

SIGRAFLEX® Gaskets

Resistance to Chemical Media



Chemical Resistance of SIGRAFLEX Flexible Graphite, Stainless Steel and PTFE

A distinction is made between four cases:

- | | | | |
|------------------|---|-------------------------|---|
| 1. Resistant | ● | 3. Reservedly resistant | △ |
| 2. Not resistant | □ | 4. Insufficient data | — |

In the third case chemical resistance is governed by the operating mode, service temperature and concentration. Users are advised to consult the seal manufacturer or SGL GROUP.

The following resistance table is intended to give an overview of media. When employing media not included in the table, users should request SGL GROUP's technical advice.

	SIGRAFLEX Graphite Foil	Stainless steel 316 (L)	PTFE (virgin)
Acetaldehyde	●	●	●
Acetamide	●	-	●
Acetate of copper	●	●	●
Acetone	●	●	●
Acetylene	●	●	●
Acrylic acid (water free)	●	●	●
Acrylonitrile	●	●	●
Adipic acid	●	●	●
Alum	●	△	●
Aluminium acetate	●	●	●
Aluminium chlorate	●	●	●
Aluminium chloride	●	□	●
Aluminium fluoride	●	□	●
Aluminium sulphate	●	△	●
Ammonia	●	●	●
Ammonia, gaseous	●	●	●
Ammonium bifluoride	●	●	●
Ammonium carbonate	●	●	●
Ammonium chloride	●	△	●
Ammonium diphosphate	●	●	●
Ammonium fluoride	●	●	●
Ammonium hydroxide	●	●	●
Amylacetate	●	●	●
Amyl alcohol	●	●	●
Aniline	●	●	●
Anone (Cyclohexanon)	●	●	●
Aqua regia	□	□	●
Barium salt, aqueous	●	●	●
Bariumchloride	●	●	●
Benzene	●	●	●
Benzoic acid	●	●	●
Benzol	●	●	●
Benzylchloride	●	●	△
Black liquor (sulfide)	●	-	●
Black liquor (sulphate)	●	-	●
Bleach liquor (dry)	●	△	●
Borate (aqueous solution)	●	●	●
Boric acid	●	●	●
Boric hydrogen fluoride	□	□	●
Bromic trifluoride	□	□	□
Bromine, liquor	□	□	●
Butadiene	●	●	●
Butane	●	●	△
Butanol (Butyl alcohol)	●	●	●
Butanone (Methyl ethylketone)	●	●	●
Butyl acetate	●	●	●
Butyl amine	●	●	●
Butylphenol	●	●	●
Butyric acid	●	●	●
Calcium chloride	●	△	●
Calcium hydroxide	●	●	●
Calcium hypochloride	●	△	●
Calcium oxide	●	●	●

	SIGRAFLEX Graphite Foil	Stainless steel 316 (L)	PTFE (virgin)
Calcium sulphate	●	●	●
Carbamide	●	●	●
Carbolic acid (Phenol)	●	●	●
Carbon bisulphate	●	●	●
Carbon dioxide	●	●	●
Carbon hydrate	●	●	●
Carbon tetrachloride	●	● (No liquor)	●
Caustic potash solution liquor	●	●	●
Caustic soda	●	□	●
Cesium melt	-	-	□
Chlorine	□	□	●
Chlorine (dry)	●	●	●
Chlorine bleach liquor	●	□	●
Chlorine trifluoride	□	□	□
Chlorine water solution	□	□	●
Chlorobenzene	●	●	●
Chlorodioxide	□	□	●
Chloroform (trichloromethane)	●	●	●
Chromic acid	●	□	●
Chroming solutions	△	△	-
Clophen	●	●	●
Copper sulphate	●	●	●
Cresol	●	●	●
Cyclohexane	●	●	●
Cyclohexanol	●	●	●
Decalin	●	●	●
Dibenzylether	●	●	●
Dibutylphthalate	●	●	●
Dichlorien methan (Methylenchloride)	●	△	△
Diesel oil	●	●	●
Diethylketone	●	●	●
Dimethylamine	●	●	●
Dimethylformamide	●	●	●
Dioxane	●	●	●
Diphenyl	●	●	●
Dithiophosphoric acid	●	-	●
Ethane	●	●	●
Ethanoic acid / pure acetic acid	●	△	●
Ethanol (Ethyl alcohol)	●	●	●
Ethyl acetate	●	●	●
Ethylchloride	●	●	●
Ethylendiamine	●	●	●
Ethylene	●	●	●
Ethylene oxide	●	●	□
Ethylenealcol	●	●	●
Ethylether	●	●	●
Fatty alcohols	●	●	●
Fluorine benzene	●	●	●
Fluorine dioxide	□	□	□
Fluorine hydrogen chloride	●	●	△
Fluorine, gaseous	△	□	□
Fluorine, liquor	□	□	□
Fluoro carbon	●	●	●
Fluorosilicic (HF)	-	-	●
Fluosilic acid	●	-	●
Formaldehyde (Methanal, Formaline)	●	●	●
Formamide	●	●	●

	SIGRAFLEX Graphite Foil	Stainless steel 316 (L)	PTFE (virgin)
Formic acid	●	△	●
Glycerine	●	●	●
Glycol (Ethylene glycol)	●	●	●
Heptane	●	●	●
Hexamine (Urotropin)	●	-	-
Hydraulic oil	●	●	●
Hydrazine	●	●	●
Hydrazine hydrate	●	●	●
Hydrochloric acid	●	□	●
Hydrocyanic acid	●	●	●
Hydrofluoric acid, 40%	●	□	●
Hydrofluorsilicic	-	●	●
Hydrogen chloride	●	□	●
Hydrogen fluoride	●	□	●
Hydrogen peroxide	△ Z-Quality	● (<80°C)	●
Hydrogen sulphide	●	△	●
Hydrosilicic fluoric acid	●	-	●
Hydrosilico fluoride	●	-	●
Iod	●	●	●
Isooctane	●	●	●
Isopropanol (Isopropylalcohol)	●	●	●
Kerosene	●	●	●
Kerosine	●	●	●
Ketone	●	●	●
Lactic acid	●	△	●
Lauryl alcohol	●	●	●
Lead acetate	●	●	●
Lead arsenate	●	●	●
Line water	●	●	●
Lithium bromide	●	●	●
Lithium melt	-	-	□
Magnesium hydroxide	●	●	●
Magnesium sulphate	●	●	●
Maleic acid	●	●	●
Maleic acid hydride	●	●	●
Methane	●	●	●
Methanol (Methylalcohol)	●	●	●
Mineral oil	●	●	●
Monochlor methane (Methylchloride)	●	●	●
Monochloracetic acid	●	□	●
Morpholine	●	-	●
Naphta	●	-	●
Naphtalene	●	-	●
Natural gas type L	●	●	●
Nitric acid	△	□	●
Nitrobenzene	●	●	●
Ocalic acid	●	□	●
Octane	●	●	●
Oelic acid	●	●	●
Oil	●	●	●
Oleum (fuming nitric acid)	□	□	●
Oxygen up to ca. 350 °C	●	●	●
Palmitic acid	●	●	●
p-Dihydroxybenzene (hydroquinone)	●	-	●
Pentane	●	●	●
Perchloric acid	△	□	●
Perchloroethylene	●	●	●

	SIGRAFLEX Graphite Foil	Stainless steel 316 (L)	PTFE (virgin)
Petroleum ether	●	●	●
Phenol	●	●	●
Phosgene	●	●	●
Phosphorous acid 20%	●	●	●
Phosphorous acid, >45%	●	△	●
Phosphorous, impure	●	△	●
Phthalic acid	●	●	●
Potassium acetate	●	●	●
Potassium bifluorine, saturated	●	●	●
Potassium carbonate	●	●	●
Potassium chlorate	□	●	●
Potassium chloride	●	●	●
Potassium chromate	△	□	●
Potassium chrome sulphate	-	□	●
Potassium cyanide (Cyankali)	●	●	●
Potassium hydroxide (caustic potash solution)	●	●	●
Potassium hypochloride	●	□	●
Potassium iodide	●	●	●
Potassium melt up to 350 °C	●	-	□
Potassium nitrate	□	□	●
Potassium nitrate (melt)	□	□	□
Potassium permanganate	●	●	●
Potassium silicate	●	●	●
Propane	●	●	●
Pyridine	●	●	●
Salicylic acid	●	●	●
Soda	●	●	●
Sodium acetate	●	●	●
Sodium aluminate	●	-	●
Sodium aluminium fluoride / Kryolith	●	-	●
Sodium ammonium hydrogen phosphate	●	●	●
Sodium bisulphate	●	●	●
Sodium carbonate	●	●	●
Sodium chloride	●	△	●
Sodium cyanide	●	●	●
Sodium hydrate (caustic soda)	●	□	●
Sodium hypochloride	●	□	●
Sodium melt up to 350 °C	●	-	□
Sodium phosphate, bi-basic	●	●	●
Sodium phosphate, tribasic	●	●	●
Sodium silicate	●	●	●
Sodium silicate (water glas)	●	●	●
Sodium sulfide	●	△	●
Sodium sulphate	●	●	●
Stearic acid	●	●	●
Styrene	●	●	□
Sulfide	-	-	-
Sulphate	-	-	-
Sulphur dioxide	●	●	●
Sulphur trioxide	□	□	●
Sulphuric acid up to 70%	●	□	●
Sulphuric acid over 70%	● up to 100°C	□	●
Sulphuric acid, fuming (Oleum)	□	□	●
Sulphurous acid	●	△	●
Tannic acid	●	●	●
Tannin	●	●	●
Tetrachloroethane	●	●	●

	SIGRAFLEX Graphite Foil	Stainless steel 316 (L)	PTFE (virgin)
Tetrafluor boric acid (HF)	●	□	●
Tetraline (1,2,3,4 Tetra hydronaphtaline)	●	●	●
Toluene	●	●	●
Tribasic calcium	●	●	●
Trichloroethylene	●	●	●
Trichlorotrifluorethane (F 113)	●	●	△
Triethanolamine	●	-	●
Triethylene aluminium	●	-	□
Triethylene tetramine	●	-	●
Trisodium phosphate	●	●	●
Turpentine	●	●	●
Vinyl chloride	●	-	●

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