

**CHEMICAL RESISTANCE GUIDE**

**STONSHIELD**

**STONHARD**

# STONSHIELD CHEMICAL RESISTANCE GUIDE

The purpose of this guide is to aid in determining the potential value of Stonshield when exposed to the damaging effects of corrosive chemical spillages. The test procedure used was to totally immerse cured samples of Stonshield in the chemicals listed for a period of 7 days at normal room temperatures. (This is an exceptionally severe test, since most floors subject to chemical spillages such as these are “flushed down” periodically with water as part of the normal floor maintenance operation.)

The resultant resistance of Stonshield to the various chemicals is rated using the symbols listed to the right. (It is recommended that normal “good housekeeping procedures” are used, including a daily flushing with clean water.)

## RATING CODE

E - Excellent  
 G - Good  
 NR - Not Recommended  
 OS - Suitable for use where “occasional spillages” occur, when followed by immediate water flushing

The data contained here is based on laboratory tests performed under carefully controlled conditions. No warranty can be expressed nor implied regarding the accuracy of this information as it will apply to actual plant operational use. Plant operations vary widely, and the individual results obtained are affected by the specific conditions encountered, which are beyond our control.

**Note:** Staining may occur depending upon length of exposure time, chemical concentration and temperature.

## Acids

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Acetic – 5%	G	G	G	G	E	E	E
Acetic – 10%	G	G	G	G	E	E	E
Acetic – 15%	G	G	G	G	E	E	E
Acetic – 20%	OS	OS	OS	OS	E	G	E
Acetic – 50%	NR	NR	NR	NR	G	OS	G
Acetic Glacial	NR	NR	NR	NR	OS	NR	OS
Benzoic – Sat. 3%	E	E	E	E	E	E	E
Boric – Sat. 30%	E	E	E	E	E	E	E
Butyric – 10%	OS	OS	OS	OS	E	OS	E
Chromic – 10%	G	G	G	G	G	G	G
Chromic – 15%	OS	OS	OS	OS	OS	G	OS
Chromic – 40%	NR	NR	NR	NR	NR	OS	NR
Citric – 50%	E	E	E	E	E	OS	E
Cresylic	OS	OS	OS	OS	G		G
Diglycolic	G	G	G	G	G	OS	G
Fatty	G	G	G	G	E	G	E
Fluoboric	G	G	G	G	OS	OS	OS
Formic – up to 10%	OS	OS	OS	OS	G	G	G
Formic – over 10%	NR	NR	NR	NR	OS	OS	OS
Heptanoic	OS	OS	OS	OS	G	NR	G
Hydrochloric – 15%	E	E	E	E	E	E	E
Hydrochloric – 37%	G	G	G	G	G	OS	G
Hydrofluoric – 5%	G	G	G	G	G	G	G
Hydrofluoric – 10%	OS	OS	OS	OS	OS	OS	OS
Hydrofluoric – 15%	OS	OS	OS	OS	NR	NR	NR
Hypochlorous – 5%	E	E	E	E	E	OS	E
Lactic – up to 20%	G	G	G	G	E	G	E
Lactic – over 20%	OS	OS	OS	OS	G	G	G
Maleic – up to 10%	G	G	G	G	E	E	E

### *Acids (continued)*

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Maleic – 40%	G	G	G	G	E	OS	E
Maleic – Sat.	NR	NR	NR	NR	G	G	G
Monochloroacetic – 5%	G	G	G	G	G	OS	G
Monochloroacetic – 10%	OS	OS	OS	OS	G	NR	G
Monochloroacetic – 20%	NR	NR	NR	NR	OS	NR	OS
Nitric – 10%	E	E	E	E	E	E	E
Nitric – 20%	G	G	G	G	E	G	E
Nitric – 30%	OS	OS	OS	OS	G	OS	G
Nitric – over 40%	NR	NR	NR	NR	NR	NR	NR
Oleic	E	E	E	E	E	E	E
Oxalic – Sat.	E	E	E	E	E	G	E
Perchloric – 35%	OS	OS	OS	OS	OS	NR	OS
Phosphoric – up to 70%	OS	OS	OS	OS	E	G	E
Phosphoric – Conc.85%	NR	NR	NR	NR	OS	OS	OS
Picric – Sat.	E	E	E	E	E	E	E
Phthalic	G	G	G	G	G	OS	G
Succinic – Sat.	E	E	E	E	E	E	E
Sulfuric – 20%	E	E	E	E	E	E	E
Sulfuric – 50%	G	G	G	G	G	OS	G
Sulfuric – 70%	OS	OS	OS	OS	NR	OS	NR
Sulfuric – 98%	NR	NR	NR	NR	NR	NR	NR
Tannic – Sat.	E	E	E	E	E	E	E
Tartanic – Sat.	E	E	E	E	E	E	E
Trichloroacetic 10%	OS	OS	OS	OS	G	NR	G
Trichloroacetic 20%	NR	NR	NR	NR	OS	NR	OS

### *Alkalies and Salts*

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Aluminum Chloride – 50%	E	E	E	E	E	E	E
Ammonium Chloride – 50%	E	E	E	E	E	E	E
Ammonium Hydroxide – up to 20%	E	E	E	E	E	E	E
Ammonium Hydroxide – 40%	G	G	G	G	E	E	E
Ammonium Nitrate – Sat.	E	E	E	E	E	E	E
Ammonium Sulfate – Sat.	E	E	E	E	E	E	E
Calcium Chloride – Sat.	E	E	E	E	E	E	E
Calcium Hydroxide – Sat.	E	E	E	E	E	E	E
Calcium Hypochlorite – up to 15%	G	G	G	G	E	E	E
Copper Fluoroborate	E	E	E	E	E	E	E
Ferric Chloride – Sat.	G	G	G	G	E	E	E
Ferrous Sulfate	G	G	G	G	E	E	E
Potassium Hydroxide – up to 40%	E	E	E	E	E	E	E
Sodium Benzoate	E	E	E	E	E	E	E
Sodium Carbonate (Soda Ash) – Sat.	E	E	E	E	E	E	E
Sodium Bicarbonate – Sat.	E	E	E	E	E	E	E
Sodium Bisulfate – Sat.	E	E	E	E	E	E	E
Sodium Bisulfite – Sat.	E	E	E	E	E	E	E
Sodium Chloride (Salt) – Sat.	E	E	E	E	E	E	E
Sodium Glutamate	E	E	E	E	E	E	E
Sodium Hydroxide – up to 50%	E	E	E	E	E	E	E
Sodium Hypochlorite – up to 10%	G	G	G	G	G	E	G

## *Alkalies and Salts (continued)*

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Sodium Sulfate – Sat.	E	E	E	E	E	E	E
Sodium Sulfite – Sat.	E	E	E	E	E	E	E
Sodium Sulfide – Sat.	E	E	E	E	E	E	E
Trisodium Phosphate – Sat.	E	E	E	E	E	E	E
Zinc Nitrate	G	G	G	G	E	E	E

## *Solvents and Other Chemicals*

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Acetone	OS	OS	OS	OS	OS	NR	OS
Acrylonitrile	OS	OS	OS	OS	OS	NR	OS
Aniline	NR	NR	NR	NR	NR	NR	NR
Alcohol (Methyl)	OS	OS	OS	OS	OS	NR	OS
Alcohol (Ethyl, Propyl, Isopropyl, Butyl)	G	G	G	G	G	OS	G
Amyl Acetate	E	E	E	E	E	OS	E
Beer	E	E	E	E	E	E	E
Benzene	OS	OS	OS	OS	OS	NR	OS
Bromine	NR	NR	G	G	NR	NR	NR
Butyl Acetate	G	G	G	G	G	NR	G
Butyl Lactate	G	G	G	G	G		G
Carbon Disulfide	NR	NR	NR	NR	NR		NR
Carbon Tetrachloride	E	E	E	E	E	NR	E
Chlorobenzene	E	E	E	E	E	NR	E
Corn Oil	E	E	E	E	E	E	E
Cyclohexane	E	E	E	E	E	OS	E
Cyclohexanol	E	E	E	E	E	E	E
Cyclohexanone	OS	OS	OS	OS	OS	NR	OS
Chloroform	NR	NR	NR	NR	NR	NR	NR
Diacetone Alcohol	E	E	E	E	E	NR	E
Diethyl Phthalate	E	E	E	E	E	NR	E
Dimethyl Phthalate	E	E	E	E	E	NR	E
Ethyl Acetate	OS	OS	OS	OS	G	OS	G
Ethylene Glycol	E	E	E	E	E	G	E
Ether	OS	OS	OS	OS	OS	OS	OS
Ethylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Formaldehyde	E	E	E	E	E	G	E
Gasoline	E	E	E	E	E	OS	E
Glycerine	E	E	E	E	E	OS	E
Gyoxal	E	E	E	E	E		E
Hydrogen Peroxide – 10%	E	E	E	E	E	E	E
JP5 Jet Fuel	E	E	E	E	E	OS	E
Juices – Fruit	E	E	E	E	E	E	E
Juices – Vegetable	E	E	E	E	E	E	E
Kerosene	OS	OS	OS	OS	OS	G	OS
Lanoline	E	E	E	E	E		E
Lard	G	G	G	G	E	E	E
Linseed Oil	E	E	E	E	E	E	E
Mayonnaise	G	G	G	G	E	G	E
Methyl Ethyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Isobutyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methylene Chloride	NR	NR	NR	NR	NR	NR	NR
Milk	E	E	E	E	E	E	E
Mineral Spirits	E	E	E	E	E	OS	E

## Solvents and Other Chemicals *(continued)*

Chemical	HRI	SLT	MRT	ATS	UTS	XPRESS	URT
Muriatic Acid (See Hydrochloric Acid)							
Mustard	E	E	E	E	E	G	E
Naphtha	G	G	G	G	E	NR	E
Naphthalene	G	G	G	G	E		E
Oils – Cutting	E	E	E	E	E	E	E
Oils – Mineral	E	E	E	E	E	E	E
Oils – Vegetable	G	G	G	G	E	G	E
Peanut Butter	E	E	E	E	E	E	E
Perchloroethylene	OS	OS	OS	OS	OS	OS	OS
Phenol – 5%	NR	NR	NR	NR	NR	OS	NR
Pyridine	NR	NR	NR	NR	NR		NR
Skydrol	E	E	E	E	E		E
Sucrose – Sat. (Sugar)	E	E	E	E	E	E	E
Toluene	G	G	G	G	E	NR	E
Triacetin	E	E	E	E	E		E
Trichloroethane	G	G	G	G	G	NR	G
Trichloroethylene	OS	OS	OS	OS	OS	OS	OS
Triethanolamine	E	E	E	E	E	E	E
Triethylene Glycol	E	E	E	E	E		E
Urea	E	E	E	E	E	E	E
Vinegar (Household)	E	E	E	E	E	E	E
Water	E	E	E	E	E	E	E
Wine	E	E	E	E	E	E	E
Xylene	G	G	G	G	G	NR	G

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**Important:**

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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