

TECHNICAL INFORMATION

Service Temperatures
Max: 400°F (204°C) Long Term
[500°F (260°C) Short Term]
Min: 37°F (3°C)

Tensile Strength	2000 to 3200 psi (13.8-22.1 MPa)
Hardness	60 Shore A to 70 Shore A
Elongation	55% to 400%
Compression Set⁽¹⁾	As Low as 24%
Abrasion Resistance	Good to Excellent

Electrical Resistance	
Volume Resistivity of Vulcanized Polymer	
Measured at	ohms-cm
76°F (24°C)	3.0 x 10¹⁶
400°F (204°C)	1.7 x 10¹³

(1) 70 hrs @ 392°F [200°C] ASTM D395, Method B

benefits include:

- Better resistance to many individual chemicals as well as resistance to an exceptionally wide variety of chemicals.
- Excellent electrical resistance properties.
- **750CWP SCV** is approved and tested for STEAM service up to 500 Working Steam Pressure (470°F)

..resists a wide variety of *chemicals* including:

Oils and Lubricants
Hydraulic Fluids - All Types
Brake Fluids - All Types
Transmission Fluids
Power Steering Fluids
Sour (H₂S) Oil and Gas

Amine Corrosion Inhibitors
Ozone/Weathering
Solvents - Many Types
Steam/Hot Water
Acids
Bases

Oxidizing Agents
Bleaches
Pulp and Paper Liquors
Insecticides, Herbicides
Gamma Radiation
Alcohols

...out performs other rubber materials in such *Oilfield applications* as:

Sour (H₂S) Oil and Gas
Amine Corrosion Inhibitors
High pH and Water Based Drilling and Completion Fluids
Fracturing Acids
Oil/Water Combinations

...is not as resistant to some *chemicals* including:

High Aromatic Fluids (i.e., Toluene)
Ethers and Ketones
Organic Acetates and Acetic Acid
Some Chlorinated and Non-polar Solvents

...is more resistant in *vehicular Applications* to new types of:

Engine Oils (i.e., SF & SG series)
Power Steering Fluids
Automatic Transmission Fluids

...out performs other elastomers at *high temperatures* in:

Engine Coolants with Rust Inhibitors
EP Lubricants
Glycol Type Brake Fluids

...is used in a variety of different *facilities* including:

Chemical Plants
Petrochemical Plants
Agrochemical Plants
Chemical Applicators
Pulp and Paper mills
Steel and Aluminum Plants
Semiconductor Manufacturing

Other Industrial Environments

...provides service life advantages in such *solutions* as:

Acids and Bases
Steam/Hot Water
Corrosion and Scale Inhibitors
Pulp and Paper Liquors
Oils and Hydraulic Fluids
Amines and Oxidizing Agents
Sour (H₂S) Oil and Gas

Gamma Radiation
Sewage and Waste Products

Zelon Chemical Resistance

The following Chart provides an indication of the chemical resistance of Zelon. This chart provides guidelines only since many factors such as chemical concentration, temperature and mixture of chemicals can affect performance. The chemical resistance ratings shown in the chart are based on total immersion of the sample in the chemical. This test condition is more severe than normally experienced in actual use where only a small portion of the rubber part is exposed to the chemical.

1 = Excellent property retention	3 = Fair property retention, volume swell < 40%
2 = Good property retention, moderate volume swell	4 = Poor property retention, volume swell > 40%

CHEMICAL	RATING	CHEMICAL	RATING
Acetamide.....	1	Chloroform.....	4
Acetic acid.....	4	Chloroprene.....	1
Acetic acid / 10% Sodium chlorite.....	2	Chlorosulfonic acid (mineral filled compound)	1
Acetic anhydride.....	2	Chromic acid (62%).....	1
Acetone.....	4	Chromic acid (46%)/ Sulfuric acid (25%)....	1
Acetylene acetone.....	4	Citric acid.....	1
Alum saturated solution.....	1	Cottonseed oil.....	1
Amine corrosion inhibitors.....	1	Creosylic acid.....	1
Ammonia (28%).....	1	Cresol.....	1
Ammonium carbonate (saturated).....	1	Cupric sulfate (saturated).....	1
Ammonium hydroxide (28%).....	1	Cyclohexane.....	2
Ammonium nitrate (saturated).....	1	Cyclohexanone.....	2
Aniline.....	1	Dichlorobutane.....	1
Automatic transmission fluid.....	1	Diesel fuel #2.....	2
ASTMO Oil #1.....	1	Diethylether.....	4
ASTMO Oil #3.....	1	Dinitro chlorobenzene.....	1
Barium Sulfide (saturated sol.).....	1	Diocetyl cebacate.....	1
Benzaldehyde.....	2	Dioxane.....	4
Benzene.....	3	Diphenyl.....	2
Benzene/methanol 30/70.....	2	Diphenyl oxide.....	2
Benzene/methanol 50/50.....	2	DMF.....	1
Benzyl alcohol.....	1	Dowtherm™ 209.....	1
Benzyl chloride.....	1	Engine Oils (SF, SF CD).....	1
Bleaching powder 10% (CACl O).....	1	EP Lubricants.....	1
Brake fluid (glycol base).....	1	Ethanolamine.....	1
Brake fluid (mineral oil).....	1	Ethyl acetate.....	4
Brake fluid (silicone oil).....	1	Ethyl alcohol.....	1
Bromine.....	1	Ethyl benzene.....	2
Butyl acetate.....	4	Ethyl benzoate.....	3
Butyl stearate.....	1	Ethylene chlorohydrin.....	1
n-Butyl alcohol.....	1	Ethylene dichloride.....	2
Calcium acetate (saturated).....	1	Ethylene glycol/water/rust inhibitor.....	1
Calcium chloride (saturated).....	1	Formaldehyde.....	1
Calcium hydroxide (saturated).....	1	Formic acid.....	2
Calcium hypochlorite 10%.....	1	Freon™ TF.....	4
Calcium nitrate (saturated sol.).....	1	Fuel B.....	4
Calcium sulfide (saturated sol.).....	1	Fuel C.....	4
Caproic acid.....	2	Furfural.....	2
Carbon disulfide.....	1	Gasoline.....	2-3
Carbon tetrachloride.....	4	Glycerol.....	1
Castor oil.....	1	Heptane.....	3
Chlorine solution (Sat.) / 35% Sodium chloride/ 10% Sodium hypochlorite	1	Hexane.....	2
		Hydrazine (mineral filled compound) .	1-2

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CHEMICAL	RATING	CHEMICAL	RATING
Hydrochloric acid (37%).....	1	Phthalate dioctyl.....	2
Hydrochloric acid (20%).....	1	Pine oil.....	1
Hydrofluoric acid (50%).....	1	Potassium acetate (saturated).....	1
Hydrogen peroxide (30%).....	1	Potassium chloride (saturated).....	1
Iso-amyl acetate.....	4	Potassium hydroxide (30%).....	1
Iso-amyl alcohol.....	1	Potassium nitrate (saturated).....	1
Iso-octane.....	2	Power steering fluid.....	1
Isophorone.....	2	Propyl alcohol.....	1
Isopropylether.....	4	Pyridine oil.....	2
Jet turbine oils.....	1-2	Skydrol™ 500 B4.....	2
Kerosene.....	1-2	Sodium bisulfite (saturated).....	1
KF/HF (1/1.8).....	1	Sodium borate (saturated).....	1
Lacquer thinner.....	4	Sodium carbonate (saturated).....	1
Light oil.....	1	Sodium chloride solutions.....	1
Linseed oil.....	1	Sodium chlorite (10%).....	2
Lithium bromide (58%).....	1	Sodium hydroxide (50%).....	1
Lithium chromate.....	1	Sodium hypochlorite (10%).....	1
Magnesium chloride (18%).....	1	Sodium nitrate (saturated).....	1
Mesityl oxide.....	4	Sodium phosphate (saturated).....	1
Methyl alcohol.....	1	Sodium silicate (saturated).....	1
Methyl cellosolve.....	1	Sodium sulfate (saturated).....	1
Methyl chloroform.....	4	Sour gas, wet (35% H2S) with 5% Amine corrosion inhibitor.....	1-2
Methylene chloride.....	2	Sour oil, wet (35% H2S) with 5% Amine corrosion inhibitor.....	1-2
Methyl ethyl ketone.....	4	Stauffer™ 7700.....	2
Methyl isbutyl ketone (MIBK).....	4	Steam.....	1
Methyl salicylate.....	3	Stearic acid.....	1
Mil-H-5606.....	1-2	Styrene.....	2-3
Mil-H-83282A.....	1	Sulfur dioxide (5%).....	1
Mil-L-7808.....	1-2	Sulfuric acid fuming.....	1
Monobromobenzene.....	2	Sulfuric acid (96%).....	1
Naphtha.....	1	Sulfuric acid (60%).....	1
Naphthalene.....	2	Sulfuric acid (20%).....	1
Naphthenic acid.....	1	Tanning solution.....	1
Nitric acid fuming.....	2	Toluene.....	4
Nitric acid (98%).....	2	Tributyl phosphate.....	1
Nitric acid (60%).....	1	Trichloroethylene.....	4
Nitric acid (20%).....	1-2	Trichlorotrifluoroethane.....	4
Nitrobenzene.....	1	Trichloryl benzene.....	2
Nitroethane.....	2	Triethanolamine.....	1
1-Nitropropane.....	2	Turpentine.....	3
NMP.....	1-2	Vinyl acetate.....	4
Oleic acid.....	1	Vinyl chloride.....	1-2
Paradichlorobenzene.....	3	Water.....	1
Phenol.....	1	Xylene.....	3
Phosphate tributyl.....	3	Zinc chloride (saturated sol.).....	1
Phosphate tricresyl.....	1	Zinc sulfate (saturated sol.).....	1
Phosphate Triphenyl.....	1		
Phthalate dibutyl.....	2		