7855-244	♠	7855-444	♠	7855-744	♠	7855-944	♠
-226	50.4	3.5	3	7855-46	♠	7855-246	♠	7855-446	♠	7855-746	♠	7855-946	♠
-227	53.6	3.5	3	7855-45	♠	7855-245	♠	7855-445	♠	7855-745	♠	—	—
-228	56.7	3.5	3	7855-47	♠	7855-247	♠	7855-447	♠	7855-747	♠	—	—
-229	59.9	3.5	3	7855-48	♠	7855-248	♠	7855-448	♠	7855-748	♠	7855-948	♠
-230	63.1	3.5	3	7855-75	♠	7855-275	♠	7855-475	♠	7855-775	♠	7855-975	♠
-233	72.6	3.5	3	—	—	—	—	—	—	7855-778	♠	—	—
-235	79.0	3.5	3	7855-64	♠	7855-264	♠	7855-464	♠	7855-764	♠	—	—
-239	91.7	3.5	3	7855-69	♠	—	—	—	—	—	—	—	—
-240	94.9	3.5	3	7855-78	♠	—	—	—	—	—	—	—	—
-325	37.5	5.3	6	7855-65	♠	—	—	7855-453	♠	—	—	—	—
-326	40.6	5.3	6	7855-67	♠	—	—	7855-454	♠	—	—	—	—
-327	43.8	5.3	6	7855-68	♠	7855-278	♠	7855-455	♠	—	—	—	—
-329	50.2	5.3	3	—	—	7855-283	♠	—	—	7855-783	♠	—	—
-335	69.2	5.3	3	—	—	—	—	7855-499	♠	—	—	—	—
-336	72.4	5.3	3	7855-82	♠	7855-282	♠	—	—	7855-782	♠	—	—
-338	78.7	5.3	3	7855-77	♠	7855-277	♠	—	—	7855-777	♠	—	—
-341	88.3	5.3	3	7855-50	♠	7855-250	♠	7855-450	♠	7855-750	♠	—	—
-343	94.6	5.3	3	7855-66	♠	7855-266	♠	—	—	7855-766	♠	—	—
-348	110.5	5.3	3	7855-79	♠	—	—	—	—	7855-779	♠	—	—
-349	113.7	5.3	3	—	—	7855-287	♠	—	—	7855-787	♠	—	—
-359	145.4	5.3	3	—	—	7855-289	♠	—	—	—	—	—	—
5-101	2.5	0.97	12	7855-80	♠	—	—	—	—	—	—	—	—
2-105	—	—	12	7855-303	♠	—	—	—	—	—	—	—	—
5-193	4.5	1.0	12	7855-81	♠	7855-281	♠	—	—	—	—	—	—
5-017	6.1	2.6	12	—	—	—	—	7855-482	♠	—	—	—	—
—	75.5	4.0	1	7855-83	♠	7855-251	♠	—	—	—	—	—	—
—	110.0	5.0	1	7855-84	♠	7855-254	♠	—	—	—	—	—	—
—	150.0	5.0	1	7855-85	♠	7855-260	♠	—	—	—	—	—	—
—	215.0	5.0	1	—	—	7855-288	♠	—	—	—	—	—	—
O-Ring Kits — 30 Sizes			500	7855-99	♠	—	—	7855-499	♠	—	—	—	—
O-Ring Sets: one box of 18 sets			—	—	—	—	—	—	—	8194-310	♠	—	—
O-Ring Sets: one box of 18 sets			—	—	—	—	—	—	—	8194-313	♠	—	—
O-Ring Sets: one box of 12 sets			—	—	—	—	—	—	—	8194-315	♠	—	—
O-Ring Sets: one box of 6 sets			—	—	—	—	—	—	—	8194-317	♠	—	—

*Sizes not listed are available via special order. Call or email for quotation.



O-RING KITS *Viton*[®] A / *Buna-N*

Ace Glass is pleased to offer O-Ring kits in Buna-N, and Viton. The O-Rings are packaged in a clear, plastic box with a resealable lid, clearly marked with material type, O-Ring size, and quantity. The cardboard insert indicates the individual Ace codes for each size, so you can easily re-order the O-Rings as they are depleted. The quantity of each O-Ring varies by size and compartment.



Viton[®] A Kit 7855-99

- Comprised of linear co-polymer of vinylidene fluoride and hexafluoropropylene
- Fluorine content is between 66 to 70%
- Generally black in color, and with generally good temperature and chemical resistance
- Kit contains 500 total o-rings

Buna-N Kit 7855-499

- Also known as Nitrile rubber
- A synthetic blended rubber, co-polymer of acrylonitrile and butadiene
- Generally resistant to fuels and oils
- Generally black or brown in color
- Kit contains 500 total o-rings

Size	Dimensions (mm)	
	I.D.	Width
-006	2.9	1.78
-007	3.7	1.78
-008	4.5	1.78
-009	5.3	1.78
-010	6.1	1.78
-011	7.7	1.78
-012	9.3	1.78
-110	9.2	2.6
-111	10.8	2.6
-112	12.4	2.6
-113	13.9	2.6
-114	15.5	2.6
-115	17.1	2.6
-116	18.7	2.6
-210	18.6	3.5
-211	20.2	3.5
-212	21.8	3.5
-213	23.4	3.5
-214	25.0	3.5
-215	26.6	3.5
-216	28.2	3.5
-217	29.7	3.5
-218	31.3	3.5
-219	32.9	3.5
-220	34.5	3.5
-221	36.1	3.5
-222	37.7	3.5
-325	37.5	5.3
-326	40.6	5.3
-327	43.8	5.3

Viton[®] A and Buna-N Kit contents

-006 Qty. 35	-007 Qty. 35	-008 Qty. 35	-009 Qty. 35	-010 Qty. 35	-011 Qty. 35	-012 Qty. 35	-110 Qty. 20	-111 Qty. 20
-112 Qty. 20	-113 Qty. 20	-114 Qty. 16	-115 Qty. 16	-116 Qty. 16	-210 Qty. 10	-211 Qty. 10	-212 Qty. 10	-213 Qty. 10
-214 Qty. 10	-215 Qty. 10	-216 Qty. 10	-217 Qty. 7	-218 Qty. 7	-219 Qty. 7	-220 Qty. 7	-221 Qty. 7	-222 Qty. 7
-325 Qty. 5		-327 Qty. 5					-326 Qty. 5	

O-RING KITS *FETFE® / Mixed Material*

Ace Glass is pleased to offer O-Ring kits in FETFE, and a mixed set (FETFE, Silicone, Buna-N and Viton A). The O-Rings are packaged in a clear, plastic box with a resealable lid, clearly marked with material type, O-Ring size, and quantity. The cardboard insert indicates the individual Ace codes for each size, so you can easily re-order the O-Rings as they are depleted. The quantity of each O-Ring varies by size and compartment.



FETFE® Kit 7855-799

- An ACE exclusive compound which is a fluoroelastomer with TFE additives
- Good compression set along with excellent temperature and chemical compatibility
- Generally black in color
- Kit contains 216 total o-rings, 12 of each size

Mixed Kit 7855-300

- Includes 4 different materials: FETFE, Silicone, Buna-N, Viton A
- Kit contains 360 total o-rings

Dimensions (mm)

Size	I.D.	Width
-008	4.5	1.78
-009	5.3	1.78
-010	6.1	1.78
-011	7.7	1.78
-012	9.3	1.78
-013	10.8	1.78
-014	12.4	1.78
-018	18.8	1.78
-108	6.0	2.6
-110	9.2	2.6
-111	10.8	2.6
-112	12.4	2.6
-116	18.7	2.6
-121	26.6	2.6
-136	50.5	2.6
-210	18.6	3.5
-212	21.8	3.5
-220	34.5	3.5

FETFE® Kit contents

-008	-010	-011	-009	-012	-013
-108	-014	-018	-110	-111	-112
-116	-121	-136	-210	-212	-220

Mixed Kit contents

Viton A -010	Viton A -011	Viton A -013	Viton A -108	Viton A -110	Silicone -010
Silicone -011	Silicone -013	Silicone -110	Silicone -210	FETFE -008	FETFE -013
FETFE -110	FETFE -210	FETFE -212	Buna-N -011	Buna-N -013	Buna-N -110



P.O. Box 688 • Vineland, NJ 08362-0688 • 856-692-3333 • Fax: 856-692-8919

TOLL-FREE: 1-800-223-4524 • FAX: 1-800-543-6752

www.aceglass.com email: sales@aceglass.com