Chemical Resistance Guide for Flowchem EPN

This guide is designed to aid in the proper selection of material for every job application. Exposure to over 250 chemicals are rated for specific temperature ranges. Due to the number of variables involved in each application, it is recommended that the Technical Department be contacted for specific recommendations. This Chemical Resistance Guide is intended only as a guideline and does not constitute an implied warranty for the use of our materials under the environments indicated.

Instructions for use
The chemical resistance data contained in this guide has been summarized from in-depth laboratory analysis and actual job performance. The rating system shown below is designed to consider most application variables. Choose the closest chart temperature, 38˚C or 66˚C. The rating gives the maximum service for a chemical at that temperature.

Please Note:

- Discoloration 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.

Chemical resistance key
I = Resistant to Immersion
S = Resistant to Splashes or Spills
NR = Not Recommended

Notes:
- For immersion conditions over 66˚C, contact Technical Department.
- For solutions with no concentrations given, the rating is for all possible concentrations.

* Indicates chemicals where carbon filled systems are required. Consult Technical Department.

CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Acetaldehyde	S	NR
Acetic Acid - 10%	S	NR
Acetic Acid - 25%	S	NR
Acetic Acid - 50%	NR	NR
Acetic Acid, Glacial	NR	NR
Acetic Anhydride	S	NR
Acetone	S	S
Acetonitrile	S	NR
Acrylonitrile	NR	NR
Adipic Acid - 23%	S	NR

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Alum	I	S
Aluminium Chloride	I	I
Aluminium Fluoride *	I	I
Aluminium Hydroxide	I	I
Aluminium Nitrate - 10%	I	I
Aluminium Sulphate	I	I
Ammonia	I	S
Ammonium Chloride	I	I
Ammonium Fluoride *	I	I
Ammonium Hydroxide - 10%	I	I
Ammonium Hydroxide - 29%	I	I
Ammonium Nitrate	I	I
Ammonium Oxalate	I	S
Ammonium Persulphate	I	S
Ammonium Phosphate	I	I
Ammonium Sulphate	I	I
Ammonium Sulphide - Sat.	I	I
Ammonium Sulphite - Sat.	I	I
Amyl Acetate	I	S
Amyl Alcohol	I	I
Aniline	I	S
Aniline Hydrochloride	I	I
Barium Acetate	I	I
Barium Bromide	I	I
Barium Carbonate	I	I
Barium Chloride	I	I
Barium Hydroxide	I	I
Barium Sulphate	I	I
Barium Sulphide	I	S
Benzene	I	S
Benzene Sulphonic Acid - 50%	I	S
Benzoic Acid - Sat.	I	S
Benzyl Chloride	I	S
Black Liquor	I	I
Blood Sugar	I	S
Borax - 100%	I	I
Boric Acid	I	S
Brine	I	I
Bromine, Liquid	NR	NR
Butanol	I	I
Butyl Acetate	I	S
Butyl Acrylate	I	S
Butyl Cellosolve solvent	I	S
Butyric Acid	S	NR
Calcium Bisulphite	I	I
Calcium Bromide	I	I
Calcium Carbonate	I	I
Calcium Chlorate	I	I

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Calcium Chloride	I	I
Calcium Hydroxide	I	I
Calcium Hypochlorite	I	S
Calcium Nitrate	I	I
Calcium Sulphate	I	S
Calcium Sulphite	I	S
Carbon Disulfide	S	NR
Carbon Tetrachloride	I	S
Castor Oil	I	S
Chlorine Water - Sat.	I	S
Chloroacetic Acid - 25%	S	NR
Chloroacetic Acid - 50%	NR	NR
Chlorobenzene	I	S
Chloroform	S	NR
Chromic Acid - 10%	S	NR
Chromic Acid - 40%	S	NR
Citric Acid	I	I
Copper Acetate	I	I
Copper Chloride	I	I
Copper Cyanide	I	I
Copper Fluoride *	I	I
Copper Nitrate	I	I
Copper Sulphate	I	I
Corn Oil	I	S
Corn Starch - Slurry	I	I
Corn Sugar	I	I
Cottonseed Oil	I	S
Creosote	I	I
Cutting Oil	I	S
Cyclohexane	I	S
Detergents, Organic	I	S
Detergents, Sulphonated	I	S
Dibutylphthalate	I	I
Dichlorobenzene	I	S
Dichloroethane	S	NR
Diesel Fuel	I	I
Diethylbenzene	I	S
Diethylene Glycol	I	I
Diethyl Ether	I	S
Dimethyl Formamide	NR	NR
Dimethyl Sulphoxide	NR	NR
Epichlorohydrin	I	I
Ethanol	S	S
Ethanolamine	S	NR
Ethyl Acetate	S	NR
Ethyl Acrylate	S	NR
Ethylbenzene	I	S
Ethyl Chloride	S	NR

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Ethylene Dichloride	S	NR
Ethylene Glycol	I	I
Fatty Acids	S	NR
Ferric Chloride	I	I
Ferrous Nitrate	I	I
Ferric Sulphate	I	I
Ferrous Chloride	I	I
Ferrous Sulphate	I	I
Fluoboric Acid *	S	NR
Fluosilicic Acid - 10% *	S	NR
Formaldehyde	I	S
Formic Acid - 10%	S	NR
Formic Acid - 50%	NR	NR
Fuel Oil	I	I
Furfural Alcohol	S	NR
Gasoline	I	I
Glycerine	I	S
Green Liquor	I	I
Heptane-n	I	I
Hexane	I	I
Hydraulic Fluid	I	I
Hydrobromic Acid - 18%	S	NR
Hydrobromic Acid - 48%	S	NR
Hydrobromic Acid - 62%	S	NR
Hydrochloric Acid - 10%	I	S
Hydrochloric Acid - 37%	I	S
Hydrofluoric Acid - 10% *	I	S
Hydrofluoric Acid - 40% *	S	NR
Hydrogen Peroxide - 10%	S	NR
Hydrogen Peroxide - 30%	S	NR
Hydrogen Peroxide - 50%	NR	NR
Hydrogen Sulphide - 5%	I	S
Hydrogen Sulphide - 100%	I	S
Hypochlorous Acid - 20%	NR	NR
Isopropyl Alcohol	I	I
Isopropyl Amine	S	NR
Jet Fuel (JP-4)	I	I
Kerosene	I	I
Lactic Acid - 10%	I	S
Lactic Acid - 50%	S	NR
Lactic Acid - 85%	NR	NR
LASSO Herbicide	I	S
Lead Acetate	I	I
Linseed Oil	I	S
Lithium Bromide - Sat.	I	I
Lithium Chloride - Sat.	I	I
Lithium Hydroxide - Sat.	I	I
Magnesium Bisulphite	I	I

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Magnesium Carbonate	I	I
Magnesium Chloride	I	I
Magnesium Hydroxide	I	I
Magnesium Nitrate	I	I
Magnesium Sulphate	I	I
Maleic Acid	S	NR
Manganese Chloride	I	I
Manganese Sulphate	I	I
Mercuric Chloride	I	I
Mercurous Chloride	I	I
Mercury	I	I
Methyl Benzoate	I	S
Methyl Alcohol	S	NR
Methyl Ethyl Ketone	S	NR
Methyl Isobutyl Ketone	I	NR
Methylene Chloride	S	NR
Milk	I	I
Mineral Oils	I	I
Mineral Spirits	I	S
Motor Oil	I	I
M-Pyrol	NR	NR
Naphtha	I	I
Nickel Chloride	I	I
Nickel Nitrate	I	I
Nickel Sulphate	I	I
Nitric Acid - 10%	I	S
Nitric Acid - 40%	S	NR
Nitric Acid - 70%	NR	NR
Nitrobenzene	S	NR
Oil, Sour Crude	I	S
Oil, Sweet Crude	I	S
Oleic Acid	I	S
Oleum	S	NR
Oxalic Acid	S	NR
Perchloric Acid	S	NR
Perchloroethylene	I	S
Phenol - 5%	S	NR
Phenol - 88%	NR	NR
Phosphoric Acid - 50%	I	S
Phosphoric Acid - 85%	I	S
Phosphorous Acid - 70%	I	S
Phosphorous Trichloride	I	S
Picric Acid - 10%	I	S
Plating Solutions, Cyanide	I	S
Plating Solutions, Fluoborate *	I	S
Potassium Bicarbonate - 10%	I	I
Potassium Bicarbonate - 50%	I	I
Potassium Bromide	I	I

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Potassium Carbonate	I	I
Potassium Chloride	I	I
Potassium Hydroxide	I	I
Potassium Iodide	I	I
Potassium Nitrate	I	I
Potassium Permanganate	I	S
Potassium Persulphate	I	S
Potassium Sulphate	I	I
Propionic Acid	S	NR
Propylene Glycol	I	I
Pyridine	NR	NR
Salt Brine - 30%	I	I
Silver Nitrate	I	S
Skydrol	I	S
Sodium Acetate.	I	I
Sodium Benzoate.	I	I
Sodium Bicarbonate - 10%	I	I
Sodium Bicarbonate - Sat.	I	I
Sodium Bisulphate	I	I
Sodium Bisulphite - Sat.	I	I
Sodium Carbonate	I	I
Sodium Chlorate - 50%	I	S
Sodium Chloride - Sat.	I	I
Sodium Chlorite - 10%	S	NR
Sodium Chlorite - 50%	S	NR
Sodium Chromate - 50%	I	S
Sodium Cyanide	I	I
Sodium Dichromate	I	S
Sodium Ferrocyanide	I	I
Sodium Fluoride *	I	I
Sodium Hydroxide	I	I
Sodium Hypochlorite - 5.25%	I	S
Sodium Hypochlorite - 15%	NR	NR
Sodium Nitrate	I	I
Sodium Phosphate - 10%	I	I
Sodium Silicate	I	I
Sodium Sulphate	I	I
Sodium Sulphide	I	I
Sodium Sulphite	I	I
Sodium Tartrate	I	I
Sodium Tetraborate - Sat.	I	I
Sodium Thiosulphate	I	I
Stannic Chloride	I	I
Stannous Chloride	I	I
Stearic Acid	I	S
Styrene	I	S
Sugar Cane	I	I
Sugar/Sucrose	I	I

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CHEMICAL NAME	TEMPERATURES	
	38˚C	66˚C
Sulphite/Sulphate Liquors	I	I
Sulphuric Acid - 25%	I	S
Sulphuric Acid - 75%	I	S
Sulphuric Acid - 98%	I	S
Sulphurous Acid - 10%	I	S
Tall Oil	I	I
Tannic Acid	I	S
Tartaric Acid	I	S
Tetrachloroethane.	I	S
Thionyl Chloride	NR	NR
Toluene	I	S
Toluene Sulphonic Acid	I	S
Transformer Oils	I	I
Trichloroacetic Acid - 50%	NR	NR
Trichloroethane	I	S
Trichloroethylene	I	S
Tricresyl Phosphate	I	S
Trisodium Phosphate	I	I
Turpentine	I	S
Tween Surfactant	I	S
Urea - 50%	I	I
Vegetable Oils	I	I
Vinegar	I	S
Water, Deionised	I	I
Water, Distilled	I	I
Water, Sea	I	I
Water, Steam Condensate	I	I
White Liquor	I	I
Xylene	I	S
Zinc Chloride - 70%	I	I
Zinc Chlorate	I	S
Zinc Nitrate	I	I
Zinc Sulphate	I	I
Zinc Sulphite	I	I

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.

Important:
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