

CORROSION RESISTANCE OF SILICONE RUBBERS

This list does not pretend to be exhaustive but does give an indication of the resistance of silicone rubbers to various common chemicals, solvents, foodstuffs, etc.

Key: "R" - Resistant to

"ND" - No data

A blank indicates that silicone rubber is not suitable for use under the conditions shown.

	20°C	60°C	100°C		20°C	60°C	100°C
Acetaldehyde	R	R	R				
Acetic Acid 10%	R	R	R				
Acetic Acid (glacial & anhydrous)	R ¹	R	R	Caustic Soda Potash	R	R	R
Acetic Anhydride	R	R	R	Chlorates of Na, K, Ba	R	R ³	R
Acetone	R ¹	R	R	Chlorine (dry)	R	R	R
Other Keytones	R ¹	R	R	Chlorine (wet)	R	R	R
Acid Fumes	R ⁴	R	R	Chlorides of Na, K, Mg	R	R	R
Alcohols (mostly fatty)	R	R	R	Chloroacetic Acid	R	R	R
Aliphatic Esters	R ³	R	R	Chlorobenzene	R	R	
Alkyl Chlorides	R ²	R	R	Chloroform	R ³	R	
Alum	R	R	R	Chromic Acid 80%	R ⁵	R	R
Aluminium Chloride	R	R	R	Citric Acid	R	R	R
Ammonia (anhydrous) <small>GAS OK</small>	R	ND	ND	Copper Salts (most)	R	R	R
Ammonia (aqueous)	R	R	R	Cresylic Acid	R ²	R	R
Ammonium Chloride	R	R	R	Cyclohexane	R ²	ND	ND
Amyl Acetate	R ²	R	R	Detergents (synthetic)	R	R	R
Aniline	R	R	R	Emulsifiers (all conc.)	R	R	R
Antimony Trichloride	R	R	R	Ether			
Aqua Regia				Fatty Acids >C6	R	R	R
Aromatic Solvents	R ²	R	R	Ferric Chloride	R	R	R
Beer	R	R	R	Ferrous Sulphate	R	R	R
Benzoic Acid	R	R	R	Fluorinated Refrigerants			
Boric Acid	R	R	R	Aerosols eg Freon	R ^{2,7}		
Brines (saturated)	R	R	R	Fluorine (dry)			
Bromine				(wet)			
Calcium Chloride	R	R	R	Fluosilicic Acid	R	R	R
Carbon Disulphide	R	R	R	Formaldehyde (40%)	R	R	R
Carbonic Acid	R	R	R	Formic Acid	R	ND	ND
Carbon Tetrachloride	R ²	R	R	Fruit Juices	R	R	R
				Gelatine	R	R	R
				Glycerine	R	R	R
				Glycols	R	R	R

	20°C	60°C	100°C		20°C	60°C	100°C
Hydrobromic Acid (50%)				Paraffin Wax	R	R	R
Hydrochloric Acid 10%	R	R	R	Phenol	R	R	R
Hydrochloric Acid (conc)	R ³			Phosphoric Acid 35%	R	R	R
Hydrofluoric Acid 40%				Phosphoric Acid 50%	R ³	R	R
Hydrofluoric Acid 75%				Phosphoric Acid 95%	R ³	R	R
Hydrogen Peroxide 30%	R	R	R	Phosphorous Pentoxide	R	R	R
Hydrogen Peroxide 30-90%	R ³	R	R	Phthalic Acid	R	R	R
Hypochlorites	R	R	R	Sea Water	R	R	R
Lactic Acid 100%	R	R	R	Silicic Acid	R	R	R
Lead Acetate	R	R ³	R	Silicone Fluids	R ^{2,3}	R	R
Lime (CaO)	R	R	R	Silver Nitrate	R	R	R
Maleic Acid	R	R	R	Sodium Carbonate	R	R	R
Meat Juices	R	R	R	Sodium Peroxide	R	R	R
Mercuric Chloride	R	R	R	Sodium Sulphide	R	R	R
Mercury	R	R	R	Stannic Chloride	R	R	R
Milk and its products	R	R	R	Starch	R	R	R
Moist Air	R	R	R	Sugar, Syrups, Jams	R	R	R
Molasses	R	R	R	Sulphates, Na,K,Mg,Co	R	R	R
Naptha	R ²	R	R	Sulphites	R	R	R
Napthalene	R ²	R	R	Sulphur	R	R	R
Nickel Salts	R	R	R	Sulphur Dioxide (dry)	R	R	ND
Nitrates Na,K, NH ₃	R	R	R	Sulphur Dioxide (wet)	R	R	ND
Nitric Acid 25%	R	R	R	Sulphur Trioxide	R	R	R
Nitric Acid 50%	R ²			Sulphuric Acid 50%	R	R	R
Nitric Acid 95% fuming	R ²			Sulphuric Acid 95%			
Oils (essential)	R ³	R	R	Sulphuric Acid (Fuming)			
Oils (mineral)	R ³	R	R	Sulphur Chlorides			
Oils (veg & animal)	R	R	R	Tallow	R ³	R	R
Oxalic Acid	R	R	R	Tannic Acid 10%	R	R	R
Ozone	R	R	R	Tartaric Acid 10%	R	R	R
				Trichloroethylene	R ²	R	R
				Vinegar	R	R	R
				Water	R ⁶	R	R
				Yeast	R	R	R
				Zinc Chloride	R	R	R

Notes

Explanatory notes at low temperatures may be taken to be true also of high temperatures unless otherwise stated.

1. Not fluorinated silicone rubbers
2. Fluorinated silicone rubbers only
3. Depending on the composition or specification of the material
4. Depending on the acid

5. Up to 50%
6. Hard, Soft or Distilled
7. Fair resistance