

CHEMICAL RESISTANCE OF SHEET MATERIALS

Chemical Resistance

Media	Formula	Klinger Quantum / Top-sil-ML1	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-graph-2000	Graphite	Top-chem-2000/2003 Softchem	Top-chem-2005	Top-chem-2006	Milam
A														
Acetaldehyde	CH ₃ CHO	B	B	B	B	B	A	B	B	A	A	A	A	A
Acetamide	CH ₃ COCH ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Acetic acid	CH ₃ COOH	A	A	A	A	C	A	A	A	A	A	A	A	A
Acetic ether	CH ₃ COOC ₂ H ₅	B	B	B	B	B	B	B	B	A	A	A	A	A
Acetone	CH ₃ COCH ₃	B	B	B	B	B	A	B	B	A	A	A	A	A
Acetylene	C ₂ H ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Adipic acid	COOH(CH ₂) ₄ COOH	A	A	A	A	A	A	A	A	A	A	A	A	A
Alum	KAl(SO ₄) ₂	A	A	A	A	B	A	A	A	A	A	A	A	A
Aluminium acetate	(CH ₃ COO) ₃ Al	A	A	A	A	B	A	A	A	A	A	A	A	A
Aluminium chlorate	Al(ClO ₃) ₃	A	A	A	A	C	A	A	B	A	A	A	A	A
Aluminium chloride	AlCl ₃	A	A	A	A	B	A	A	A	A	A	A	A	A
Ammonia	NH ₃	A	A	A	A	A	A	A	A	A	A	B	A	A
Ammonium bicarbonate	NH ₄ HCO ₃	A	A	A	A	A	A	A	B	A	A	A	A	A
Ammonium chloride	NH ₄ Cl	A	A	A	A	C	A	A	A	A	A	A	A	A
Ammonium diphosphate	(NH ₄) ₂ HPO ₄	A	A	A	A	B	A	A	A	A	A	A	A	A
Ammonium hydroxide	NH ₄ OH	A	A	A	A	B	A	A	C	A	A	A	A	A
Amyl acetate	CHCOOC ₅ H ₁₁	B	B	B	B	B	B	B	A	A	A	A	A	A
Aniline	C ₆ H ₅ NH ₂	C	C	C	C	C	C	C	C	A	A	A	A	A
Asphalt (tar)		A	A	A	A	A	A	A	C	A	A	A	A	A
ASTM oil 1		A	A	A	A	A	A	A	A	A	A	A	A	A
ASTM oil 3		A	A	A	A	A	A	A	A	A	A	A	A	A
B														
Barium chloride	BaCl ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Benzene	C ₆ H ₆	A	A	A	A	A	A	A	A	A	A	A	A	A
Benzine		A	A	A	A	A	A	A	A	A	A	A	A	A
Benzoic acid	C ₆ H ₅ COOH	B	B	B	A	B	A	B	B	A	A	A	A	A
Bleach	Ca(OCl) ₂	A	A	A	A	C	A	A	A	A	A	A	A	A
Borax	Na ₂ B ₄ O ₇ ·10H ₂ O	A	A	A	A	A	A	A	A	A	A	A	A	A
Butane	C ₄ H ₁₀	A	A	A	A	A	A	A	A	A	A	A	A	A
Butanone		B	B	B	B	B	B	B	B	A	A	A	A	A
Butyl acetate	CHCOOC ₄ H ₉	B	B	B	B	B	B	B	A	A	A	A	A	A
Butyl alcohol (butanol)	C ₄ H ₉ OH	A	A	A	A	A	A	A	A	A	A	A	A	A
C														
Calcium chloride	CaCl ₂	A	A	A	A	B	A	A	A	A	A	A	A	A
Calcium hydroxide	Ca(OH) ₂	A	A	A	A	B	A	A	B	A	A	B	A	A
Calcium sulphate	CaSO ₄	A	A	A	A	A	A	A	A	A	A	A	A	A
Carbon dioxide	CO ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Carbon disulphide	CS ₂	C	C	C	B	C	C	C	A	A	A	A	A	A



Telephone : 01274 - 688222
 Fax : 01274 - 688549
 E-mail : enquiries@klingeruk.co.uk

CHEMICAL RESISTANCE OF SHEET MATERIALS

Media	Formula	Klinger Quantum / Top-sil-ML1	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-graph-2000	Graphite	Top-chem-2000/2003 Soft-chem	Top-chem-2005	Top-chem-2006	Milam
Carbon tetrachloride	CCl ₄	B	B	B	B	B	C	B	B	A	A	A	A	A
Castor oil		A	A	A	A	A	A	A	A	A	A	A	A	A
Chlorine (dry)	Cl ₂	B	B	B	B	B	B	B	B	B	A	A	A	A
Chlorine water (0.5%)		A	A	A	A	C	A	A	A	B	A	A	A	A
Chlorine (wet)	Cl ₂	C	C	C	C	C	C	C	C	B	A	A	A	A
Chloroform	CHCl ₃	B	B	B	B	B	B	B	B	A	A	A	A	A
Chloromethane	CH ₂ Cl	B	B	B	B	B	B	B	B	A	A	A	A	A
Chromic acid	H ₂ CrO ₄	B	B	B	B	C	B	C	B	C	A	A	A	A
Citric acid	(CH ₂ COOH) ₂ C(OH)COOH	A	A	A	A	A	A	A	A	A	A	A	A	A
Clophen	T64	B	B	B	B	B	B	B	B	A	A	A	A	A
Copper acetate	(CH ₃ COO) ₂ Cu	A	A	A	A	A	A	A	A	A	A	A	A	A
Copper sulphate	CuS ₄	A	A	A	A	A	A	A	A	A	A	A	A	A
Creosote		C	C	C	C	C	C	C	C	A	A	A	A	A
Cresol	C ₆ H ₄ (OH)CH ₃	B	B	B	B	B	B	B	C	A	A	A	A	A
Cyclohexanol	C ₆ H ₁₁ OH	A	A	A	A	A	A	A	A	A	A	A	A	A
Cyclohexanone	C ₆ H ₁₀ O	C	C	C	C	C	C	C	C	A	A	A	A	A
D														
Decalin	C ₁₀ H ₁₈	A	A	A	A	A	A	A	A	A	A	A	A	A
Di-benzylether	(C ₆ H ₅ CH ₂) ₂ O	C	C	C	C	C	C	C	B	A	A	A	A	A
Di-butylphthalate	C ₆ H ₄ (COOC ₄ H ₉) ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Dimethylformamide	HCON(CH ₃) ₂	C	C	C	C	C	C	C	C	A	A	A	A	A
Diphyl (Dowtherm A)		A	A	A	A	A	A	A	A	A	A	A	A	A
E														
Ethane	C ₂ H ₆	A	A	A	A	A	A	A	A	A	A	A	A	A
Ethyl acetate	CH ₃ COOC ₂ H ₅	B	B	B	B	B	B	B	A	A	A	A	A	A
Ethyl alcohol (Ethanol)	C ₂ H ₅ OH	A	A	A	A	A	A	A	A	A	A	A	A	A
Ethyl chloride	C ₂ H ₅ Cl	B	B	B	B	B	B	B	B	A	A	A	A	A
Ethyl ether	C ₂ H ₅ OC ₂ H ₅	A	A	A	A	A	A	A	A	A	A	A	A	A
Ethylene chloride	(CH ₂ Cl) ₂	C	C	C	C	C	A	C	C	A	A	A	A	A
Ethylene glycol	(CH ₂ OH) ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
F														
Formaldehyde	CH ₂ O	A	A	A	A	A	A	A	B	A	A	A	A	A
Formamide	HCONH ₂	B	B	B	A	B	B	B	B	A	A	A	A	A
Freon 12		A	A	A	A	A	A	A	A	A	A	A	A	A
Freon 22		B	B	B	B	B	A	B	A	A	A	A	A	A
G														
Glucose	C ₆ H ₁₂ O ₆	A	A	A	A	A	A	A	A	A	A	A	A	A

CHEMICAL RESISTANCE OF SHEET MATERIALS

Chemical Resistance

Media	Formula	Klinger Quantum / Top-sil-ML1	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-graph-2000	Graphite	Top-chem-2000/2003 Soft-chem	Top-chem-2005	Top-chem-2006	Milam
Glycerine	(CH ₂ OH) ₂ CHOH	A	A	A	A	A	A	A	A	A	A	A	A	A
H														
Heptane	C ₇ H ₁₆	A	A	A	A	A	A	A	A	A	A	A	A	A
Hydraulic oil (mineral/Glycol)		A	A	A	A	B	A	A	A	A	A	A	A	A
Hydraulic oil (phosphate ester)		B	B	B	B	B	B	B	B	A	A	A	A	A
Hydrazine hydrate	(NH ₂) ₂ H ₂ O	A	A	A	A	A	A	A	A	A	A	A	A	A
Hydrochloric acid (20%)	HCl	B	B	B	B	C	A	B	B	A	A	A	C	A
Hydrochloric acid (30%)	HCl	C	C	C	C	C	A	C	C	A	A	A	C	A
Hydrofluoric acid (10%)	HF	C	C	C	C	C	A	C	C	A	A	C	C	A
Hydrogen	H ₂	A	A	A	A	B	A	A	A	A	A	A	A	A
Hydrogen peroxide (<6%ww)	H ₂ O ₂	A	A	A	A	C	A	A	C	A	A	A	A	A
I														
Iso-octane	(CH ₃) ₂ CCH ₂ (CH ₃) ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Iso-propyl alcohol	(CH ₃) ₂ CHOH	A	A	A	A	A	A	A	A	A	A	A	A	A
K														
Kerosene (petroleum)		A	A	A	A	A	A	A	A	A	A	A	A	A
L														
Lead acetate	(CH ₃ COO) ₂ Pb	A	A	A	A	A	A	A	A	A	A	A	A	A
Lead arsenate	Pb ₃ (AsO ₄) ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
M														
Magnesium sulphate	MgSO ₄	A	A	A	A	A	A	A	A	A	A	A	A	A
Methane	CH ₄	A	A	A	A	A	A	A	A	A	A	A	A	A
Methyl alcohol	CH ₃ OH	A	A	A	A	A	A	A	A	A	A	A	A	A
Methyl chloride	CH ₃ Cl	B	B	B	B	B	B	B	B	A	A	A	A	A
Methyl ethyl ketone	CH ₃ COO ₂ H ₃	B	B	B	B	B	B	B	B	A	A	A	A	A
Methylene chloride	CH ₂ Cl ₂	C	C	C	C	C	B	C	B	A	A	A	A	A
N														
Naphtha		A	A	A	A	A	A	A	A	A	A	A	A	A
Nitrobenzene	C ₆ H ₅ NO ₂	C	C	C	C	C	C	C	C	A	A	A	A	A
Nitrogen	N ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Nitric Acid	HNO ₃	C	C	C	C	C	B	C	C	C	A	A	B	A
O														
Octane	C ₈ H ₁₈	A	A	A	A	A	A	A	A	A	A	A	A	A
Oleum (fuming sulphuric acid)		C	C	C	C	C	C	C	C	C	A	A	C	A



Telephone : 01274 - 688222
 Fax : 01274 - 688549
 E-mail : enquiries@klingeruk.co.uk

CHEMICAL RESISTANCE OF SHEET MATERIALS

Media	Formula	Klinger Quantum / Top-sil-MLI	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-graph-2000	Graphite	Top-chem-2000/2003-Soft-chem	Top-chem-2005	Top-chem-2006	Milam
Oxalic acid	HO ₂ CCO ₂ H	B	B	B	B	B	A	B	B	A	A	A	A	A
Oxygen	O ₂	A	A	A	A	B	A	A	B	A	A	A	A	A
P														
Pentane	C ₅ H ₁₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Perchloroethylene	C ₂ Cl ₄	B	B	B	B	B	B	B	B	A	A	A	A	A
Petroleum ether		A	A	A	A	A	A	A	A	A	A	A	A	A
Phenol	C ₆ H ₅ OH	C	C	C	C	C	B	C	C	A	A	A	A	A
Phosphoric acid	H ₃ PO ₄	A	A	A	A	C	A	C	A	A	A	A	A	A
Phthalic acid	(C ₆ H ₄ COOH) ₂	A	A	A	A	A	A	A	A	A	A	A	A	A
Potassium acetate	CH ₃ COOK	A	A	A	A	A	A	A	A	A	A	A	A	A
Potassium carbonate	K ₂ CO ₃	A	A	A	A	A	A	A	B	A	A	A	A	A
Potassium chlorate	KClO ₃	A	A	A	A	C	A	A	A	B	A	A	A	A
Potassium chloride	KCl	A	A	A	A	A	A	A	A	A	A	A	A	A
Potassium cyanide	KCN	A	A	A	A	A	A	A	A	A	A	A	A	A
Potassium dichromate	K ₂ Cr ₂ O ₇	A	A	A	A	B	A	A	A	B	A	A	A	A
Potassium hydroxide	KOH	B	B	B	A	B	A	B	B	A	A	C	A	A
Potassium hypochlorite	KClO	A	A	A	A	C	A	B	A	B	A	A	A	A
Potassium nitrate	KNO ₃	A	A	A	A	A	A	A	A	A	A	A	A	A
Potassium permanganate	KMnO ₄	A	A	A	A	A	A	A	A	B	A	A	A	A
Propane	C ₃ H ₈	A	A	A	A	A	A	A	A	A	A	A	A	A
Pyridine	C ₅ H ₅ N	C	C	C	C	C	C	C	C	A	A	A	A	A
S														
Salt	NaCl	A	A	A	A	A	A	A	A	A	A	A	A	A
Silicone oil		A	A	A	A	A	A	A	A	A	A	A	A	A
Soda	Na ₂ CO ₃	A	A	A	A	A	A	A	A	A	A	C	A	A
Sodium aluminate	Na ₂ AlO ₃	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium bisulphite	NaHSO ₃	A	A	A	A	B	A	A	A	A	A	A	A	A
Sodium carbonate	NaHCO ₃	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium chloride	NaCl	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium cyanide	NaCN	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium hydroxide	NaOH	B	B	B	A	B	A	B	B	A	A	C	A	A
Sodium silicate (water glass)		A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium sulphate	Na ₂ SO ₄	A	A	A	A	A	A	A	A	A	A	A	A	A
Sodium sulphide	Na ₂ S	A	A	A	A	A	A	A	A	A	A	A	A	A
Steam	H ₂ O	B	B	B	B	B	B	B	A	A	B	B	B	A
Stearic acid	C ₁₇ H ₃₅ COOH	A	A	A	A	A	A	A	A	A	A	A	A	A
Sulphur dioxide	SO ₂	C	C	C	B	C	A	C	B	A	A	A	A	A
Sulphuric acid	H ₂ SO ₄	C	C	C	C	C	A	C	C	B	A	A	C	A
T														

CHEMICAL RESISTANCE OF SHEET MATERIALS

Chemical Resistance

Media	Formula	Klinger Quantum / Top-sil-ML1	C-4400	C-4430	C-4500	C-4509	C-8200	C-4324	Top-graph-2000	Graphite	Top-chem-2000/2003 Soft-chem	Top-chem-2005	Top-chem-2006	Milam
Tetrachloroethane	$C_2H_2Cl_4$	B	B	B	B	B	B	B	B	A	A	A	A	A
Tetraline	$C_{10}H_{12}$	A	A	A	A	A	A	A	A	A	A	A	A	A
Toluene	$C_6H_5CH_3$	A	A	A	A	A	A	A	A	A	A	A	A	A
Transformer oil		A	A	A	A	A	B	A	A	A	A	A	A	A
Trichloroethylene	C_2HCl_3	B	B	B	B	B	B	B	B	A	A	A	A	A
Triethanolamine	$N(CH_2CH_2OHO)_3$	A	A	A	A	A	A	A	A	A	A	A	A	A
U														
Urea	$(NH_2)_2CO$	A	A	A	A	A	A	A	A	A	A	A	A	A
V														
Vinyl acetate	$CH_3COOC_2H_3$	A	A	A	A	A	A	A	A	A	A	A	A	A
W														
Water	H_2O	A	A	A	A	A	A	A	A	A	A	A	A	A
Water glass	Na_2SiO_3	A	A	A	A	A	A	A	A	A	A	A	A	A
X														
Xylol	$C_6H_4(CH_3)_2$	A	A	A	A	A	A	A	A	A	A	A	A	A

A - Suitable

B - Suitability depends on operating conditions

C - Not suitable



Telephone : 01274 - 688222
 Fax : 01274 - 688549
 E-mail : enquiries@klingeruk.co.uk