



The Chemical Company

Chemical Resistance of Ucrete®

Chemical Resistance Guide For Ucrete HF, Ucrete MF and Ucrete WR

Laboratory tests have been carried out using Ucrete HF & MF grades and with specific chemical examples for each generic family group to establish resistance within their group. These test examples are marked with an asterisk (*). These tests have been of the immersion type, carried out at ambient temperature, 50% relative humidity and over a period of 28-days, with changes in weight and compressive strength recorded.

The classification RESISTANT (R) that has been given were samples that retained more than 70% of their compressive strength and have not lost or gained more than 3% of their weight when totally immersed in the environments. Experience has shown that this interpretation correlates well with practical applications, just as testing within a generic group will accurately predict "performance" for the other chemicals that have not been tested in that group.

The classification CONDITIONAL (C) has been defined to enable customers with very difficult environmental conditions, but also who, have well controlled standards of housekeeping to take advantage of the cost savings offered by Ucrete in the confidence that it can still give them a useful life. Generally speaking, if normal SAFETY REGULATIONS for handling strong inorganic acids are observed and a washdown is completed within one hour of spillage, Ucrete will provide an excellent compromise between cost and performance. Please contact BASF Building Systems Technical Support at 800/243-6739 for specific information relative to your application.

On this basis, the following table has been compiled as a guide to the suitability of Ucrete; always provided, it is correctly applied, and properly maintained during service. End Users should, nevertheless, satisfy themselves that Ucrete is suitable for their particular environmental conditions, and take into account both the mechanical duty and any elevated temperatures, which may accompany spillage. We would advise that these influencing factors should be discussed with your BASF Performance Flooring sales representative before finalizing a specification. It should be noted that some environments (especially aggressive oxidizing chemicals) affect the color of Ucrete on the surface. BASF Performance Flooring always recommends a test sample of the selected product under actual job conditions to insure proper performance.

TESTS CARRIED OUT AT AMBIENT TEMPERATURE

	CONC %	HF/WR	MF		CONC %	HF/WR	MF
ACIDS - INORGANIC				ALKALIS			
Aqua Regia	CONC'D	C	C	Ammonia, Aqueous	30%	R	R
* Boric	100%	R	R	Ammonia, Anhydrous	GAS	R	R
Chlorine Water	SAT'D	R	R	* Ammonium Hydroxide	30%	R	R
Chromic	20%	C	C	Caustic (see Sodium Hydroxide)			
Fluosilicic	10%	C	C	Household Ammonia	5%	R	R
Hydrobromic	50%	C	C	Milk of Lime	SAT'D	R	R
Hydrochloric	35%	R	R	Potassium Hydroxide	50%	R	R
Hydrofluoboric	4%	R	R	* Sodium Hydroxide	25 - 50%	R	R
Hydrofluoboric	6%	C	C				
Hydrofluoric	4%	R	R	AMINES			
Hydrofluoric	6%	C	C	* Aniline	100%	R	C
Hydrosilicofluoric	4%	R	R	Chloronaphthalene	100%	R	R
Hydrosilicofluoric	5%	C	C	Diethylenetriamine	100%	C	C
Hypochlorous	SAT'D	R	R	Ethylamine, 40% Aq. Soln.	40%	R	C
Muriatic	35%	R	R	Methyl Amine	40%	C	C
* Nitric	30%	R	R	* Monomethyl Amine	100%	C	C
* Nitric	45%	C	C	Triethanolamine	100%	C	C
Oleum	100%	C	C				
Perchloric	SAT'D	C	C	SALTS			
Phosphoric	80%	R	R	* Aluminum Chloride	Below 50%	R	R
* Sulfuric	30%	R	R	* Aluminum Sulfate	SAT'D	R	R
* Sulfuric	45%	C	C	* Ammonium Chloride	50%	R	R
				* Ammonium Carbonate	50%	R	R
ACIDS - ORGANIC				* Ammonium Sulfate	50%	R	R
Acetic	60%	C	C	* Ammonium Nitrate	50%	R	R
* Acetic	10%	R	R	* Ammonium Persulfate	50%	R	R
* Acetic Glacial	100%	C	C	* Ammonium Phosphate	SAT'D	R	R
* Acetic Anhydride	100%	C	C	* Ammonium Sulfide soln.	SAT'D	R	R
* Adipic	ALL	R	R	Barium Chloride	SAT'D	R	R
Amidosulfonic	100%	R	R	Bleach (see Sodium Hypochlorite)			
Benzoic	100%	R	R	Bleaching Liquors	SAT'D	R	R
Chloroacetic	50%	C	C	Brine (see Sodium Chloride)			
Chloroacetic	10%	R	R	Calcium Bisulfate	SAT'D	R	R
* Citric	40%	R	R	Calcium Chlorate	SAT'D	R	R
* Fatty Acids	100%	R	R	Calcium Chloride	50%	R	R
* Formic	50%	C	C	Calcium Disulfide	100%	C	C
Fumaric	ALL	R	R	Calcium Hypochlorite	SAT'D	R	R
Gallic	100%	R	R	Calcium Nitrate	SAT'D	R	R
Glycolic	100%	R	R	Calcium Sulfate	SAT'D	R	R
Heptanic	ALL	R	R	Chlorinated Lime	SAT'D	R	R
* Lactic Acid	85%	R	R	Coolant Brines	SAT'D	R	R
* Maleic	40%	R	R	Copper Acetate	SAT'D	R	R
* Maleic Anhydride	100%	R	R	Copper Chloride	SAT'D	R	R
* Malic	50%	C	C	Copper Nitrate	SAT'D	R	R
* Oleic	ALL	R	R	* Copper Sulfate	SAT'D	R	R
Pentargonic	10%	R	R	Ferric Chloride	50%	R	R
Phenyl Sulphuric	ALL	R	R	Ferric Chloride, Anhydrous	SAT'D	R	R
Picric	50%	C	C	Ferric Nitrate	SAT'D	R	R
Picric	5%	R	R	Ferric Sulfate	SAT'D	R	R
Prussic	SAT'D	C	C	* Hydrogen Peroxide	50%	R	R
Salicylic	SAT'D	R	R	Hydrogen Sulfide	SAT'D	R	R
Stearic	ALL	R	R	Iron Sulfate	SAT'D	R	R
Tartaric	SAT'D	R	R	* Magnesium Bisulfite	SAT'D	R	R
Toluenesulfonic	100%	R	R	* Magnesium Chloride	SAT'D	R	R
Thioglycolic	100%	R	R	* Magnesium Sulfate	SAT'D	R	R
Vinegar	5-10% Acetic Acid	R	R	Nickel Chloride	SAT'D	R	R

*R - Resistant

*C - Conditional

*NR - Not Recommended



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Chemical Resistance of Ucrete® (continued)

SALTS				SOLVENTS			
	CONC %	HF/WR	MF		CONC %	HF/WR SOLVENTS	MF
Nickel Nitrate	SAT'D	R	R	Nitrobenzene	100%	C	C
Nickel Sulfate	SAT'D	R	R	Perchloroethylene	100%	R	R
Phosphorous Chlorides	SAT'D	R	R	* Phenol	5%	C	C
Potassium Bromide	SAT'D	R	R	Pyridine	100%	C	C
Potassium Carbonate	SAT'D	R	R	* Styrene	100%	R	R
Potassium Chloride	SAT'D	R	R	Tetrachloroethene	100%	C	C
Potassium Cyanide	SAT'D	R	R	Tetrachloromethane	100%	R	R
Potassium Ferricyanide	SAT'D	R	R	Tetrahydrofuran	100%	R	R
Potassium Nitrate	SAT'D	R	R	* Toluene	100%	R	C
Potassium Permanganate	Below 5%	R	R	* Trichlorobenzene	100%	R	R
Potassium Peroxide	5%	R	R	* Xylene	---	R	R
Potassium Persulfate	SAT'D	R	R				
Potassium Sulfate	SAT'D	R	R	MISCELLANEOUS			
Potassium Sulfide	SAT'D	R	R	Acetaldehyde	100%	R	R
Salt - saturated solution	SAT'D	R	R	Acetylene	100%	R (Gas)	R
Sodium Acetate	SAT'D	R	R	Allyl Chloride	100%	R	R
Sodium Bicarbonate	SAT'D	R	R	Amyl Acetate	100%	R	R
Sodium Bichromate	SAT'D	R	R	Antifreeze (Glycol)	100%	R	R
Sodium Carbonate	SAT'D	R	R	* Beer	100%	R	R
Sodium Chlorate	SAT'D	R	R	Benzole-Alcohol Mixture	---	R	R
Sodium Chloride	SAT'D	R	R	Benzoyl Chloride	100%	R	R
* Sodium Hypochlorite	50 PPM Cl2	R	R	Benzyl Acetate	100%	R	R
Sodium Hypochlorite	500 PPM Cl2	R	R	Benzyl Chloride	100%	R	R
* Sodium Hypochlorite	Below 6% Cl2	R	R	* Blood	100%	R	R
* Sodium Hypochlorite	27%	R	R	Bromine	100%	R (Gas)	R
Sodium Nitrate	SAT'D	R	R	Butyl Acetate	100%	R	R
Sodium Peroxide	5%	R	R	Carbon Dioxide	100%	R (Gas)	R
Sodium Phosphate	SAT'D	R	R	* Caprolactam	20%	C	R
Sodium Sulfate	SAT'D	R	R	* Castor Oil	100%	R	R
Sodium Sulfide	SAT'D	R	R	Chlorine (Dry)	GAS	R (Gas)	R
Stannic Chloride	SAT'D	R	R	Chlorine (Wet)	5000 PPM	R	R
Sulfur Chloride	SAT'D	R	R	Cottage Cheese	100%	R	R
Sulfur Monochloride	SAT'D	R	R	* Cottonseed Oil	100%	R	R
Trisodium Phosphate	ALL	R	R	Crude Oil	---	R	R
* Urea	20%	R	R	Diphenyl or Diphenyl Oxide	100%	R	R
Zinc Chloride	50%	R	R	Ethyl Chloride	100%	C	C
				Ethylene Dichloride	100%	C	C
				* Formaldehyde (Formalin)	37%	R	R
SOLVENTS				Glycerine	100%	R	R
* Acetone	100%	C	C	* Glycerol	100%	R	R
Benzene	100%	R	R	Hexachlorocyclopentadiene	100%	C	C
Benzyl Alcohol	100%	R	R	Hydroquinone	100%	R	R
Butyl Alcohol	100%	R	R	Jet Fuel	100%	R	R
* Carbon Disulfide	100%	R	R	Kerosene	100%	R	R
* Carbon Tetrachloride	100%	R	R	Lard	100%	R	R
* Chloroform	100%	C	C	Mercury	100%	R	R
Chloronitrobenzene	100%	C	C	* Methylated Spirits	100%	R	R
Cresois	100%	C	C	Methyl Naphthalene	100%	R	C
* Cyclohexane	100%	R	R	* Milk	100%	R	R
Cyclohexanone	100%	R	R	* Mineral Oil	100%	R	R
Dichlorethylene	100%	C	C	Miscible Oil	100%	R	R
Diethylene Glycol	100%	R	R	Motor Oil	100%	R	R
Dimethylaminoethanol	100%	R	R	Nitric Oxides	100%	R (Gas)	R
Dimethyl Formamide	100%	C	C	Nitropropane	100%	R (Gas)	R
Dinitrobenzene	100%	R	R	Oils (Saponifiable)	100%	R	R
Ether	100%	R	R	Oxygen	100%	R (Gas)	R
Ethyl Acetate	100%	R	R	Paradimethyl-amino-benzo-phenone	100%	R	R
Ethyl Alcohol	100%	R	R	Paraffin	100%	R	R
* Ethylene Dichloride	100%	C	C	Petroleum	100%	R	R
Ethylene Glycol	100%	R	R	* Propylene Glycol	100%	R	R
Furfural	100%	R	R	Phosgene	100%	R (Gas)	R
Furfural Alcohol	100%	R	R	Phthalicanhydride	100%	R	R
Glycol	100%	R	R	Quinine Sulfate	100%	R	R
Glycol Acetate	100%	R	R	Sacharin Soins	ALL	R	R
* Methanol	100%	R	R	Steam	100%	R	R
Methyl Acetate	100%	R	R	* Sugar Solutions	SAT'D	R	R
Methyl Alcohol	100%	R	R	Sulfur Dioxide	100%	R (Gas)	R
Methyl Cellosolve	100%	R	R	Sulfuryl Chloride	100%	C	C
* Methyl Chloride	100%	C	C	Tannin	100%	R	R
Methylcyclohexanol	100%	R	R	Tar, Tar Oils	100%	R	R
* Methyl Ethyl Ketone (MEK)	100%	C	C	Town Gas	100%	R (Gas)	R
Methylene Chloride	100%	C	C	Turpentine	100%	R	R
* Methyl Methacrylate	100%	R	C	Urine	100%	R	R
* Mono Chlorobenzene	100%	R	C	Vegetable Oil	100%	R	R
Naphthalene	100%	R	R	Water	100%	R	R

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*R - Resistant *C - Conditional *NR - Not Recommended