

Chemical Resistance Data

Chemical resistant tests have been completed on the full range of Flowcrete Industrial Flooring products. Usually this has been effected upon products, which are pigmented, light grey in colour. All test pieces were cast as 20 x 20 x 4mm coupons (grouted and sealed where appropriate) being allowed to fully cure for 10 days at 20°C prior to being tested in accordance with the schedules described below.

The results detailed in the tables below should be considered as the most extreme circumstances as the test pieces were completely immersed in the test solutions. In practice, aggressive chemicals only come into contact with the uppermost working surface of any floor system, which significantly reduces the aggressive potential of a given chemical. Additionally, these effects should be minimised in practice by good house keeping and cleaning regimes.

In the absence of specific chemical contact data or combinations of chemicals listed below please contact our technical department or laboratories who will be pleased to advise you based upon experience from previous case histories. Alternatively, our technical centre can carry out further tests.

KEY:

Chemical Resistance ratings are as follows:

Rating	Description	Explanation
5	Excellent	No deleterious action after long term contact.
3	Medium Term	Unaffected after 1 month contact but may begin to fail thereafter.
1	Short Term	Unaffected after 24 hours contact but may begin to fail thereafter.
0	Not Resistant	Attacked on contact or within 2-3 hours

PRODUCT GROUPS

Solvent Free and High Solids Epoxy Coatings

(Including high solids coatings)

Flowcoat SK
Flowcoat SF41
Flowcoat TL
Flowprime Fastcure
Flowprime
Peran ESD Primer
Flowshield SL
Flowshield HD SL
Peran ESD SL
Peran STC
Peran TCW
Hydraseal DPM

Solvent Free Epoxy Screeds

Mondéco Earth
Flowtex
Flowtex F1 Mortar
Flowtex PT
Peran STB

Note: The assessment is based on a resin rich screed where permeation by liquid chemicals is minimal. The use of a highly filled screed will significantly reduce the performances noted within the table below.

Water borne Epoxy Coatings

Peran Primer W
Flowseal EPW
Peran WW

Polyurethane Coatings

Flowseal LS
Flowseal UV
Flowseal PU Matt & Gloss

Polyurethane Screed

Flowcrete HF
Flowcrete HF Cove
Flowcrete MF
Mondéco TZ
Ultrafresh HF
Ultrafresh HF Cove
Ultrafresh HF Grout
Ultrafresh ESD HF
Ultrafresh MF
Ultrafresh ESD MF
Ultrafresh NWF

Flexible Polyurethane Coatings

Flowcoat LXP
Flowgrip HD
Flowshield LXP
Flowshield LXP HD
Flowprime LXP
Deckshield Finish

Vinyl Ester

ATB-300® system

Chemical Resistance Data

Chemical	%	Test Result						
		Solvent Free Epoxy Coating	Solvent Free Epoxy Screed	Water born epoxy coating	Polyurethane Coating	Polyurethane Screed	Flexible Polyurethane Coatings	Vinyl Ester
Acetaldehyde		0	0	0	0	3	0	5
Acetic Acid @ 20°C	5	0	0	0	1	5	0	5
Acetic Acid @ 20°C	10	0	0	0	1	5	0	
Acetic Acid @ 60°C	10	0	0	0	0	0	0	5
Acetic Acid @ 20°C	20	0	0	0	0	5	0	5
Acetic Acid @ 20°C	30	0	0	0	0	4	0	5
Acetic Acid @ 60°C	30	0	0	0	0	0	0	5
Acetic Anhydride		0	0	0	0	5	0	5
Acetone		0	0	0	0	0	0	0
Acetonitrile		0	0	0	0	5	0	0
Acetyl Chloride		0	0	0	3	5	3	2
Acrolein		0	0	0	0	5	0	0
Acrylic acid @ 20°C		0	0	0	0	5	0	5
Acrylic Methyl Ester		0	0	0	3	5	3	5
Acrylonitrile		0	0	0	0	3	0	3
Adiponitrile		3	3	0	3	5	3	0
Allyl Alcohol		0	0	0	3	5	3	5
Allyl Chloride		0	0	0	3	5	3	5
Aluminium Sulphate @ 20°C	30	5	5	5	5	5	5	5
Amines		0	0	0	3	3	3	
Ammonia 0.880 @ 20°C		0	0	0	0	5	0	5
Ammonia (aq. Sol'n) @ 20°C	40	3	1	0	3	3	3	5
Ammonium chloride @ 20°C	30	5	5	5	5	5	5	5
Ammonium Nitrate @ 20°C	30	5	5	5	5	5	5	5
Amyl Acetate (Mixed Isomers)		3	3	3	3	5	3	5
Aniline		0	0	0	0	3	0	5
Aromasol H		5	5	3	5	5	5	3
Beer		5	5	5	5	5	5	5
Benzene		0	0	0	5	5	5	5
Benzyl Alcohol		0	0	0	0	5	0	5
Benzyl Chloride		0	0	0	0	5	0	
Blood		5	5	5	5	5	5	5
Boric Acid @ 20°C	20	3	3	0	3	5	3	5
Brine	Mar-30	5	5	5	5	5	5	5
Butanol		3	3	1	1	5	1	5
Butyl Acetate		3	3	1	3	5	3	5
Butyl Acrylate		5	5	3	3	5	3	5
Butyl Benzyl Phthalate		5	5	3	3	5	3	5
Butyl Ether		5	5	5	5	5	5	5
Butyric Acid		0	0	0	0	3	0	5
Butyrolactone		0	0	0	0	3	0	3
Calcium Carbonate sol'n	Sat'd	5	5	5	5	5	5	5
Calcium Hydroxide susp'n	30	5	5	5	5	5	5	5
Caprolactam @ 20°C	20	3	3	3	5	5	5	5
Caprolactam @ 20°C	30	3	3	3	5	5	5	5

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Chemical	%	Test Result						
		Solvent Free Epoxy Coating	Solvent Free Epoxy Screed	Water born epoxy coating	Polyurethane Coating	Polyurethane Screed	Flexible Polyurethane Coatings	Vinyl Ester
Caprolactam @ 20°C	50	3	3	3	5	5	5	5
Caprolactam @ 20°C	100	3	3	3	5	5	5	5
Carbon Tetrachloride		3	3	3	5	5	5	5
Castor Oil		5	5	5	5	5	5	5
Chicken Fats		3	5	0	3	5	3	5
Chloride of Lime sol'n @ 20°C	1	5	5	3	5	5	5	5
Chlorinated Paraffin		5	5	3	3	5	3	5
Chlorobenzene		0	0	0	0	3	0	5
Chloroform		0	0	0	0	0	0	5
Chromic acid @ 20°C	1	5	3	1	5	5	5	
Chromic acid @ 20°C	5	3	3	0	3	3	1	
Chromic acid @ 20°C	10	3	3	0	3	3	1	0
Chromic acid @ 20°C	30	1	1	0	3	3	1	0
Ciopen A30		5	5	3	5	5	5	5
Ciopen A60		5	5	3	5	5	5	5
Citric acid @ 20°C	10	5	5	3	5	5	5	5
Citric acid @ 20°C	30	5	5	3	5	5	5	5
Cleaning agent for heavy duty vehicles	10	3	3	0	0	5	0	5
Cleaning agent for heavy duty vehicles – concentrate		3	3	0	0	5	0	5
Cleaning petrol		5	5	5	5	5	5	5
Coconut fatty acid		5	5	5	5	5	5	5
Coconut oil		5	5	5	5	5	5	5
Cod liver oil		5	5	5	5	5	5	5
Common Salt sol'n @ 20°C	5	5	5	5	5	5	5	5
Common Salt sol'n	Sat'd	5	5	5	5	5	5	5
Copper Sulphate sol'n @ 20°C	30	5	5	5	5	5	5	5
Cotton Seed Oil		5	5	5	5	5	5	5
Creosote		5	5	3	3	5	3	
Cresylic acid		0	0	0	0	3	0	
Crotonaldehyde		0	0	0	0	3	0	
Crude Oil		5	5	5	5	5	5	5
Cyclohexane		5	5	5	5	5	5	5
Cyclohexanol		5	5	3	5	5	5	3
Cyclohexanone		0	0	0	5	5	5	
Decanol		5	5	5	5	5	5	5
Deionized water		5	5	5	5	5	5	5
Detergent solution	3	5	5	5	5	5	5	5
Diacetone alcohol		5	5	3	5	5	5	5
Dibutyl phthalate		5	5	5	5	5	5	5
Dichlorobenzene		5	5	3	3	5	3	5
Dichloroethane		0	0	0	0	3	0	5
Dichloroethylene		0	0	0	0	5	0	5
Dichloromethane		0	0	0	0	5	0	
Dichloropropane		5	5	0	5	5	5	

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Dicyclopentadiene		3	3	3	3	5	3	
Diesel oil		5	5	5	5	5	5	5
Diethanolamine		3	3	3	3	5	3	
Diethylamine (aq. Sol'n) @ 20°C	50	0	0	0	0	3	0	5
Diethylamine (aq. Sol'n) @ 20°C	60	0	0	0	0	0	0	5
Diethylene glycol		0	0	0	0	3	0	5
Diethylene glycol monobutyl ether		3	3	0	0	3	0	5
Diethylene glycol monoethyl ether		0	0	0	0	3	0	5
Diethylene glycol monomethyl ether		0	0	0	0	3	0	5
Diethylene triamine @ 20°C	100	0	0	0	0	4	4	
Diethylether		3	3	0	0	3	0	
Di-isobutyl ketone		5	5	3	3	5	3	0
Dimethylamine (aq.sol'n) @ 20°C	40	3	3	0	0	3	0	5
Dimethylamine (aq. Sol'n) @ 20°C	50	0	0	0	0	0	0	5
2-Diethylaminoethanol		3	3	1	3	3	3	
Dimethyl formamide (DMF)		0	0	0	0	0	0	5
Di-N-butyl phthalate		5	5	5	5	5	5	5
Di-octyl phthalate		5	5	5	5	5	5	5
Dioxane		0	0	0	3	5	3	5
Dipentene		5	5	3	5	5	5	5
Di-propylene glycol		5	5	5	5	5	5	5
Dishwashing detergent	3	5	5	5	5	5	5	5
Dutrex 217 UK		5	5	0	0	5	0	5
Electrocoating		5	5	0	5	5	5	5
Epichlorohydrin		0	0	0	3	5	3	5
Ethanol @ 20°C	10	5	5	5	5	5	5	5
Ethanol @ 20°C	15	5	5	5	5	5	5	5
Ethanol @ 20°C	70	5	5	3	5	5	5	5
Ethanol @ 20°C	96	3	3	0	5	5	3	5
Ethanolamine		0	0	0	3	3	3	5
Ethyl Acetate		0	0	0	5	5	5	5
Ethyl Acrylate		0	0	0	5	5	5	5
Ethyl Benzene		3	3	0	3	3	3	5
Ethylene Diamine		0	0	0	3	3	3	
Ethyl glycol		5	5	0	3	5	3	5
Ethylene glycol		5	5	5	5	5	5	5
Ethyl glycol acetate		5	5	3	5	5	5	5
Ethylene Glycol Monobutyl ether		3	3	3	3	5	3	5
Ethylene Glycol monobutyl ether acetate		5	5	3	3	5	3	
Ethylene glycol monoethyl ether		0	0	0	0	3	0	0
Ethylene glycol monoethyl ether acetate		3	3	3	3	5	3	3
Ethylene glycol monomethyl ether		0	0	0	0	0	0	0
2-ethyl hexanol		5	5	3	3	5	3	3
2-ethyl hexyl acrylate		5	5	3	3	5	3	

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Ethylene Amine		0	0	0	0	3	0	
Fish Oil		5	5	5	5	5	5	5
Formaldehyde @ 20°C	40	5	5	0	0	5	0	
Formaldehyde @ 20°C	100	3	3	0	0	5	0	5
Formic acid @ 20°C	5	3	3	0	0	5	0	5
Formic acid @ 20°C	10	3	3	0	0	5	0	5
Formic acid @ 20°C	20	0	0	0	0	5	0	5
Formic acid @ 20°C	30	0	0	0	0	5	0	5
Formic acid @ 20°C	98	0	0	0	0	3	0	5
Furfural		0	0	0	0	3	0	0
Furfuryl alcohol		0	0	0	0	3	0	5
Glycerol		5	5	5	5	5	5	5
Grape Juice		3	3	3	3	5	3	5
Groundnut oil		5	5	3	5	5	5	5
Heptane		5	5	3	5	5	5	
Hexane		5	5	3	5	5	5	5
Hexylene glycol		5	5	3	3	5	3	5
Hydrazine Hydrate		3	3	1	0	3	0	
Hydrochloric acid @ 20°C	5	5	5	3	0	5	0	5
Hydrochloric acid @ 20°C	10	3	3	0	0	5	0	5
Hydrochloric acid @ 20°C	36	0	0	0	0	3	0	5
Hydrofluoric acid @ 20°C	20	0	0	0	0	0	0	5
Hydrogen peroxide @ 20°C	3	5	5	3	5	5	5	5
Hydrogen peroxide @ 20°C	30	3	3	1	5	5	5	5
Hydrogen sulphide		3	3	0	3	5	3	5
Iso-amyl acetate		5	5	3	5	5	5	5
Iso-amyl alcohol		3	3	1	5	5	5	
Iso-butanol		3	3	1	5	5	5	5
Iso-butyl acetate		5	5	3	5	5	5	5
Iso-butyl aldehyde		0	0	0	3	3	3	
Iso-octanol		5	5	3	5	5	5	
Iso-pentane		5	5	3	5	5	5	
Iso-phorone		3	3	0	3	3	3	5
Iso-phorone diamine @ 20°C		0	0	0	3	3	3	5
Isoprene		3	3	1	3	5	3	5
Iso-propanol		3	3	0	5	5	5	5
Jet Fuel		5	5	3	5	5	5	5
Kerosene		5	5	3	5	5	5	5
Lactic acid @ 20°C	2	5	5	3	5	5	5	5
Lactic acid @ 20°C	5	5	5	1	5	5	5	5
Lactic acid @ 20°C	30	3	3	0	3	5	3	5
Lactic acid @ 20°C	90	0	0	0	0	5	0	5
Lard		5	5	5	5	5	5	5
Lime Juice		3	3	0	3	5	3	5
Linseed fatty acid		5	5	5	5	5	5	5

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		Solvent Free Epoxy Coating	Solvent Free Epoxy Screed	Water born epoxy coating	Polyurethane Coating	Polyurethane Screed	Flexible Polyurethane Coatings	Vinyl Ester
Linseed oil		5	5	5	5	5	5	5
Maleic acid @ 20°C	30	5	5	3	5	5	5	5
Methanol		0	0	0	5	5	5	5
Methyl acetate		0	0	0	0	5	0	
Methyl acrylate		0	0	0	5	5	5	
Methylene chloride		0	0	0	0	0	0	0
Meta cresol		0	0	0	0	3	0	3
Methyl ethyl ketone (MEK)		0	0	0	0	0	0	5
Methyl glycol acetate		3	3	1	3	3	3	5
Methyl Isobutyl ketone (MIBK)		3	3	0	3	3	3	0
Methyl methacrylate		0	0	0	3	5	3	
N-methyl pyrrolidone		0	0	0	0	0	0	
Milk		5	5	5	5	5	5	5
Mineral oil		5	5	5	5	5	5	5
Molasses		5	5	5	5	5	5	5
Morpholine		0	0	0	0	3	0	5
n-amino ethyl piperazine @ 20°C		0	0	0	3	3	3	4
Naphtha (petroleum)		5	5	3	3	5	3	5
Naphtha (solvent)		5	5	3	3	5	3	5
Naphthenic acid		5	5	5	5	5	5	
n-butanol		5	5	1	3	5	3	5
n-butyl acetate		5	5	1	3	5	3	5
n-heptanol		5	5	3	5	5	5	5
n-hexanol		5	5	3	5	5	5	5
Nitric acid @ 20°C	1	5	5	3	5	5	5	5
Nitric acid @ 20°C	3	5	5	0	5	5	5	5
Nitric acid @ 20°C	5	3	3	0	5	5	5	5
Nitric acid @ 20°C	10	3	3	0	5	5	5	5
Nitric acid @ 20°C	30	0	0	0	0	5	0	5
Nitric acid @ 20°C	69	0	0	0	0	0	0	0
Nitrobenzene		0	0	0	0	0	0	5
Nitro-ethane		0	0	0	0	0	0	0
Nitro-propane (mixed isomers)		0	0	0	0	3	0	0
Nonanol		5	5	3	3	5	3	5
Nonyl phenol		5	5	3	5	5	5	5
n-pentane		5	5	3	5	5	5	5
Octanol		5	5	3	5	5	5	5
Oleic acid @ 20°C	100	3	3	0	5	5	5	5
Olive Oil		5	5	5	5	5	5	5
Ortho cresol		0	0	0	0	3	0	4
Orthophosphoric acid @ 20°C	85	0	0	0	3	5	3	5
Oxalic acid @ 20°C	2	5	5	3	3	5	3	5
Oxalic acid @ 20°C	10	3	3	0	5	5	5	5
Palm Kernel oil		5	5	5	5	5	5	5
Para cresol (aq)		0	0	0	0	3	0	0

Chemical Resistance Data

Chemical	%	Test Result						
		Solvent Free Epoxy Coating	Solvent Free Epoxy Screed	Water born epoxy coating	Polyurethane Coating	Polyurethane Screed	Flexible Polyurethane Coatings	Vinyl Ester
Paraffin		5	5	5	5	5	5	5
Paraffin wax		5	5	5	5	5	5	5
Pentane (mixed isomers)		5	5	3	5	5	5	5
Perchlorethylene		3	3	1	5	5	5	5
Perchloric acid @ 20°C	30	3	3	0	3	4	3	5
Petrol		5	5	5	5	5	5	5
Petroleum ether		5	5	3	5	5	5	5
Phenol		0	0	0	0	0	0	5
Phosphoric acid @ 20°C	5	5	5	0	5	5	5	5
Phosphoric acid @ 20°C	10	5	5	0	5	5	5	5
Phosphoric acid @ 20°C	20	5	5	0	5	5	5	5
Phosphoric acid @ 20°C	50	5	5	0	5	5	5	5
Photographic developer sol'n	10	5	5	5	5	5	5	5
Pine oil		5	5	5	5	5	5	5
Polypropylene glycol		5	5	5	5	5	5	5
Potassium dichromate @ 20°C	20	5	5	3	3	5	3	5
Potassium hydroxide sol'n @ 20°C	5	5	5	5	5	5	5	5
Potassium hydroxide sol'n @ 20°C	10	5	5	5	5	5	5	5
Potassium hydroxide sol'n @ 100°C	10	5	5	5	5	5	5	5
Potassium hydroxide sol'n @ 20°C	20	5	5	5	5	5	5	5
Potassium hydroxide sol'n @ 20°C	50	5	5	5	5	5	5	5
Pyridine		0	0	0	3	3	3	
Pyridine bases		0	0	0	3	3	3	
Seawater		5	5	5	5	5	5	5
Sec-butanol		5	5	3	3	5	3	5
Shell Rotella oil		5	5	5	5	5	5	5
Shellsol A		5	5	3	3	5	3	5
Shellsol T		5	5	3	3	5	3	
Silicone oil		5	5	5	5	5	5	5
Skydrol A500		5	5	0	5	5	5	5
Soap solution		5	5	5	5	5	5	5
Soda solution (saturated)		5	5	5	5	5	5	5
Soda solution (dilute)		5	5	5	5	5	5	5
Sodium Chloride (sat'd sol'n)		5	5	5	5	5	5	5
Sodium dichromate aq. Sol'n @ 20°C	33	5	5	3	3	5	3	5
Sodium bicarbonate (aq)		5	5	5	5	5	5	5
Sodium hydroxide @ 20°C	5	5	5	5	5	5	5	5
Sodium hydroxide @ 20°C	20	5	5	5	5	5	5	5
Sodium hydroxide @ 20°C	50	5	5	5	5	5	5	5
Sodium hydroxide @ 60°C	50	0	0	0	0	0	0	5
Sodium hypochlorite sol'n 15% available Cl @ 20°C		5	5	1	5	5	3	5
Sodium nitrate @ 20°C	20	5	5	5	5	5	5	
Solvesso 150		5	5	3	3	5	3	5
Soya bean oil		5	5	5	5	5	5	5

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Stannic chloride		5	5	3	5	5	5	5
Styrene		3	3	0	3	5	3	5
Succinic acid	10	5	5	0	0	5	0	5
Sugar solution @ 20°C	30	5	5	5	5	5	5	5
Sulphuric acid @ 20°C	5	5	5	0	3	5	3	5
Sulphuric acid @ 20°C	10	5	5	0	3	5	3	5
Sulphuric acid @ 100°C	10	0	0	0	0	0	0	5
Sulphuric acid @ 20°C	20	5	5	0	0	5	0	5
Sulphuric acid @ 20°C	30	3	3	0	0	3	0	5
Sulphuric acid @ 20°C	50	3	3	0	0	3	0	5
Sulphuric acid @ 20°C	98	0	0	0	0	0	0	0
Sunflower seed oil		5	5	5	5	5	5	5
Tall oil		5	5	5	5	5	5	5
Tall oil fatty acid		5	5	5	5	5	5	5
Tallow		5	5	5	5	5	5	
Tapwater		5	5	5	5	5	5	
Tartaric acid @ 20°C	5	5	5	0	5	5	5	5
Tartar solution @ 20°C	5	5	5	0	0	5	0	5
Teepol		5	5	3	5	5	5	5
Tert-butanol		5	5	3	3	5	3	5
Tetrachloroethylene		5	5	0	3	5	3	5
Tetrahydrofuran (THF)		0	0	0	0	3	0	
Tetrahydronaphthalene		5	5	0	3	5	3	
Titanium tetrachloride		3	3	0	3	3	3	
Toluene		0	0	0	1	1	0	5
Toluene-di-isocyanate		5	5	3	5	5	5	5
Tributyl citrate		5	5	3	5	5	5	5
1,1,1 – trichloroethane		5	5	0	0	5	0	5
Trichloroethylene		0	0	0	0	0	0	5
Tri cresyl phosphate		5	5	5	5	5	5	5
Triethanolamine		5	5	0	3	5	3	5
Triethylene glycol		5	5	3	5	5	5	5
Triethylene cetramine		0	0	0	3	5	3	5
Triolyl phosphate		5	5	5	5	5	5	5
Trixylyl phosphate		5	5	5	5	5	5	5
Urea @ 20°C	30	5	5	5	5	5	5	5
Vegetable Juice		5	5	5	5	5	5	5
Water @ 20°C		5	5	5	5	5	5	5
Water, distilled @ 100°C		5	5	5	5	5	5	5
Whisky		3	3	1	5	5	5	5
White Spirit		5	5	5	5	5	5	5
Wine		3	3	1	5	5	5	5
Xylene (mixed Isomers)		3	3	1	5	5	1	5