

COLOURFUL
CAR PARK
DECKING



ANTI SLIP
FINISHES



CORROSION
PROTECTION
COATINGS



FAST CURE
FLOORING



FOOD & BEVERAGE
FLOORING



TYPICAL CHEMICAL
RESISTANCE OF
FLOWCRETE FLOORING
MATERIALS



FLOWCRETE AUSTRALIA

Epoxy & Vinyl Ester Chemical Resistance Data

COLOURFUL CAR
PARK DECKING



ANTI SLIP
FINISHES



FOOD &
BEVERAGE
FLOORING

ANTISTATIC SYSTEMS
FOR ELECTRONICS
MANUFACTURING

FAST CURE
FLOORING



HEAVY
DUTY
SCREEDS



CORROSION
PROTECTION
COATINGS



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 20–25°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 not classified as chemical attack if hardness is not affected.



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.

Flowcrete flooring materials are categorised as below...

Solvent Free Epoxy Coating

Deckcoat EP
Flowcoat SF41
Flowcoat HS
Flowcoat OP
Flowflake systems
Flowshield ESD
Flowshield SL
Flowshield Quartz
Peran STC

Solvent Free Chemical Resistant Epoxy Coating

Flowcoat CR
Flowcoat SK
Flowshield CR/CR1000
Flowshield ESD CR
Flowshield SK/SK1000

Vinyl Ester

Flowchem VE systems

Water Born Epoxy Coating

Deckcoat EPW
Flowseal EPW
Flowseal ESD

CHEMICAL (tested at 20–25 °C unless stated)	%	TEST RESULT			
		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Acetaldehyde		0	3	0	5
Acetic Acid	5	0	5	0	5
Acetic Acid	10	0	5	0	5
Acetic Acid (at 60 °C)	10	0	0	0	5
Acetic Acid	20	0	3	0	5
Acetic Acid	30	0	1	0	5
Acetic Acid (at 60 °C)	30	0	0	0	5
Acetic Anhydride		0	3	0	5
Acetone		0	0	0	0
Acetonitrile		0	3	0	5
Acetyl Chloride		0	3	0	5
Acrolein		0	3	0	5
Acrylic Acid		0	3	0	5
Acrylic Methyl Ester		0	3	0	5
Acrylonitrile		0	3	0	5
Adiponitrile		1	3	0	5
Allyl Alcohol		0	3	0	5
Allyl Chloride		0	3	0	5
Alumunium Sulphate	30	3	3	0	5
Ammonia 0.880		0	3	0	5
Ammonia (aq. Sol'n)	40	3	3	0	5
Ammonium Chloride	30	3	3	3	5
Ammonium Nitrate	30	3	3	3	5
Amyl Acetate (Mixed Isomers)		3	3	3	5
Aniline		0	3	0	5
Aromasol H		3	3	1	5
Beer		5	5	5	5
Benzene		0	3	0	5
Benzyl Alcohol		0	3	0	5
Benzyl Chloride		0	3	0	5
Blood		5	5	5	5
Brine	30	3	3	3	5
Butanol		3	3	1	5
Butyl Acetate		3	3	1	5
Butyl Acrylate		3	3	1	5
Butyl Benzyl Phthalate		3	3	3	5
Butyl Ether		3	3	3	5
Butyric Acid		0	3	0	5
Calcium Carbonate Sol'n	Sat'd	3	3	3	5
Calcium Hydroxide Susp' n	30	3	3	3	5

Chemical resistance ratings are classified as follows...

5 EXCELLENT

No deleterious action after long term contact.

3 MEDIUM TERM

Unaffected after 1 month but may begin to fail thereafter.

1 SHORT TERM

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0 NOT RESISTANT

Attacked on contact or within 2-3 hours.

CHEMICAL (tested at 20–25 °C unless stated)	%	TEST RESULT			Vinyl Ester
		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	
Caprolactam	20	1	3	1	5
Caprolactam	30	1	3	1	5
Caprolactam	50	1	3	1	5
Caprolactam	100	1	3	1	5
Carbon Tetrachloride		3	5	3	5
Castor Oil		5	5	5	5
Chicken Fats		3	5	0	5
Chloride of Lime Sol'n	1	5	5	3	5
Chlorinated Paraffin		3	5	3	5
Chlorobenzene		0	3	0	5
Chloroform		0	0	0	5
Ciopen A30		3	3	1	5
Ciopen A60		3	3	1	5
Citric Acid	10	5	5	3	5
Citric Acid	30	5	5	3	5
Cleaning Agent (for Heavy Duty Vehicles)	10	3	3	0	5
Cleaning Agent (for Heavy Duty Vehicles) Concentrated		3	3	0	5
Cleaning Petrol		5	5	5	5
Coconut Fatty Acid		5	5	5	5
Coconut Oil		5	5	5	5
Cod Liver Oil		5	5	5	5
Common Salt Sol'n	5	5	5	5	5
Common Salt Sol'n	Sat'd	5	5	5	5
Copper Sulphate Sol'n	30	5	5	5	5
Cotton Seed Oil		5	5	5	5
Creosote		3	3	1	5
Cresylic Acid		0	3	0	3
Crude Oil		5	5	5	5
Cyclohexanol		5	5	3	5
Cyclohexanone		0	5	0	5
Deionized Water		5	5	5	5
Detergent Sol'n	3	5	5	5	5
Diacetone Alcohol		1	3	1	5
Dibutyl Phthalate		5	5	5	5
Dichlorobenzene		3	5	3	5
Dichloroethane		0	3	0	5
Dichloroethylene		0	3	0	5
Dichloropropane		1	3	0	5
Dicyclopentadiene		1	3	0	5

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		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Diesel Oil		3	5	1	5
Diethanolamine		3	3	3	5
Diethylamine (ad. Sol'n)	50	0	3	0	5
Diethylamine (ad. Sol'n)	60	0	0	0	5
Diethylene Glycol		0	3	0	5
Diethylene Glycol Monobutyle Ether		3	3	0	5
Diethylene Glycol Monoethyl Ether		0	3	0	5
Diethylene Glycol Monomethyl Ether		0	3	0	5
Diethylene Triamine	100	0	0	0	0
Diethylether		3	3	0	0
Di-isobutyl Ketone		1	3	1	5
Dimethylamine (aq. Sol'n)	40	1	3	0	5
Dimethylamine (aq. Sol'n)	50	0	0	0	5
2-Diethylaminoethanol		3	3	1	
Dimethyl Formamide (DMF)		0	0	0	0
Di-N-butyl Phthalate		5	5	5	5
Di-octyl Phthalate		5	5	5	5
Dipentene		5	5	3	5
Di-propylene Glycol		5	5	5	5
Dishwashing Detergent	3	5	5	5	5
Dutrex 217 UK		3	5	0	5
Electrocoating		5	5	0	5
Epichlorohydrin		0	3	0	5
Ethanol	10	5	5	5	5
Ethanol	15	5	5	5	5
Ethanol	70	3	3	1	5
Ethanol	96	0	1	0	5
Ethanolamine		0	0	0	5
Ethyl Acetate		0	0	0	5
Ethyl Acrylate		0	0	0	5
Ethyl Benzene		3	3	0	5
Ethyl Glycol		5	5	0	5
Ethylene Glycol		5	5	5	5
Ethyl Glycol Acetate		5	5	3	5
Ethylene Glycol Monomethyl Ether		0	0	0	0
Fish Oil		5	5	5	5
Formaldehyde	40	3	5	0	5
Formaldehyde	100	1	3	0	5
Formic Acid	5	3	3	0	5
Formic Acid	10	3	3	0	5

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		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Formic Acid	20	0	0	0	5
Formic Acid	30	0	0	0	5
Formic Acid	98	0	0	0	5
Furfuryl Alcohol		0	3	0	5
Glycerol		5	5	5	5
Grape Juice		3	5	3	5
Groundnut Oil		3	5	3	5
Heptane		3	5	3	5
Hexane		3	5	3	5
Hexylene Glycol		3	5	3	5
Hydrochloric Acid	5	3	5	0	5
Hydrochloric Acid	10	3	3	0	5
Hydrochloric Acid	36	0	3	0	5
Hydrochloric Acid	20	0	0	0	5
Hydrogen Peroxide	3	1	5	0	5
Hydrogen Peroxide	30	0	0	0	5
Hydrogen Sulphide		3	3	0	5
Iso-amyl Acetate		5	5	3	5
Iso-butanol		1	3	1	5
Iso-butyl Acetate		3	3	1	5
Iso-phorone		1	3	0	5
Iso-phorone Diamine		0	3	0	5
Isoprene		1	3	1	5
Iso-propanol		1	3	0	5
Jet Fuel		1	5	0	5
Kerosene		1	5	0	5
Lactic Acid	2	5	5	3	5
Lactic Acid	5	1	3	1	5
Lactic Acid	30	0	3	0	5
Lactic Acid	90	0	1	0	5
Lard		5	5	5	5
Linseed Fatty Acid		5	5	5	5
Linseed Oil		5	5	5	5
Maleic Acid	30	3	5	3	5
Methanol		0	1	0	5
Methylene Chloride		0	0	0	0
Methyl Ethyl Ketone (MEK)		0	0	0	5
Methyl Glycol Acetate		1	3	1	5
Methyl Isobutyl Ketone (MIBK)		0	3	0	5
Methyl Methacrylate		0	5	0	5

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		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Milk		5	5	5	5
Mineral Oil		5	5	5	5
Molasses		5	5	5	5
Morpholine		0	3	0	5
Naptha (Petroleum)		1	3	1	5
Naptha (Solvent)		1	3	0	5
Napthenic Acid		5	5	5	5
n-butanol		5	5	1	5
n-butyl Acetate		5	5	1	5
n-heptanol		5	5	3	5
n-hexanol		5	5	3	5
Nitric Acid	1	5	5	1	5
Nitric Acid	3	5	5	0	5
Nitric Acid	5	0	1	0	5
Nitric Acid	10	0	1	0	5
Nitric Acid	20	0	1	0	5
Nitric Acid	65	0	0	0	0
Nitrobenzene		0	0	0	5
Nitro-ethane		0	0	0	0
Nonanol		3	5	3	5
Nonyl Phenol		3	5	3	5
n-pentane		3	5	3	5
Octanol		3	5	3	5
Oleic Acid		3	3	0	5
Olive Oil		5	5	5	5
Orthophosphoric Acid	85	0	3	0	5
Oxalic Acid	2	3	5	1	5
Oxalic Acid	10	1	3	0	5
Palm Kernel Oil		5	5	5	5
Paraffin		5	5	5	5
Paraffin Wax		5	5	5	5
Pentane (Mixed Isomers)		3	5	3	5
Perchloroethylene		3	3	1	5
Perchloric Acid	30	1	3	0	5
Petrol		1	5	0	5
Petroleum Ether		1	5	1	5
Phenol		0	0	0	5
Phosphoric Acid	5	5	5	0	5
Phosphoric Acid	10	3	5	0	5
Phosphoric Acid	50	1	3	0	5

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		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Photographic Developer Sol'n	10	5	5	5	5
Pine Oil		5	5	5	5
Polypropylene Glycol		5	5	5	5
Potassium Dichromate	20	5	5	3	5
Potassium Hydroxide Sol'n	5	5	5	5	5
Potassium Hydroxide Sol'n	10	5	5	5	5
Potassium Hydroxide Sol'n	20	3	5	3	5
Potassium Hydroxide Sol'n	50	1	5	0	5
Seawater		5	5	5	5
Sec-butanol		3	5	3	5
Shell Rotella Oil		5	5	5	5
Shellsol A		3	5	3	5
Silicone Oil		5	5	5	5
Skydrol A500		1	5	0	5
Soap Solution		5	5	5	5
Soda Solution (Dilute)		5	5	5	5
Sodium Chloride (sat'd Sol'n)		5	5	5	5
Sodium Dichromate (aq. Sol'n)	33	3	5	3	5
Sodium Bicarbonate (aq.)		5	5	5	5
Sodium Hydroxide	5	5	5	5	5
Sodium Hydroxide	20	3	5	3	5
Sodium Hydroxide	50	1	5	0	5
Sodium Hydroxide @ 60°C	50	0	0	0	5
Sodium Hypochlorite Sol'n 15% available Cl		3	5	0	5
Sodium Nitrate	20	5	5	5	5
Solvesso 150		3	5	3	5
Soya Bean Oil		5	5	5	5
Stannic Chloride		5	5	3	5
Styrene		1	3	0	5
Succinic Acid	10	1	3	0	5
Sugar Solution	30	5	5	5	5
Sulphuric Acid	5	3	5	0	5
Sulphuric Acid	10	3	5	0	5
Sulphuric Acid @ 100°C	10	0	0	0	5
Sulphuric Acid	20	1	3	0	5
Sulphuric Acid	30	0	3	0	5
Sulphuric Acid	50	0	3	0	5
Sulphuric Acid	98	0	0	0	0
Sunflower Seed Oil		5	5	5	5
Tall Oil		5	5	5	5

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		Solvent Free Epoxy Coating	Solvent Free Chemical Resistant Epoxy Coating	Water Born Epoxy Coating	Vinyl Ester
Tall Oil Fatty Acid		5	5	5	5
Tapwater		5	5	5	5
Tartaric Acid	5	3	5	0	5
Tartar Sol'n	5	3	5	0	5
Teepol		3	5	3	5
Tert-butanol		3	5	3	5
Tetrachloethylene		3	5	0	5
Tetrahydronaphthalene		3	5	0	5
Toluene		0	1	0	5
Toluene-di-isocyanate		1	3	0	5
Tributyl Citrate		5	5	3	5
1,1,1 - Trichloroethane		3	5	0	5
Trichloroethane		0	0	0	5
Triethanolamine		3	5	0	5
Triethylene Glycol		3	5	1	5
Triethylene Cetramine		0	3	0	5
Urea	30	5	5	5	5
Vegetable Juice		5	5	5	5
Water		5	5	5	5
Water, distilled @ 100°C		5	5	5	5
Whisky		3	3	1	5
White Spirit		0	1	0	5
Wine		3	3	1	5
Xylene (Mixed Isomers)		0	1	0	5

Any recommendation or suggestion relating to the use of the products made by Flowcrete, whether in its technical literature, or in response to a specific enquiry, or otherwise, is based upon data believed to be reliable, however the products and information are intended for use by Customers having requisite skill and know-how in the industry and therefore it is for the Customer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that the Customer has done so at its sole discretion and risk.

Note: The data contained herein is based on laboratory tests performed under carefully controlled conditions. No warranty can be expressed or implied regarding the accuracy of this information, as it will apply to actual operational use. Plant operations vary widely, and the individual results obtained are affected by the specific conditions encountered, which are beyond our control.

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