



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

Polyurethane Chemical Resistance Data

COLOURFUL CAR  
PARK DECKING



ANTI SLIP  
FINISHES



FOOD &  
BEVERAGE  
FLOORING

ANTISTATIC SYSTEMS  
FOR ELECTRONICS  
MANUFACTURING

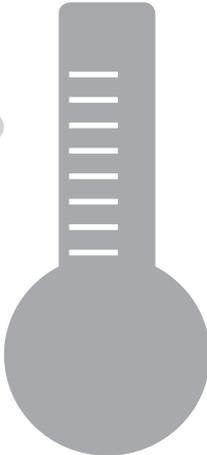
FAST CURE  
FLOORING



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...

## Polyurethane Coating

Flowseal PU Matt  
Flowseal HTS  
Flowseal UV  
Flowseal UV Satin  
Deckshield UV

## Water Born Polyurethane Coating

Deckshield UV (WB)  
Flowseal WB  
Flowseal WB Satin  
Flowseal Satin

## Polyurethane Screed

Flowcrete HF  
Flowcrete HF Cove  
Flowcrete MF  
Flowcrete RT  
Flowfresh Cove  
Flowfresh ESD HF  
Flowfresh ESD MF  
Flowfresh MF  
Flowfresh RT  
Flowfresh SR  
Flowfresh SRQ  
Flowshield PU

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

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**

Unaffected after 24 hours but may begin to fail thereafter.

**0 NOT RESISTANT**

Attacked on contact or within 2-3 hours.

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

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CHEMICAL (tested at 20–25 °C unless stated)	%	TEST RESULT		
		Polyurethane Coating	Water Borne Polyurethane Coating	Polyurethane Screed
Diethylamine (ad. Sol'n)	50	0	0	3
Diethylamine (ad. Sol'n)	60	0	0	0
Diethylene Glycol		0	0	3
Diethylene Glycol Monobutyle Ether		0	0	3
Diethylene Glycol Monoethyl Ether		0	0	3
Diethylene Glycol Monomethyl Ether		0	0	3
Diethylene Triamine	100	0	0	0
Diethylether		0	0	3
Di-isobutyl Ketone		1	1	3
Dimethylamine (aq. Sol'n)	40	0	0	3
Dimethylamine (aq. Sol'n)	50	0	0	0
2-Diethylaminoethanol		3	3	3
Dimethyl Formamide (DMF)		0	0	0
Di-N-butyl Phthalate		5	5	5
Di-octyl Phthalate		5	5	5
Dipentene		5	5	5
Di-propylene Glycol		5	5	5
Dishwashing Detergent	3	5	5	5
Dutrex 217 UK		0	0	5
Electrocoating		5	5	5
Epichlorohydrin		3	3	5
Ethanol	10	5	5	5
Ethanol	15	5	5	5
Ethanol	70	3	1	5
Ethanol	96	1	0	3
Ethanolamine		3	1	3
Ethyl Acetate		5	3	5
Ethyl Acrylate		5	3	5
Ethyl Benzene		3	1	3
Ethyl Glycol		3	1	5
Ethylene Glycol		5	5	5
Ethyl Glycol Acetate		5	5	5
Ethylene Glycol Monomethyl Ether		0	0	0
Fish Oil		5	5	5
Formaldehyde	40	0	0	5
Formaldehyde	100	0	0	3
Formic Acid	5	0	0	5
Formic Acid	10	0	0	5
Formic Acid	20	0	0	3
Formic Acid	30	0	0	3
Formic Acid	98	0	0	1

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CHEMICAL (tested at 20–25 °C unless stated)	%	TEST RESULT		
		Polyurethane Coating	Water Borne Polyurethane Coating	Polyurethane Screed
Furfuryl Alcohol		0	0	3
Glycerol		5	5	5
Grape Juice		3	3	5
Groundnut Oil		5	5	5
Heptane		5	5	5
Hexane		5	5	5
Hexylene Glycol		3	3	5
Hydrochloric Acid	5	3	1	5
Hydrochloric Acid	10	3	1	5
Hydrochloric Acid	36	1	0	3
Hydrochloric Acid	20	0	0	0
Hydrogen Peroxide	3	5	1	5
Hydrogen Peroxide	30	1	0	1
Hydrogen Sulphide		3	1	5
Iso-amyl Acetate		5	3	5
Iso-butanol		3	1	5
Iso-butyl Acetate		3	1	3
Iso-phorone		1	1	3
Iso-phorone Diamine		1	1	3
Isoprene		3	3	5
Iso-propanol		1	0	5
Jet Fuel		5	5	5
Kerosene		5	5	5
Lactic Acid	2	5	5	5
Lactic Acid	5	3	3	3
Lactic Acid	30	0	0	3
Lactic Acid	90	0	0	1
Lard		5	5	5
Linseed Fatty Acid		5	5	5
Linseed Oil		5	5	5
Maleic Acid	30	3	3	5
Methanol		1	0	3
Methylene Chloride		0	0	0
Methyl Ethyl Ketone (MEK)		0	0	0
Methyl Glycol Acetate		1	1	3
Methyl Isobutyl Ketone (MIBK)		0	0	3
Methyl Methacrylate		3	3	5
Milk		5	5	5
Mineral Oil		5	5	5
Molasses		5	5	5
Morpholine		0	0	3

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		Polyurethane Coating	Water Borne Polyurethane Coating	Polyurethane Screed
Naptha (Petroleum)		3	3	3
Naptha (Solvent)		3	3	3
Napthenic Acid		5	5	5
n-butanol		3	3	5
n-butyl Acetate		3	3	5
n-heptanol		5	3	5
n-hexanol		5	3	5
Nitric Acid	1	5	3	5
Nitric Acid	3	5	3	5
Nitric Acid	5	1	0	1
Nitric Acid	10	0	0	1
Nitric Acid	20	0	0	1
Nitric Acid	65	0	0	0
Nitrobenzene		0	0	0
Nitro-ethane		0	0	0
Nonanol		3	3	5
Nonyl Phenol		5	5	5
n-pentane		5	5	5
Octanol		5	5	5
Oleic Acid		5	3	5
Olive Oil		5	5	5
Orthophosphoric Acid	85	3	1	3
Oxalic Acid	2	3	1	5
Oxalic Acid	10	1	1	5
Palm Kernel Oil		5	5	5
Paraffin		5	5	5
Paraffin Wax		5	5	5
Pentane (Mixed Isomers)		3	3	5
Perchlorethylene		3	3	5
Perchloric Acid	30	1	1	3
Petrol		0	5	5
Petroleum Ether		0	5	5
Phenol		0	0	0
Phosphoric Acid	5	5	3	5
Phosphoric Acid	10	5	3	5
Phosphoric Acid	50	3	1	3
Photographic Developer Sol'n	10	5	5	5
Pine Oil		5	5	5
Polypropylene Glycol		5	5	5
Potassium Dichromate	20	3	3	5
Potassium Hydroxide Sol'n	5	5	5	5

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		Polyurethane Coating	Water Borne Polyurethane Coating	Polyurethane Screenshot
Potassium Hydroxide Sol'n	10	5	5	5
Potassium Hydroxide Sol'n	20	5	3	5
Potassium Hydroxide Sol'n	50	5	3	5
Seawater		5	5	5
Sec-butanol		3	3	5
Shell Rotella Oil		5	5	5
Shellsol A		3	3	5
Silicone Oil		5	5	5
Skydrol A500		5	5	5
Soap Solution		5	5	5
Soda Solution (Dilute)		5	5	5
Sodium Chloride (sat'd Sol'n)		5	5	5
Sodium Dichromate (aq. Sol'n)	33	3	3	5
Sodium Bicarbonate (aq.)		5	5	5
Sodium Hydroxide	5	5	5	5
Sodium Hydroxide	20	5	5	5
Sodium Hydroxide	50	5	3	5
Sodium Hydroxide @ 60°C	50	0	0	0
Sodium Hypochlorite Sol'n 15% available Cl		5	3	5
Sodium Nitrate	20	5	5	5
Solvesso 150		3	3	5
Soya Bean Oil		5	5	5
Stannic Chloride		5	5	5
Styrene		3	1	3
Succinic Acid	10	0	0	3
Sugar Solution	30	5	5	5
Sulphuric Acid	5	3	1	5
Sulphuric Acid	10	3	1	5
Sulphuric Acid @ 100°C	10	0	0	0
Sulphuric Acid	20	3	1	5
Sulphuric Acid	30	1	0	3
Sulphuric Acid	50	1	0	3
Sulphuric Acid	98	0	0	0
Sunflower Seed Oil		5	5	5
Tall Oil		5	5	5
Tall Oil Fatty Acid		5	5	5
Tapwater		5	5	5
Tartaric Acid	5	5	5	5
Tartar Sol'n	5	0	0	5
Teepol		5	5	5
Tert-butanol		3	3	5

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Tetrachloethylene		3	1	5
Tetrahydronaphthalene		3	1	5
Toluene		0	0	1
Toluene-di-isocyanate		1	0	3
Tributyl Citrate		5	5	5
1,1,1 - Trichloroethane		0	0	5
Trichloroethane		0	0	0
Triethanolamine		3	3	5
Triethylene Glycol		5	3	5
Triethylene Cetramine		3	3	5
Urea	30	5	5	5
Vegetable Juice		5	5	5
Water		5	5	5
Water, distilled @ 100°C		5	5	5
Whisky		5	5	5
White Spirit		1	0	3
Wine		5	5	5
Xylene (Mixed Isomers)		1	0	3

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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