

# Product Specification

## Chemical resistance

### EPDM Membranes

#### General Information

EPDM rubber have a good chemical resistance to the following groups of chemicals: Anorganic salts, Animal oils, Bases, Organic salts, Vegetable oils, Weak organic acids.

In general the chemical resistance to the following groups decreases as the number of C-atomes increases: Alcohols, Aldehydes, Amines, Esters, Ketones, Organic acids.

Arbitrary can be suggested that the chemical resistance of EPDM rubber diminishes to "Moderatly" or "Non-resistant" if the number of C-atoms of the chemical is higher than approximatly five.

The resistance to ethers and phenols can be rated as "Moderate".

EPDM rubber is not resistant to: Halogenated hydrocarbons, Hydrocarbons, Mineral oils.

Of the utmost importance for the effect of chemicals on EPDM is: The contact time, The temperature, The pressure, The concentration of the chemical.

Especially if the chemical resistance is rated "Moderatly resistant" above factors are of exeptional importance.

The resistance rating given in the following table are valid at room temperature if not other temperature is stated.

	Resistant	Moderately Resistant	Non-Resistant
Acetaldehyde		X	
Acetic acid 10-25 %	X		
Acetic acid 50-100 %		X	
Acetic anhydride	X		
Acetic acid glacial		X	
Acetylacetone		X	
Acetone	X		
Acetonitrile	X		
Acetylene			X
Acrylic acid	X		
Acrylonitrile		X	
Acrolein		X	

	Resistant	Moderately Resistant	Non-Resistant
Adipic acid	X		
Aluminium acetate	X		
Aluminium chlorate	X		
Aluminium chloride	X		
Aluminium fluoride	X		
Aluminium hydroxide	X		
Aluminium nitrate	X		
Aluminium oxide hydrate	X		
Aluminium phosphate	X		
Aluminium sulfate	X		
Allylchloride			X
Ammonia anhydrous	X		
Ammonium carbonate	X		
Ammonium chloride	X		
Ammonium fluoride	X		
Ammonium hydroxide	X		
Ammonium nitrate	X		
Ammonium ortophosphate	X		
Ammonium oxalate	X		
Ammonium sulfate	X		
Ammonium thiocyanate	X		
Amylacetate	X		
Amylalcohol	X		
Amylchloride			X
Aniline	X		
Animal oil	X		
Antimony chloride	X		
Antimony pentasuphide	X		
Antimomy trisulphide	X		
Asphaltite			X
A.S.T.M. fuel A-B-C			X
A.S.T.M. oil 1-2-3			X
Aqua regia			X
Argon	X		

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	Resistant	Moderately Resistant	Non-Resistant
Arsenic acid	X		
Arsenic tri-oxide	X		
Arsenic tri-sulfide	X		
Barium chloride	X		
Barium hydroxide	X		
Barium oxide	X		
Barium peroxide	X		
Barium sulfate	X		
Barium sulfide	X		
Beer	X		
Benzalchloride			X
Benzaldehyde	X		
Benzene			X
Benzene sulfonic acid - 10 %	X		
Benzoic acid	X		
Bezoylchloride			X
Benzylalcohol		X	
Benzyl benzoate	X		
Bismuth carbonate	X		
Bisulphite solution	X		
Bitumen	X		
Borax solution	X		
Boric acid	X		
Bromic acid	X		
Bromine anhydrous liquid			X
Bromo benzene			X
Butadiene			X
Butane			X
Butanol	X		
Butanon (M.E.K.)	X		
Buttermilk		X	
Butylstearate			X
Butylacetate		X	

	Resistant	Moderately Resistant	Non-Resistant
Butylalcohol	X		
Butylaldehyde		X	
Butylamine			X
Butylbenzoat	X		
Butylchloride			X
Butylene			X
Butylether			X
Butylglycol	X		
Butyloleate			X
Butyric acid		X	
Butyraldehyde		X	
Cadmium sulfate	X		
Calcium	X		
Calciumcarbonate	X		
Calciumchloride	X		
Calciumcyanide	X		
Calciumhydroxide	X		
Calciumsulfate	X		
Calciumsulfide	X		
Calcium(bi)sulfite	X		
Calciumoxide	X		
Caproic acid	X		
Caprolactam 20-100 %	X		
Carbamide	X		
Carbitol	X		
Carbolic oil		X	
Carbondioxide	X		
Carbondisulfide			X
Carbonmonoxide	X		
Carbontetrachloride			X
Castor oil		X	
Cellulose acetate	X		
Cement	X		

# Product Specification

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	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Cetylalcohol	X			Diacetone alcohol	X		
Chlorine dry	X			Dibenzylether	X		
Chlorine wet		X		Dibutylphthalate	X		
Chlorine dioxide	X			Dichlorobenzene			X
Chlorine water			X	Dichloroethylene			X
Chloroacetic acid	X			Dichloromethane		X	
Chlorobenzene			X	Diesel oil			X
Chlorodiphenyl			X	Diethanolamine	X		
Chloroform			X	Diethylamine			X
Chlorophenol			X	Diethylene glycol	X		
Chloroprene			X	Diethylether			X
Chlorsulfonic acid			X	Diethylketon	X		
Chronic acid 10-50 %			X	Diethylsebacate		X	
Chromium sulfate	X			Dimethylamine			X
Chromium trioxide	X			Dimethylaniline	X		
Citric acid	X			Dimethylether			X
Copper chloride	X			Dimethylformamide		X	
Copper cyanide	X			Di-n-butylsebacate	X		
Copper hydroxide	X			Diocetylphthalate		X	
Copper nitrate	X			Dioxane	X		
Copper sulfate	X			Diphenyl			X
Cottonseed oil (20° C)	X			Diphenylether			X
Cottonseed oil (100° C)		X		Dipropylene glycol	X		
Cream butter	X			Diphenyloxide			X
Creosote oil			X	Dixan 2% solution	X		
Cresol		X		Dowtherm A			X
Cyanic acid	X			Epichlorohydrin		X	
Cyclohexane			X	Ethane			X
Cyclohexene			X	Ethanolamine	X		
Cyclohexanol			X	Ethylacetate	X		
Cyclohexanone			X	Ethylacrylate	X		
Decalin			X	Ethylalcohol	X		
Dextrose	X			Ethylbenzene			X

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Ethylchloride		X	
Ethylene			X
Ethylenebromide			X
Ethylene diamine		X	
Ethylene dichloride			X
Ethylene glycol	X		
Ethylene glycoldiacetate	X		
Ethylether			X
Ethyl hexanol	X		
Ethyl mercaptan			X
Ethylene oxide	X		
Fatty acids		X	
Fatty alcohols	X		
Ferric chloride	X		
Fluoboric acid 65 %	X		
Fluosilicic acid 50 %	X		
Formaldehyde	X		
Formaline	X		
Formic acid (<50%)	X		
Freon			X
Furfural	X		
Gallic acid		X	
Gasoline			X
Gelatin	X		
Glucose	X		
Glutamic acid	X		
Glycerol (glycerin)	X		
Glycerol monostearate		X	
Glycol	X		
Helium	X		
Heptane			X
Hexaldehyde		X	
Hexane			X

	Resistant	Moderately Resistant	Non-Resistant
Hexanol		X	
Hexylamine		X	
Hexylchloride			X
Hydrazine	X		
Hydrazine hydrate	X		
Hydrobromic acid	X		
Hydrochloric acid	X		
Hydrocyanic acid 20-90 %	X		
Hydrofluoric acid 40 %		X	
Hydrofluoric acid 75 %			X
Hydrogen	X		
Hydrogen peroxide 10-30%	X		
Hydrogen sulfide(dry+wet)	X		
Iodine		X	
Iron chloride	X		
Iron sulfate	X		
Iso butyl methylketon	X		
Iso octane			X
Isopropyl acetate	X		
Isopropyl alcohol	X		
Isopropylether			X
Kerosone			X
Lactic acid (milk acid)	X		
Lanolin		X	
Lauryl alcohol		X	
Lead acetate	X		
Lead arsenate	X		
Lead sulfate	X		
Linseed oil		X	
Lubrication oil			X
Magnesium chloride	X		
Magnesium hydroxide	X		
Magnesium silicate	X		

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	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Magnesium silico fluoride	X			Nitrotoluene			X
Magnesium sulfate	X			Octane			X
Magnesium sulfite	X			Octanol		X	
Maleic acid	X			Oleic acid		X	
Mercury	X			Oleum			X
Mercury chloride	X			Olive oil		X	
Mercury nitrate	X			Oxalic acid	X		
Metaldehyde	X			Oxygen	X		
Methane			X	Ozone	X		
Methanol	X			Palmitic acid		X	
Methylacetate	X			Palm oil		X	
Methylamine			X	Paraffinic oil and wax		X	
Methylchloride			X	Pentane			X
Methylene chloride		X		Perchloric acid		X	
Methyl ethyl keton	X			Perchloro ethylene			X
Methyl glycol	X			Perhydrol	X		
Methyl glycol acetate	X			Petroleum			X
Methyl-isobutylketone		X		Phenol			X
Mineral oil			X	Phenylchloride			X
Mixed nitrate and sulphuric acid			X	Phosphoric acid 20-85 %	X		
Molasses	X			Phosphorus oxychloride	X		
Monochloro ethylene			X	Phtalic acid	X		
Mono ethanol amine	X			Phtalic acid antihydride	X		
Naphta			X	Picric acid		X	
Naphtalene			X	Potassium acetate	X		
Nickelsulphate	X			Potassium alum. sulphate	X		
Nitric acid 10 %		X		Potassium borate	X		
Nitric acid 65-100 %			X	Potassium bromide	X		
Nitric acid red funning			X	Potassium carbonate	X		
Nitrobenzene		X		Potassium chlorate	X		
Nitrogen	X			Potassium chloride	X		
Nitrogenoxide	X			Potassium chromium sulfate	X		
Nitropropane	X			Potassium cyanide	X		

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	Resistant	Moderately Resistant	Non-Resistant		Resistant	Moderately Resistant	Non-Resistant
Potassium dichromate	X			Sodium chloride	X		
Potassium hydroxide	X			Sodium cyanide	X		
Potassium hypochlorite	X			Sodium dichromate	X		
Potassium iodide	X			Sodium fluoride	X		
Potassium nitrate	X			Sodium fluo aluminate	X		
Potassium permanganate		X		Sodium hydroxide 20-75 %	X		
Potassium phosphate	X			Sodium hypochlorite 10-30 %	X		
Potassium sulfate	X			Sodium iron cyanide	X		
Potassium sulfite	X			Sodium meta phosphate	X		
Propane (liquid and gas)			X	Sodium nitrate	X		
Propanol	X			Sodium nitrite	X		
Propyl acetate	X			Sodium peroxide	X		
Propyl amine			X	Sodium orthophosphate	X		
Propylene			X	Sodium silicate	X		
Propylene chloride			X	Sodium (bi) sulfate	X		
Propylene glycol	X			Sodium sulfide	X		
Propylene oxide	X			Sodium (bi) sulfite	X		
Pyridine		X		Sodium thiosulphate	X		
Salad oil		X		Soybean oil			X
Salicylic acid	X			Sorbic acid	X		
Seawater	X			Starch (amylodextrin)	X		
Silicic acid	X			Stearic acid		X	
Salad oil		X		Styrene			X
Salicylic acid	X			Sugar	X		
Seawater	X			Sulfamic acid	X		
Silicic acid	X			Sulfur 90 °C	X		
Silicone oil	X			Sulfur dichloride			X
Skydrol	X			Sulfur dioxide (wet+dry)	X		
Soap solution	X			Sulfuric acid 10-75 %	X		
Sodium acetate	X			Sulfuric acid, fuming			X
Sodium borate	X			Sulfurous acid 10-75 %			X
Sodium(bi)carbonate	X			Sulfur trioxide		X	
Sodium chlorate	X						

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	Resistant	Moderately Resistant	Non-Resistant
Tannic acid	X		
Tartaric acid		X	
Tetra chloro ethylene			X
Tetra hydro furan			X
Tetra hydro naphtalin			X
Toluene			X
Tributyl phosphate		X	
Trichloroethane			X
Tricresyl phosphate		X	
Tri ethanol amine	X		
Tri ethyl amine			X
Tri methyl amine			X
Tri sodium phosphate	X		
Turpentine			X
Vegetable oil and fat	X		
Vinyl acetate	X		
Vinyl chloride			X
Vinyl pyridine			X
Washing preparation (synth.)	X		
Water	X		
Wine	X		
Xylol			X
Zinc acetate	X		
Zinc dichloride	X		
Zinc sulfate	X		