

Chemical Resistance

Klinger gasket materials can be select from the following table. The following information should be used as a guide only. Please contact our Technical Services Department if in any doubt.

✓ Suitable
 ✓ Suitability depends on operating conditions
 ✗ Unsuitable

Media	Formula	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-Graph 2000	Graphite	Topchem 2005	Topchem 2006
A											
Acetaldehyde	CH ₃ CHO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetamide	CH ₃ COCH ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetic acid 10%	CH ₂ COOH	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Acetic acid 100%	CH ₂ COOH	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Acetic ether	CH ₃ COOC ₂ H ₅	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetone	CH ₃ COCH ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Acetylene	C ₂ H ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adipic acid	COOH(CH ₂) ₄ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Alum	KAl(SO ₄) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aluminium acetate	(CH ₃ COO) ₃ Al	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aluminium chlorate	Al(ClO ₃) ₃	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Aluminium chloride	AlCl ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonia	NH ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonium bicarbonate	NH ₄ HCO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonium chloride	NH ₄ Cl	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Ammonium diphosphate	(NH ₄) ₂ HPO ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonium hydroxide	NH ₄ OH	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
Amyl acetate	CHCOOC ₅ H ₁₁	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Aniline	C ₆ H ₅ NH ₂	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Asphalt (tar)		✓	✓	✓	✓	✓	✓	✗	✓	✓	✓
ASTM oil 1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ASTM oil 3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
B											
Barium chloride	BaCl ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Benzene	C ₆ H ₆	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Benzine		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Benzoic acid	C ₆ H ₅ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Bleach	Ca(OCl) ₂	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Borax	Na ₂ B ₄ O ₇ 10H ₂ O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Boric Acid	H ₃ BO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brine	NaCl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butane	C ₄ H ₁₀	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butanone	M.E.K.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butyl acetate	CHCOOC ₄ HP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Media	Formula	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-Graph 2000	Graphite	Topchem 2005	Topchem 2006
Butyl alcohol (butanol)	C ₄ H ₉ OH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butyric acid	C ₃ H ₇ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C											
Calcium chloride	CaCl ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Calcium hydroxide	Ca(OH) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Calcium hypochlorite	Ca(OCl) ₂	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Calcium sulphate	CaS ₀₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carbolic acid 100%	C ₆ H ₅ OH	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Carbon dioxide	CO ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Carbon disulphide	CS ₂	✗	✗	✓	✗	✗	✗	✓	✓	✓	✓
Carbon tetrachloride	CCl ₄	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓
Castor oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chlorine (dry)	Cl ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chlorine water (0,5%)		✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Chlorine (wet)	Cl ₂	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓
Chloroform	CHCl ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chloromethane	CH ₃ Cl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chromic acid	H ₂ CrO ₄	✓	✓	✓	✗	✓	✗	✓	✗	✓	✓
Citric acid	(CH ₂ COOH) ₂ C(OH)COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clophen	T ₆₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copper acetate	(CH ₃ COO) ₂ Cu	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Copper sulphate	CuS ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Creosote		✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Cresol	C ₆ H ₄ (OH)CH ₃	✓	✓	✓	✓	✗	✓	✗	✓	✓	✓
Cyclohexanol	C ₆ H ₁₁ OH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cyclohexanone	C ₅ H ₁₀ O	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
D											
Decalin	C ₁₀ H ₁₈	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Diammonium phosphate	(NH ₄) ₂ HPO ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Di-benzylether	(C ₆ H ₅ CH ₂) ₂ O	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Di-butylphthalate	C ₆ H ₄ (COOC ₄ H ₉) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Diesel oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dimenthyformamide	HCON(CH ₃) ₂	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Diphyl (Dowtherm A)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dye Liquor		✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
E											
Ethane	C ₂ H ₆	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl acetate	CH ₃ COOC ₂ H ₅	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl alcohol (Ethanol)	C ₂ H ₅ OH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl chloride	C ₂ H ₅ Cl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl ether	C ₂ H ₅ OC ₂ H ₅	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethylene chloride	(CH ₂ Cl) ₂	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Ethylene glycol	(CH ₂ OH) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
F											
Fluosilicic acid	H ₂ SiF ₆	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Formaldehyde	HCNHO	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Formamide	CHCONH ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Formic acid 10%	HCOOH	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓

Media	Formula	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-Graph 2000	Graphite	Topchem 2005	Topchem 2006
Formic acid 85%	HCOOH	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Freon 12		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Freon 22		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
G											
Glacial acetic acid	CH ₃ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Glucose		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Glycerine	(CH ₂ OH) ₂ CHOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
H											
Heating oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Heptane	C ₇ H ₁₆	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydraulic oil (mineral/Glycol)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydraulic oil (phosphate ester)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydrazine hydrate	(NH ₂) ₂ H ₂ O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydrochloric acid 20%	HCl	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗
Hydrochloric acid 30%	HCl	✗	✗	✗	✗	✓	✗	✗	✓	✓	✗
Hydrofluoric acid (10%)	HF	✗	✗	✗	✗	✓	✗	✗	✓	✗	✗
Hydrogen	H ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hydrogen peroxide (<6%w.w.)		✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
I											
Iso-octane	(CH ₃) ₃ CCH ₂ (CH ₃) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Iso-propyl alcohol	(CH ₃) ₂ CHOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
K											
Kerosene (petroleum)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
L											
Lactic acid 50%	CH ₃ CHOHCOOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lead acetate	(CH ₃ COO) ₂ Pb	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lead arsenate	Pb ₃ (AsO ₄) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Lime water	Ca(OH) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Linseed oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M											
Magnesium sulphate	MgSO ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Malic acid	HOOCCH ₂ CHOHCOOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methane	CH ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methyl alcohol	CH ₃ OH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methyl chloride	CH ₃ Cl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methyl ethyl ketone	CH ₃ COO ₂ H ₅	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methylated spirits		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methylene chloride	CH ₂ Cl ₂	✗	✗	✓	✗	✗	✗	✗	✓	✓	✓
Mineral oil - ASTM No. 1		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Mineral oil - ASTM No. 3		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
N											
Naphtha		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Natural gas (Methane)	CH ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nitric acid 20%	HNO ₃	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Nitric acid 40%	HNO ₃	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Nitric acid 96%	HNO ₃	✗	✗	✗	✗	✗	✗	✗	✓	✓	✗
Nitrobenzene	C ₆ H ₅ NO ₂	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Nitrogen	N ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Media	Formula	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-Graph 2000	Graphite	Topchem 2005	Topchem 2006
O											
Octane	C ₈ H ₁₈	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oleic acid	C ₁₇ H ₃₃ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oleum (fuming sulphuric acid)		✗	✗	✗	✗	✗	✗	✗	✗	✓	✗
Oxalic acid	(COOH) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Oxygen	O ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
P											
Palmitic acid	C ₁₅ H ₁₅ COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paraffin		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pentane	C ₅ H ₁₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Perchloroethylene	C ₂ Cl ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Petrol		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Petroleum ether		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Phenol	C ₆ H ₅ OH	✗	✗	✗	✗	✓	✗	✗	✓	✓	✓
Phosphoric acid	H ₃ PO ₄	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓
Phthalic acid	(C ₆ H ₄ COOH) ₂	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium acetate	CH ₃ COOK	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium carbonate	K ₂ CO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium chlorate	KClO ₃	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Potassium chloride	KCl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium chromium sulphate	KCr(SO ₄) ₂ H ₂ O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium cyanide	KCN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium dichromate	K ₂ Cr ₂ O ₇	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium hydroxide	KOH	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
Potassium hypochlorite	KClO	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
Potassium iodide	KI	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium nitrate	KNO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Potassium permanganate	KMnO ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Propane	C ₃ H ₈	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pydrol		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pyridine	C ₅ H ₅ N	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
S											
Salicylic acid	C ₆ H ₄ (OH)COOH	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Salt	NaCl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sea water		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Silicone oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Skydrol 500		✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
Soda	Na ₂ CO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
Sodium aluminate	Na ₃ AlO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium bisulphite	NaHSO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium bicarbonate	NaHCO ₃	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium chloride	NaCl	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium cyanide	NaCN	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium hydroxide	NaOH	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓
Sodium silicate (water glass)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium sulphate	Na ₂ SO ₄	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sodium sulphide	Na ₂ S	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Steam	H ₂ O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Media	Formula	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-Graph 2000	Graphite	Topchem 2005	Topchem 2006
Stearic acid	$C_{17}H_{35}COOH$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sulphur dioxide	SO_2	✗	✗	✓	✗	✓	✗	✓	✓	✓	✓
Sulphuric acid 30%	H_2SO_4	✗	✗	✗	✗	✓	✗	✗	✓	✓	✗
Sulphuric acid 50%	H_2SO_4	✗	✗	✗	✗	✓	✗	✗	✓	✓	✗
Sulphuric acid 96%	H_2SO_4	✗	✗	✗	✗	✓	✗	✗	✗	✓	✗
Sulphurous acid	H_2SO_3	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓
T											
Tannic acid	$C_{76}H_{52}O_{46}$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tar (Asphalt)		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tartaric acid	$(CHOH COOH)_2$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tetrachloroethane	$C_2H_2Cl_4$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tetraline	$C_{10}H_{12}$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Toluene	$C_6H_5CH_3$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transformer oil		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trichloroethylene	C_2HCl_3	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Trietanolamine	$N(CH_2CH_2OH)_3$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Turpentine		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U											
Urea	$(NH_2)_2CO$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
V											
Vinyl acetate	$CH_3COOC_2H_3$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
W											
Water	H_2O	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water glass	$Na_2SiO_3K_2SiO_3$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
White spirit		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
X											
Xylol	$C_6H_4(CH_3)_2$	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓