

## PRODUCT GROUPS

### Solvent Free and High Solids

#### Epoxy Coatings

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

#### Water borne Epoxy Coatings

Flowseal EPW  
Peran Primer W  
Peran WW

### Solvent Free Epoxy Screeds

Flowtex  
Flowtex F1 Mortar  
Flowtex PT  
Mondéco Earth  
Peran STB

### Polyurethane Coatings

Flowseal LS  
Flowseal PU Matt & Gloss  
Flowseal UV

### Flexible Polyurethane Coatings

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

### Polyurethane Screeds

Flowcrete HF  
Flowcrete HF Cove  
Flowcrete MF  
Flowcrete RT  
Flowfresh HF  
Flowfresh HF Cove  
Flowfresh HF Grout  
Flowfresh ESD HF  
Flowfresh ESD MF  
Flowfresh MF  
Flowfresh RT  
Mondéco TZ

### Vinyl Ester

ATB-300® systems

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.

#### Please Note:

- Discoloration/ staining is not classified as chemical attack if hardness is unchanged.
- Higher temperatures will reduce the chemical resistance shown in the performance table.
- Some chemicals may concentrate due to evaporation and become more aggressive.
- Mixtures of chemicals can be more aggressive than might be expected from the individual components alone.
- Solvent resistant performances, in practice, are expected to exceed the values noted in the performance table due to good housekeeping combined with evaporation.
- The chemical resistance of Epoxy screed systems will be influenced by the integrity of the surface sealer – this being dependent upon service conditions and housekeeping.
- 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 chemical resistance shown in the performance table.

**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

# 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	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

# 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
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
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

# 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
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	
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

# 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
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	
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

# 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
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
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

# 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
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
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
Perchloroethylene		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

# 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
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
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	

# 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
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