Denpur™

CHEMICAL RESISTANCE DATA

DenCoat™ Tomorrows Floors Today

Chemical resistant tests have been completed on the full range of DENCOAT™ 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.

Product Datasheet

Please Note:

- Discoloration 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

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Acetaldehyde		0	3
Acetic Acid at 20°C	5	1	5
Acetic Acid at 20°C	10	1	5
Acetic Acid at 60°C	10	0	0
Acetic Acid at 20°C	20	0	5
Acetic Acid at 20°C	30	0	4
Acetic Acid at 60°C	30	0	0
Acetic Anhydride		0	5
Acetone		0	0
Acetonitrile		0	5
Acetyl Chloride		3	5
Acrolein		0	5
Acrylic acid at 20°C		0	5
Acrylic Methyl Ester		3	5
Acrylonitrile		0	3
Adiponitrile		3	5
Allyl Alcohol		3	5
Allyl Chloride		3	5
Aluminium Sulphate at 20°C	30	5	5
Amines		3	3
Ammonia 0.880 at 20°C		0	5
Ammonia (aq. Sol'n) at 20°C	40	3	3
Ammonium chloride at 20°C	30	5	5
Ammonium Nitrate at 20°C	30	5	5
Amyl Acetate (Mixed Isomers)		3	5
Aniline		0	3
Aromasol H		5	5
Beer		5	5
Benzene		5	5
Benzyl Alcohol		0	5
Benzyl Chloride		0	5
Blood		5	5
Boric Acid at 20°C	20	3	5
Brine	30	5	5
Butanol		1	5
Butyl Acetate		3	5
Butyl Acrylate		3	5
Butyl Benzyl Phthalate		3	5
Butyl Ether		5	5
Butyric Acid		0	3

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Butyrolactone		0	3
Calcium Carbonate sol'n	Sat'd	5	5
Calcium Hydroxide susp'n	30	5	5
Caprolactam at 20°C	20	5	5
Caprolactam at 20°C	30	5	5
Caprolactam at 20°C	50	5	5
Caprolactam at 20°C	100	5	5
Carbon Tetrachloride		5	5
Castor Oil		5	5
Chicken Fats		3	5
Chloride of Lime sol'n at 20°C	1	5	5
Chlorinated Paraffin		3	5
Chlorobenzene		0	3
Chloroform		0	0
Chromic acid at 20°C	1	5	5
Chromic acid at 20°C	5	3	3
Chromic acid at 20°C	10	3	3
Chromic acid at 20°C	30	3	3
Ciopen A30		5	5
Ciopen A60		5	5
Citric acid at 20°C	10	5	5
Citric acid at 20°C	30	5	5
Cleaning agent for heavy duty vehicles	10	0	5
Cleaning agent for heavy duty vehicles – concentrate		0	5
Cleaning petrol		5	5
Coconut fatty acid		5	5
Coconut oil		5	5
Cod liver oil		5	5
Common Salt sol'n at 20°C	5	5	5
Common Salt sol'n	Sat'd	5	5
Copper Sulphate sol'n at 20°C	30	5	5
Cotton Seed Oil		5	5
Creosote		3	5
Cresylic acid		0	3
Crotonaldehyde		0	3
Crude Oil		5	5
Cyclohexane		5	5
Cyclohexanol		5	5
Cyclohexanone		5	5
Decanol		5	5

Chemical	%	Test Result: Polyurethane Coating	Test Result: Polyurethane Screed
Deionized water		5	5
Detergent solution	3	5	5
Diacetone alcohol		5	5
Dibutyl phthalate		5	5
Dichlorobenzene		3	5
Dichloroethane		0	3
Dichloroethylene		0	5
Dichloromethane		0	5
Dichloropropane		5	5
Dicyclopentadiene		3	5
Diesel oil		5	5
Diethanolamine		3	5
Diethylamine (aq. Sol'n) - 20°C	50	0	3
Diethylamine (aq. Sol'n) - 20°C	60	0	0
Diethylene glycol		0	3
Diethylene glycol monobutyl ether		0	3
Diethylene glycol monoethyl ether		0	3
Diethylene glycol monomethyl ether		0	3
Diethylene triamine at 20°C	100	0	4
Diethylether		0	3
Di-isobutyl ketone		3	5
Dimethylamine (aq.sol'n) - 20°C	40	0	3
Dimethylamine (aq. Sol'n) - 20°C	50	0	0
2-Diethylaminoethanol		3	3
Dimethyl formamide (DMF)		0	0
Di-N-butyl phthalate		5	5
Di-octyl phthalate		5	5
Dioxane		3	5
Dipentene		5	5
Di-propylene glycol		5	5
Dishwashing detergent	3	5	5
Dutrex 217 UK		0	5
Electrocoating		5 5	
Epichlorohydrin		3	5
Ethanol at 20°C	10	5	5
Ethanol at 20°C	15	5	5
Ethanol at 20°C	70	5	5
Ethanol at 20°C	96	5	5
Ethanolamine		3	3
Ethyl Acetate		5	5

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Ethyl Acrylate		5	5
Ethyl Benzene		3	3
Ethylene Diamine		3	3
Ethyl glycol		3	5
Ethylene glycol		5	5
Ethyl glycol acetate		5	5
Ethylene Glycol Monobutyl ether		3	5
Ethylene Glycol monobutyl ether acetate		3	5
Ethylene glycol monoethyl ether		0	3
Ethylene glycol monoethyl ether acetate		3	5
Ethylene glycol monomethyl ether		0	0
2-ethyl hexanol		3	5
2-ethyl hexyl acrylate		3	5
Ethylene Amine		0	3
Fish Oil		5	5
Formaldehyde at 20°C	40	0	5
Formaldehyde at 20°C	100	0	5
Formic acid at 20°C	5	0	5
Formic acid at 20°C	10	0	5
Formic acid at 20°C	20	0	5
Formic acid at 20°C	30	0	5
Formic acid at 20°C	98	0	3
Furfural		0	3
Furfuryl alcohol		0	3
Glycerol		5	5
Grape Juice		3	5
Groundnut oil		5	5
Heptane		5	5
Hexane		5	5
Hexylene glycol		3	5
Hydrazine Hydrate		0	3
Hydrochloric acid at 20°C	5	0	5
Hydrochloric acid at 20°C	10	0	5
Hydrochloric acid at 20°C	36	0	3
Hydrochloric acid at 20°C	20	0	0
Hydrogen peroxide at 20°C	3	5	5
Hydrogen peroxide at 20°C	30	5	5
Hydrogen sulphide		3	5
Iso-amyl acetate		5	5
Iso-amyl alcohol		5	5

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Iso-butanol		5	5
Iso-butyl acetate		5	5
Iso-butyl aldehyde		3	3
Iso-octanoll		5	5
Iso-pentane		5	5
Iso-phorone		3	3
Iso-phorone diamine at 20°C		3	3
Isoprene		3	5
Iso-propanol		5	5
Jet Fuel		5	5
Kerosene		5	5
Lactic acid at 20°C	2	5	5
Lactic acid at 20°C	5	5	5
Lactic acid at 20°C	30	3	5
Lactic acid at 20°C	90	0	5
Lard		5	5
Lime Juice		3	5
Linseed fatty acid		5	5
Linseed oil		5	5
Maleic acid at 20°C	30	5	5
Methanol		5	5
Methyl acetate		0	5
Methyl acrylate		5	5
Methylene chloride		0	0
Meta cresol		0	3
Methyl ethyl ketone (MEK)		0	0
Methyl glycol acetate		3	3
Methyl Isobutyl ketone (MIBK)		3	3
Methyl methacrylate		3	5
N-methyl pyrollidone		0	0
Milk		5	5
Mineral oil		5	5
Molasses		5	5
Morpholine		0	3
n-amino ethyl piperazine at 20°C		3	3
Naphtha (petroleum)		3	5
Naphtha (solvent)		3	5
Naphthenic acid		5	5
n-butanol		3	5
n-butyl acetate		3	5

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
n-heptanol		5	5
n-hexanol		5	5
Nitric acid at 20°C	1	5	5
Nitric acid at 20°C	3	5	5
Nitric acid at 20°C	5	5	5
Nitric acid at 20°C	10	5	5
Nitric acid at 20°C	30	0	5
Nitric acid at 20°C	69	0	0
Nitrobenzene		0	0
Nitro-ethane		0	0
Nitro-propane (mixed isomers)		0	3
Nonanol		3	5
Nonyl phenol		5	5
n-pentane		5	5
Octanol		5	5
Oleic acid at 20°C	100	5	5
Olive Oil		5	5
Ortho cresol		0	3
Orthophosphoric acid at 20°C	85	3	5
Oxalic acid at 20°C	2	3	5
Oxalic acid at 20°C	10	5	5
Palm Kernel oil		5	5
Para cresol (aq)		0	3
Paraffin		5	5
Paraffin wax		5	5
Pentane (mixed isomers)		5	5
Perchlorethylene		5	5
Perchloric acid at 20°C	30	3	4
Petrol		5	5
Petroleum ether		5	5
Phenol		0	0
Phosphoric acid at 20°C	5	5	5
Phosphoric acid at 20°C	10	5	5
Phosphoric acid at 20°C	20	5	5
Phosphoric acid at 20°C	50	5	5
Photographic developer sol'n	10	5	5
Pine oil		5	5
Polypropylene glycol		5	5
Potassium dichromate at 20°C	20	3	5
Potassium hydroxide sol'n at 20°C	5	5	5

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Potassium hydroxide sol'n at 20°C	10	5	5
Potassium hydroxide sol'n at 100°C	10	5	5
Potassium hydroxide sol'n at 20°C	20	5	5
Potassium hydroxide sol'n at 20°C	50	5	5
Pyridine		3	3
Pyridine bases		3	3
Seawater		5	5
Sec-butanol		3	5
Shell Rotella oil		5	5
Shellsol A		3	5
Shellsol T		3	5
Silicone oil		5	5
Skydrol A500		5	5
Soap solution		5	5
Soda solution (saturated)		5	5
Soda solution (dilute)		5	5
Sodium Chloride (sat'd sol'n)		5	5
Sodium dichromate aq. Sol'n - 20°C	33	3	5
Sodium bicarbonate (aq)		5	5
Sodium hydroxide at 20°C	5	5	5
Sodium hydroxide at 20°C	20	5	5
Sodium hydroxide at 20°C	50	5	5
Sodium hydroxide at 60°C	50	0	0
Sodium hypochlorite sol'n 15% available Cl at 20°C		5	5
Sodium nitrate at 20°C	20	5	5
Solvesso 150		3	5
Soya bean oil		5	5
Stannic chloride		5	5
Styrene		3	5
Succinic acid	10	0	5
Sugar solution at 20°C	30	5	5
Sulphuric acid at 20°C	5	3	5
Sulphuric acid at 20°C	10	3	5
Sulphuric acid at 100°C	10	0	0
Sulphuric acid at 20°C	20	0	5
Sulphuric acid at 20°C	30	0	3
Sulphuric acid at 20°C	50	0	3
Sulphuric acid at 20°	98	0	0
Sunflower seed oil		5	5
Tall oil		5	5

		Test Result	
Chemical	**%**	**Polyurethane Coating**	**Polyurethane Screed**
Tall oil fatty acid		5	5
Tallow		5	5
Tapwater		5	5
Tartaric acid at 20°C	5	5	5
Tartar solution at 20°C	5	0	5
Teepol		5	5
Tert-butanol		3	5
Tetrachloroethylene		3	5
Tetrahydrofuran (THF)		0	3
Tetrahydronaphthalene		3	5
Titanium tetrachloride		3	3
Toluene		1	1
Toluene-di-isocyanate		5	5
Tributyl citrate		5	5
1,1,1 – trichloroethane		0	5
Trichloroethylene		0	0
Tri cresyl phosphate		5	5
Triethanolamine		3	5
Triethylene glycol		5	5
Triethylene cetramine		3	5
Triolyl phosphate		5	5
Trixylyl phosphate		5	5
Urea at 20°C	30	5	5
Vegetable Juice		5	5
Water at 20°C		5	5
Water, distilled at 100°C		5	5
Whisky		5	5
White Spirit		5	5
Wine		5	5
Xylene (mixed Isomers)		5	5

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