

METZ SAUERREISEN 65

INORGANIC SILICATE CEMENT



DESCRIPTION:

Metz Sauereisen 65 is a two part inorganic potassium silicate cement used in the laying of acidproof bricks and tiles for acidproof structures and linings.

FEATURES AND BENEFITS:

- Excellent Acid Resistance
Resistant to all acids in all concentrations, except hydrofluoric acid and fluoride salts. Especially recommended for all concentrations of sulphuric, nitric, hydrochloric and phosphoric acids. Unaffected by 98% Sulphuric Acid. Refer Metz Chemical Resistance Chart.
- Easy to Prepare and Apply
Two part mix.
- High Service Temperature
Withstands temperatures to 670°C.
- Low Shrinkage
Develops lineal shrinkage of less than 1.0%.
- Safe to Use
Does not emit hazardous fumes during mixing, application or setting.
- Superior Performance
100% potassium silicate bonded. Outperforms sodium silicate based cements.

RECOMMENDED:

As a bonding cement for acid brick and tile installations:

- Acid tanks
- Power station chimneys
- Sewage treatment
- Industrial chimneys
- Waste acid collection sumps
- Pickling lines
- Floors and drains in acid storage areas
- Absorption and drying towers in sulphuric acid and nitric acid plants
- Fertilizer industry

NOT RECOMMENDED:

- Exposure to hydrofluoric or fluoride salts.
- Exposure to alkaline solutions of any kind (i.e. any solution in pH range 7 to 14).
- Exposure to large quantities of running water.

PHYSICAL PROPERTIES:

(Typical Values)

| | |
|---|-----------------------|
| Density g/cm ³ | 1.95-2.05 |
| Compressive Strength MPa | > 21 |
| Adhesion to wire cut brick MPa | 1.2 |
| Maximum Service Temperature | 670°C |
| Tensile Strength MPa | 2.8 |
| Modulus of elasticity MPa | 390 |
| Coefficient of Thermal Expansion per °C | 10 x 10 ⁻⁶ |
| Shrinkage % | 1.0 |

COVERAGE:

 Theoretical quantity (allow for wastage)

| | |
|---|-------------------------|
| For fully bedding and jointing (nominal 3mm joint) Nori acid brick (220 x 105 x 75mm) | 0.3 kg per brick |
| For bonding bricks in independent brick wall | 0.2 kg per brick |
| For fully bedding and jointing tiles 240 x 115 x 30mm (6mm joint) | 15 kgs per square metre |

APPLICATION TEMPERATURE:

The recommended temperature range for application is 10°C to 40°C.

At temperatures below 10°C, curing may be inhibited and final technical properties may be affected. At temperatures above 40°C consistency and setting rates may be affected.

Note: Materials should be kept as cool as possible. Reducing material temperature will increase pot life.



Acid Proofing & Industrial Flooring • Specialty Ceramic Tiles



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INSTRUCTIONS FOR USE

1. Temperature of Working Area

Maintain a temperature of between 10°C and 40°C on the Metz Sauereisen 65 Liquid and Powder, brick and substrate during mixing and application. Air temperature in the area where Metz Sauereisen 65 is to be applied should also be between 10°C and 40°C.

At temperatures above 40°C, initial set will take place too rapidly. This difficulty can be overcome by cooling the mixing equipment with ice water, and by cooling the Metz Sauereisen 65 liquid. Materials should be kept as cool as possible. Reducing material temperatures will increase pot life.

2. Surface Preparation

All surfaces must be clean and dry. Metz Sauereisen 65 will not adhere adequately to concrete surfaces. These surfaces should first be coated with a membrane. The type of membrane will depend on physical and chemical conditions. Please consult Metz for recommendations.

Bricks and tiles should be dry.

3. Mixing

a) Equipment:

Mechanical mixing is recommended. A slow speed mortar mixer or a heavy duty drill with a suitable mixing paddle can be used. Small quantities can be mixed by hand, using a trowel or a spatula.

b) Proportions:

Mix 2.5 parts Metz Sauereisen 65 Powder to 1 part Metz Sauereisen 65 Liquid by weight or volume. The Powder proportion can be varied by $\pm 10\%$ to the desired consistency.

c) Mixing Procedure: Remix liquid thoroughly before use.

Pour entire amount of Liquid into the mixing equipment. Add the Powder slowly to the Liquid, mixing constantly to avoid air entrapment. Mix thoroughly until the mortar is smooth and lump free. Material which has begun to set must be discarded.

d) Pot Life

| Temperature °C | Pot Life minutes (approx.) |
|----------------|----------------------------|
| 10 | 60 |
| 15 | 45 |
| 20 | 30 |
| 30 | 15 |
| 40 | 10 |

e) Clean up:

Mixing equipment, tools, etc. can be cleaned with water prior to initial set of cement. To ensure you have the latest mixing instructions, refer www.metz.net.au for current data sheet versions.

4. Installation

Bricks or tiles should be buttered with Metz Sauereisen 65 using a trowel and well beaten down. Joints should be kept to minimum width possible, usually 2-3mm. Ensure there are no voids.

Setting time:

| Temperature °C (i) | Final set hours (ii) |
|--------------------|----------------------|
| 10 | 48 |
| 15 | 36 |
| 20 | 24 |
| 30 | 24 |
| 40 | 24 |

(i) Final set is achieved when material has set through entire mass.

(ii) Do not use material where surface has skinned

Protect Metz Sauereisen 65 from chemicals, water, steam and temperatures below 10°C until final set is achieved. For installations that will be exposed to temperatures above 93°C, consult Metz for drying cycles.

Acid Treatment:

If, after final set, the installation will be exposed to water before it is exposed to acid, it is recommended that Metz Sauereisen 65 be treated with a mixture of 1 part commercial strength (33%) hydrochloric acid to 2 parts water.

5. Storage

Store in original, sealed containers in a cool, dry place. Protect liquid from freezing. Under these conditions minimum shelf life is 6 months

6. Safety Precautions

Liquid

Avoid contact with eyes at all costs.

Wear safety glasses when mixing.

If contact occurs, wash with copious amounts of water.

Seek medical attention.

Avoid contact with skin. Wear protective gloves.

Powder

Avoid breathing dust.

Ensure adequate ventilation.

For fully safety precautions refer to the Material Safety Data Sheet for each component.

Always ensure you have the latest data sheet version, refer www.metz.net.au

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