

# CHEMICAL RESISTANCE CHART



## INTRODUCTION

This information on Metz and Metz Sauereisen products has been prepared as a guide only and should not be used for specification purposes by itself.

## WHAT WE NEED TO KNOW:

A number of factors must be considered in specifying the correct product for a particular application, including:

- Type, concentration and temperature of all chemicals, including cleaning compounds;
- Whether exposure is continuous or intermittent;
- Mechanical stresses such as traffic, equipment loading, abrasion, etc;
- Type and condition of substrate;
- Surface finish required;
- Site conditions at the time of installation.
- Available curing time before being placed into service.

## CLASS CATEGORIES:

1. Membranes - includes Metz 18A, 20M, 96 and Metz Sauereisen 89
2. Potassium Silicate - includes Metz 7K, Metz 7KE, Metz Sauereisen 65 and 54 Series
3. Epoxy A - includes Metz 6B, 6M, 10 and 33 Series, 44-SL, 70  
Epoxy B - includes Metz 4HB and 19 Series, Metz Epoxy Plaster
4. Epoxy Novolac - includes Metz 4HB-EN, 5EN-Coating, 5NF, 5NFA, 6NF, 10EN, 33EN Series, 33EN Sprayable
5. Furane - Metz 12P, 12PHF
6. Vinyl Ester - Metz 15VE
7. Polyurethane A - Metz 93PU and 94 Series  
Polyurethane B - Metz 20B, 20M, 92, 95M and 97
8. Fluoroelastomer - Metz Viton Caulk, Metz Viton Coating
9. Silicone - Metz 8
10. Ceramics - Metz Acid Tile, Metz Acid Brick, Metz Fireclay Acid Brick, Metz Acid Brick Type XL

## CHEMICAL LISTING

The chemicals listed in the following pages are in concentrated form unless otherwise specified. For chemicals or chemical concentrations not specifically mentioned please consult Metz for recommendations.

## CHEMICAL RESISTANCE IS DESCRIBED AS:

- R recommended for full exposure  
S satisfactory for splash and spillage exposure with adequate slopes to drain  
NR not recommended  
ND no data  
\* Metz carbon products recommended

The data in this chart is based on experience and tests on cured samples conducted at 20°C. Combinations of chemicals and also higher temperatures can produce different results. For other specific conditions consult Metz. This information is offered as a guide only to assist the user, who should satisfy themselves that selected products are suitable for their application.

We would welcome your enquiry for advice on any application.

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Acid Proofing & Industrial Flooring • Specialty Ceramic Tiles



CHEMICAL	MEMBRANES			POTASSIUM SILICATE	EPOXY A	EPOXY B	EPOXY NOVOLAC	FURANE	VINYL ESTER	POLYUR-ETHANE A	POLYUR-ETHANE B	FLURO-ELASTOMER	SILICONE	CERAMIC
	18A	20M, 96	SAUEREISEN 89	7K, 7KE, S65, S54 Series	6B, 6M, 10 & 33 Series, 70	4HB & 19 Series, Epoxy Plaster	4HB-EN, 5EN, 5NF, 5NFA, 10EN, 33EN Series & 33EN Sprayable	12P, 12PHF	15VE	93PU & 94 Series	20B, 20M, 95M, 92 & 97	Viton Caulk, Viton Coating	8	Acid Tiles & Bricks
ACETIC ACID, <10%	R	R	R	R	S	S	R	R	R	R	R	R	R	R
ACETIC ACID, GLACIAL	NR	NR	NR	R	NR	NR	NR	R	S	R - 93PU, S - 94	NR	NR	R	R
ACETONE	NR	NR	NR	R	S	NR	S	R	R	S	NR	NR	NR	R
ALUMINIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
ALUMINIUM FLUORIDE	NR	S	NR	NR	R	R	R	R - 12PHF, S - 12P	R	S	S	R	R	R
ALUMINIUM NITRATE	R	R	R	R	R	S	R	S	R	S	R	R	R	R
ALUMINIUM SULPHATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
AMMONIA	R	R	R	NR	R	R	R	R	R	R	R	NR	R	R
AMMONIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
AMMONIUM FLUORIDE	S	S	NR	NR	R	R	R	R - 12PHF, S - 12P	R	S	S	S	S	S*
AMMONIUM HYDROXIDE	R	R	R	NR	R	R	R	R	R	R	R	R	R	R
AMMONIUM NITRATE	R	R	R	R	R	S	R	R	R	R	R	R	R	R
AMMONIUM PHOSPHATES	R	R	R	R	R	R	R	R	R	R	R	R	R	R
AQUA REGIA	NR	NR	NR	R	NR	NR	S	NR	NR	NR	NR	R	NR	R
BARIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
BENZENE	NR	NR	NR	R	NR	NR	R	R	S	S	NR	R	NR	R
BENZOIC ACID	S	S	R	R	S	NR	S	R	R	R	S	R	S	R
BENZYL ALCOHOL	NR	NR	NR	R	S	NR	S	S	R	S	NR	R	R	R
BORIC ACID	R	R	R	R	R	S	R	R	R	R	R	R	R	R
BROMINE	S	S	S	R	S	NR	S	NR	S	S	S	R	NR	R
BUTANOL	NR	S	NR	R	S	NR	S	R	R	R	S	R	R	R
CADMIUM SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
CALCIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
CALCIUM HYDROXIDE	R	R	R	NR	R	R	R	R	R	R	R	R	R	R
CALCIUM HYPOCHLORITE	NR	R	NR	NR	NR	NR	R	NR	R	R	R	R	S	R

R = RECOMMENDED

s = SPLASH SPILLAGE

NR = NOT RECOMMENDED

ND = NO DATA

\* = METZ CARBON PRODUCTS RECOMMENDED

CHEMICAL	MEMBRANES			POTASSIUM SILICATE	EPOXY A	EPOXY B	EPOXY NOVOLAC	FURANE	VINYL ESTER	POLYUR-ETHANE A	POLYUR-ETHANE B	FLURO-ELASTOMER	SILICONE	CERAMIC
	18A	20M, 96	SAUEREISEN 89	7K, 7KE, S65, S54 Series	6B, 6M, 10 & 33 Series, 70	4HB & 19 Series, Epoxy Plaster	4HB-EN, 5EN, 5NF, 5NFA, 10EN, 33EN Series & 33EN Sprayable	12P, 12PHF	15VE	93PU & 94 Series	20B, 20M, 95M, 92 & 97	Viton Caulk, Viton Coating	8	Acid Tiles & Bricks
CALCIUM SULPHATE	R	R	R	S	R	R	R	R	R	R	R	R	R	R
CARBON DISULPHIDE	NR	NR	S	R	NR	NR	NR	R	S	NR	NR	R	NR	R
CARBON TETRACHLORIDE	NR	NR	NR	R	S	NR	S	R	R	S	NR	R	NR	R
CHLORINE DIOXIDE, WATER	NR	NR	NR	R	NR	NR	S	S	R	NR	NR	R	S	R
CHLORINE, LIQUID OR GAS	NR	NR	S	R	NR	NR	NR	NR	S	NR	NR	R	NR	R
CHROMIC ACID < 10%	S	NR	S	R	S	NR	R	S	R	R	NR	R	S	R
CHROMIC ACID > 10%	NR	NR	NR	R	NR	NR	S	NR	S	S	NR	R	NR	R
CITRIC ACID, 10%	R	R	R	R	R	R	R	R	R	R	R	R	R	R
CITRIC ACID, 50%	R	NR	R	R	S	NR	R	R	R	R - 93PU, S - 94	NR	R	S	R
COPPER SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
CRESOL	NR	NR	NR	R	NR	NR	S	R	S	S	NR	NR	NR	R
ETHYL ACETATE	NR	NR	NR	R	S	NR	S	R	S	R - 93PU, S - 94	NR	NR	S	R
ETHANOL	NR	S	NR	R	S	S	R	R	R	R	S	S	R	R
ETHYLAMINE	NR	NR	NR	R	NR	NR	NR	S	R	S	NR	NR	S	R
ETHYLENE DICHLORIDE	NR	NR	NR	R	NR	NR	S	R	R	R	NR	R	NR	R
ETHYLENE OXIDE	NR	NR	NR	R	NR	NR	S	R	NR	S	NR	NR	NR	R
FERRIC CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FERRIC SULPHATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FERRIC & FERROCYANIDES	R	R	R	R	R	R	R	R	R	R	R	R	R	R
FLUOBORIC ACID	NR	NR	NR	NR	S	NR	R	R - 12PHF, S - 12P	R	S	NR	R	S	R
FLUORINE GAS	NR	NR	NR	NR	NR	NR	NR	NR	R	NR	NR	R	NR	NR*
FLUOSILICIC ACID	S	S	R	NR	R	S	R	R - 12PHF, S - 12P	R	S	S	R	NR	S*
FORMALDEHYDE	S	S	R	R	S	S	S	R	R	R	S	S	S	R
FORMIC ACID	NR	S	R	R	NR	NR	S	R	R	S	S	S	S	R
GLYCERYL ACETATES	NR	S	NR	R	S	S	S	R	R	R	S	NR	S	R

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	18A	20M, 96	SAUERISEN 89	7K, 7KE, S65, S54 Series	6B, 6M, 10 & 33 Series, 70	4HB & 19 Series, Epoxy Plaster	4HB-EN, 5EN, 5NF, 5NFA, 10EN, 33EN Series & 33EN Sprayable	12P, 12PHF	15VE	93PU & 94 Series	20B, 20M, 95M, 92 & 97	Viton Caulk, Viton Coating	8	Acid Tiles & Bricks
HYDROBROMIC ACID	S	S	R	R	S	NR	S	R	R	S	S	R	NR	R
HYDROCHLORIC ACID 10%	R	R	R	R	R	R	R	R	R	R	R	R	R	R
HYDOCARBON FUELS	NR	S	NR	R	R	S	R	R	R	R	S	R	NR	R
HYDROCHLORIC ACID, 37%	S	S - 20M R - 96	R	R	S	NR	S - 33EN Spray R - All others	R	R	R	S	R	S	R
HYDROCYANIC ACID	S	S	R	R	S	S	S	R	R	S	S	R	S	R
HYDROFLUORIC ACID 10%	S	S	R	NR	S	NR	R	R - 12PHF, S - 12P	R	S	S	R	S	S*
HYDROFLUORIC ACID, 50%	NR	NR	S	NR	NR	NR	S	R - 12PHF, NR - 12P	S	NR	NR	R	NR	NR*
HYDROGEN PEROXIDE	S	S	S	S	S	NR	R	NR	S	R	S	R	R	R
HYDROGEN SULPHIDE	S	S	R	R	R	S	R	R	R	R	S	NR	S	R
HYPOCHLOROUS ACID 10%	S	S	S	R	S	NR	R	S	R	S	S	R	S	R
IODINE	S	S	R	R	S	S	S	NR	R	S	S	R	NR	R
LACTIC ACID, 10%	R	R	R	R	S	S	R	R	R	R	R	R	R	R
LACTIC ACID, 88%	S	NR	R	R	NR	NR	NR	R	R	R - 93PU, S - 94	NR	R	S	R
LEAD CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
LEAD NITRATE	S	S	R	R	S	NR	R	S	R	R	S	R	R	R
MAGNESIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
MAGNESIUM SULPHATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
MALEIC ACID	S	S	S	R	S	NR	S	R	R	R - 93PU, S - 94	S	R	R	R
MANGANESE SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
METHANOL	NR	S	NR	R	S	S	R	R	R	S	S	R	R	R
METHYL ETHYL KETONE	NR	NR	NR	R	NR	NR	S	R	R	S	NR	NR	NR	R
METHYLENE CHLORIDE	NR	NR	NR	R	NR	NR	S	R	S	S	NR	S	NR	R
NAPHTHALENE	NR	NR	NR	R	S	R	S	R	R	R	NR	R	NR	R
NICKEL SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
NITRIC ACID 10%	S	S - 20M R - 96	NR	R	S	NR	S - 33EN Spray R - All others	S	R	R	S	R	R	R

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	18A	20M, 96	SAUEREISEN 89	7K, 7KE, S65, S54 Series	6B, 6M, 10 & 33 Series, 70	4HB & 19 Series, Epoxy Plaster	4HB-EN, 5EN, 5NF, 5NFA, 10EN, 33EN Series & 33EN Sprayable	12P, 12PHF	15VE	93PU & 94 Series	20B, 20M, 95M, 92 & 97	Viton Caulk, Viton Coating	8	Acid Tiles & Bricks
NITRIC ACID 40%	NR	NR - 20M S - 96	NR	R	NR	NR	NR - 33EN Spray S- All others	NR	R	NR	NR	R	NR	R
NITRIC ACID, 70%	NR	NR	NR	R	NR	NR	NR	NR	S	NR	NR	R	NR	R
NITROGLYCERINE	NR	NR	NR	R	S	NR	S	S	S	S	NR	R	S	R
OILS, MINERAL	S	S	NR	R	R	S	R	R	R	R	S	R	R	R
OLEIC ACID	S	S	NR	R	R	NR	R	R	R	R - 93PU, S - 94	S	R	NR	R
OXALIC ACID	S	R	NR	R	R	R	R	R	R	R	R	R	R	R
PERCHLORIC ACID	NR	NR	NR	R	NR	NR	S	NR	R	S	NR	R	NR	R
PHENOL	NR	NR	NR	R	S	NR	S	R	R	R	NR	R	NR	R
PHOSPHORIC ACID 50%	R	R	R	R	R	S	R	R	R	R	R	R	R	R
PHOSPHORIC ACID 85%	S	NR - 20M S - 96	R	R	NR	NR	S - 33EN Spray R- All others	R	R	R	S	R	S	R
PHTHALIC ACID	S	S	R	R	R	NR	R	S	R	R	S	R	S	R
PICRIC ACID	S	S	NR	R	S	NR	S	S	R	S	S	R	NR	R
POTASSIUM DICHROMATE	NR	S	NR	R	S	S	R	R	R	R	S	R	R	R
POTASSIUM CARBONATE	R	R	R	NR	R	R	R	R	R	R	R	R	R	R
POTASSIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
POTASSIUM HYDROXIDE	R	R	S	NR	R	R	R	R	R	R	R	S	S	R
POTASSIUM NITRATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
POTASSIUM SULPHATE	R	R	S	R	R	R	R	R	R	R	R	R	R	R
SALICYLIC ACID	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SKYDROL	ND	NR	ND	R	R	ND	R	R	R	R	NR	ND	S	R
SODIUM BICARBONATE	R	R	R	S	R	R	R	R	R	R	R	R	R	R
SODIUM BISULPHATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SODIUM CARBONATE	R	R	R	NR	R	R	R	R	R	R	R	R	R	R
SODIUM CHLORIDE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SODIUM HYDROXIDE, 10%	R	R	R	NR	R	R	R	R	R	R	R	R	R	S*

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CHEMICAL	MEMBRANES			POTASSIUM SILICATE	EPOXY A	EPOXY B	EPOXY NOVOLAC	FURANE	VINYL ESTER	POLYUR-ETHANE A	POLYUR-ETHANE B	FLUORO-ELASTOMER	SILICONE	CERAMIC
	18A	20M, 96	SAUEREISEN 89	7K, 7KE, S65, S54 Series	6B, 6M, 10 & 33 Series, 70	4HB & 19 Series, Epoxy Plaster	4HB-EN, 5EN, 5NF, 5NFA, 10EN, 33EN Series & 33EN Sprayable	12P, 12PHF	15VE	93PU & 94 Series	20B, 20M, 95M, 92 & 97	Viton Caulk, Viton Coating	8	Acid Tiles & Bricks
SODIUM HYDROXIDE, 50%	R	S	R	NR	R	R	R	R	R	R	S	R	R	S*
SODIUM HYPOCHLORITE	NR	R	NR	NR	NR	NR	R	R	R	R	R	R	R	R
SODIUM NITRATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SODIUM SULPHATE	R	R	R	R	R	R	R	R	R	R	R	R	R	R
STEARIC ACID	S	S	S	R	S	NR	S	R	R	R	S	R	R	R
SULPHURIC ACID, <10%	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SULPHURIC ACID, 50%	S	R	R	R	R	S	R	R	R	R	R	R	R	R
SULPHURIC ACID, 98%	NR	NR	NR	R	NR	NR	S - 33EN Spray R- All others	NR	NR	NR	NR	R	NR	R
TIN SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
TOLUENE	NR	NR	NR	R	S	NR	R	R	R	S	NR	R	NR	R
TOLUENE SULPHONIC ACID	NR	NR	NR	R	NR	NR	S	R	R	R	NR	R	R	R
TRICHLOROETHYLENE	NR	NR	NR	R	NR	NR	S	R	S	S	NR	R	NR	R
TRISODIUM PHOSPHATE	R	R	NR	NR	R	R	R	R	R	R	R	R	R	R
UREA	S	R	S	R	R	R	R	R	R	R	R	NR	R	R
URIC ACID	S	S	NR	R	R	R	R	R	R	R	S	NR	R	R
WATER	R	R	R	S	R	R	R	R	R	R	R	R	R	R
WATER, DEMINERALISED	R	R	R	S	R	R	R	R	R	R	R	R	R	R
WATER, SALT	R	R	R	S	R	R	R	R	R	R	R	R	R	R
XYLENE	NR	NR	NR	R	S	NR	R	R	R	R	NR	R	NR	R
ZINC SALTS	R	R	R	R	R	R	R	R	R	R	R	R	R	R
<b>FOOD PRODUCTS</b>														
GLUTEN FLOUR	S	S			S	S	R	R		R	S		R	R
OILS, VEGETABLES	S	S			S	S	R	R		R	S		R	R
PICKLE JUICE	R	R			S	S	R	R		R	R		R	R
SPICES	R	R			R	S	R	R		R	R		R	R
VINEGAR	R	R			S	S	R	R		R	R		R	R

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