Denpox™

CHEMICAL RESISTANCE DATA

DenCoat™ Tomorrow's 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 4 mm 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	Explanation
+ Resistant	No changes after 4 weeks.
0 Slight surface attack	Short-term exposure is possible (1-4 hours). By longer exposure the layer will be damaged.
- Not resistant	Even short-term exposure is damaging.

The resistance should always be read from the column layer if available. This is due to the fact that chemicals and especially organic compounds by long term exposure can penetrate the topcoat by diffusion. This process depends on the thickness of the topcoat layer, however long term resistance is not reachable if the layer is not resistant.

		Test Result	
Chemical	**%**	**Layer**	**Coating**
Acetic acid	1%	+	0
Acetic acid	5%	+	-
Acetic acid	10%	+	-
Acetic acid	30%	0	-
Acetic acid	60%	0	-
Acetic acid	80%	-	-
Acetone		-	-
Aluminium trihydrate		+	+
Amines, i.g. dipropylene triamine		-	-
Ammonia	10%	+	0
Ammonia	25%	+	0
Antifreeze fluid (glycol-containing)		+	+
Aromatic hydrocarbons		+	0
Bear		+	+
Benzen		+	0
Boric acid at 30°C	3%	+	0
Butanol		+	0
Butyl acetate		0	-
Butyric acid	1%	+	0
Castor oil		+	+
Chalk		+	+
Chlorbenzene		0	+
Chloroform		-	-
Chromic acid	5%	+	0
Chromic acid	10%	+	0
Chromic acid	20%	+	0
Chromic acid	40%	+	0
Citric acid	30%	+	+
Codliver oil		+	+
Crude oil		+	+
Cyclohexane		+	+
Developing bath (1 : 10 in water)		+	+
Dibutyl ether		+	+
Dibutyl phthalate		+	+
Diesel fuel		+	+
Dioctyl phthalate		+	+
Ethanol		-	-
Ethanol	10%	0	+
Ethyl acetate		0	-
Ethylene glycol		+	-
Fatty acid (from tall oil)		+	+
Formaldehyde	35%	+	+

		Test Result	
Chemical	**%**	**Layer**	**Coating**
Gasoline		+	+
Glycerol		+	+
Grape juice, 20 °C		+	+
Grape juice, 80 °C		+	+
Heptane		+	+
Hexane		+	+
Hydrochloric acid	5%	+	+
Hydrochloric acid	10%	+	+
Hydrochloric acid	20%	+	+
Hydrochloric acid	30%	+	-
Hydrochloric acid	37%	0	-
Hydrogen peroxide	3%	+	+
Isopropanol		0	-
Jet fuel		+	+
Lactic acid	1%	+	0
Lard		+	+
Linseed oil		+	+
Lubricants		+	+
Methanol		-	-
Methylene chloride		-	-
Methylisobutylketone		0	-
Milk		+	+
Mineral oil		+	+
Molasses, high-viscous		+	+
Nitric acid	5%	+	+
Nitric acid	10%	0	-
Nitric acid	20%	0	-
Nitric acid	30%	0	-
Nitric acid	40%	-	-
2-Nitropropane		0	0
Olive oil		+	+
Oxalic acid		+	-
Perchloroethane		+	0
Petroleum		+	+
Phenol		-	-
Phosphoric acid	5%	+	-
Phosphoric acid	10%	+	-
Phosphoric acid	20%	0	-
Phosphoric acid	45%	0	-
Phosphoric acid, conc.		-	-
Plant oils, general		+	+
Potassium hydroxide		+	+

		Test Result	
Chemical	**%**	**Layer**	**Coating**
Propyl acetate		0	-
Propylalkohol		0	-
Silicon oil		+	+
Snow		+	+
Sodium carbonate		+	+
Sodium chloride	3%	+	+
Sodium chloride	30%	+	+
Sodium chloride, conc.		+	+
Sodium hydroxide	10%	+	+
Sodium hydroxide	30-40%	+	+
Sodium hydroxide	50%, 50°C	+	+
Sodium hypochlorite	16%,+12%NaCl	0	0
Styrene		0	-
Sulfuric acid	5%	+	0
Sulfuric acid	10%	+	0
Sulfuric acid	20%	+	0
Sulfuric acid	30%	0	0
Sulfuric acid	60%	0	0
Sulfuric acid	78%		
Sulfuric acid	80%	-	-
Sulfuric acid, conc.		-	-
Tetrachloromethane		+	-
Toluene		-	-
Transmission fluid (Aerosafe 2300)		+	0
Transmission fluid (Skydrol B 500)		+	0
Trichloroethylene		-	-
Turpentine		+	0
Varnish diluent (gasoline)		+	+
Vegetable fluids		+	+
Waste water		+	0
Water + 5% detergent		+	+
Water, 100°C		+	+
Water, dist.		+	+
Whiskey		-	-
Wine		+	+
Xylene		+	0

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