

# METZ 14VE

## VINYL ESTER CEMENT



### DESCRIPTION:

Metz 14VE is a two-part cement based on a novolac epoxy vinyl ester resin, which is used for bonding acidproof bricks and tiles. Metz 14VE provides excellent resistance to oxidizing chemicals such as chlorine dioxide and hypochlorite solutions as well as many acids, alkalis and solvents at temperatures up to 125°C.

### FEATURES AND BENEFITS:

- **High Chemical Resistance**  
Resistant to strong oxidizing agents, alkalis and bleaches. Refer METZ Chemical Resistance Chart.
- **High Temperature Resistance**  
Resistant to temperatures up to 125°C.
- **High bond, Tensile and Compressive Strengths**
- **Low absorption and shrinkage**
- **Fast Setting**  
Initial set in one hour at 20°C.

### RECOMMENDED:

As a bonding cement for acid brick and tile installations:

- Pulp and Paper Mills
- Acid Plants
- Fertiliser Plants
- Oil Refineries
- Steel Mills
- CIP rooms in food and beverage plants

### NOT RECOMMENDED:

- For exposure to strong solvents. Refer Metz 12P.
- For long term immersion in concentrated oxidizing acids. Refer Metz Sauereisen 65.

### PHYSICAL PROPERTIES:

	(Typical Values)
Density g/cm <sup>3</sup>	1.9-2.0
Compressive Strength MPa	84
Adhesion to brick MPa	>2.1 (brick failure)
Maximum Service Temperature °C	125
Tensile Strength MPa	15.4
Modulus of Elasticity MPa	13,300
Shrinkage %	0.3

### COVERAGE:

Theoretical quantity (allow for wastage)	
For fully bonding Acid Brick, 220 x 105 x 75 mm (3mm joint)	0.3 kg per brick
For fully bedding and jointing tiles, 240 x 115 x 30 mm (6mm joint)	15 kgs per square metre
For jointing tiles, 240 x 115 x 20 mm (6mm joint)	3 kgs per square metre

### APPLICATION TEMPERATURE:

For optimum results, maintain a temperature of 15°C to 30°C on air, substrate and components during mixing, application and curing.

At temperatures below 15°C, curing may be inhibited and final technical properties may be affected.

At temperatures above 30°C, consistency and setting rates may be affected.

If necessary consult METZ.



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### INSTRUCTIONS FOR USE

#### 1. Temperature of Working Area

For optimum results, maintain a temperature of between 15-30°C on air, substrate and components during mixing, application and curing.

At temperatures below 15°C, the application becomes more difficult and curing is retarded.

At temperatures above 30°C, initial set will take place too rapidly. This difficulty can be overcome by mixing in a cooler area or by cooling the components.

#### 2. Surface Preparation

All surfaces must be clean, dry and free from oil, grease, water and other contaminants which may inhibit bond.

#### 3. Mixing

##### a) Equipment:

Mechanical mixing is recommended. A low speed mixer or a heavy duty drill with an appropriate mixing paddle are suitable. Small quantities can be mixed by hand, using a trowel.

##### b) Proportions:

	By Weight	By Volume
Liquid	1	1
Powder	3.25	2.8

Powder proportion may be altered by  $\pm 10\%$  to suit requirements.

For application in cold climates, an accelerator may be added to assist curing. Contact Metz for details.

##### c) Mixing Procedure:

Place measured quantity of liquid in mixing container. Add powder gradually while mixing continuously until mortar is uniformly blended.

Do not leave mixed material in a thick mass as this will greatly decrease the pot life.

Spread freshly mixed material thinly in a shallow tray.

Material which has begun to set must be discarded.

##### d) Pot Life at 20°C:

\_\_\_ Approximately 25 minutes.

##### e) Clean Up:

Mixing equipment, tools, etc. can be cleaned with METZ Cleaner, acetone or M.E.K. prior to initial set of cement.

#### 4. Installation

##### a) Masking of Floor Tiles

To facilitate cleaning of tiles, they should first be coated with METZ Masking Compound. This compound is applied sparingly with a lambswool roller. At least two coats are recommended, with great care being taken to ensure that it does not run down the tile sides of the joint.

The Masking Compound should be allowed to dry (approx. 1 hour under normal conditions) before the second coat is applied. For porous tiles, three coats or more may have to be applied.

If tile surfaces are very rough, it is recommended that they be waxed before laying.

##### b) Application

Apply using trowel or gun. For bedding and jointing brickwork, ensure that brick surfaces to be bonded are fully covered with METZ 14VE and are well beaten down with joints of minimum width (3 to 4.5mm). When jointing floors, ensure joints are flush with tile surface. Remove excess cement with cleaner before it begins setting. After joints have set (usually the next day) the masking compound can be removed with water and a scrubbing machine.

##### c) Setting Time:

\_\_\_ Initial set: 1 hour at 20°C

\_\_\_ Final set: 24 hours at 20°C

##### d) Full Cure:

72 hours at 20°C

#### 5. Usage Theoretical quantities (allow for wastage)

For fully bonding Acid Brick

220 x 105 x 75mm (3mm joint) 0.3 kg/brick

For fully bedding and jointing tiles

240 x 115 x 30mm (6mm joint) 15 kgs/sq m

For jointing tiles

240 x 115 x 20mm (6mm joint) 3 kgs/sq m

#### 6. Safety Precautions

##### a) Liquid:

Inflammable. Avoid formation of sparks.

Avoid contact with skin and eyes. Avoid breathing vapour. Use barrier cream. Wear safety glasses and protective gloves. Ensure adequate ventilation.

If contact occurs, wash with copious amounts of water.

Seek medical attention.

##### b) Powder:

Avoid contact with skin and eyes. Avoid breathing dust. Ensure adequate ventilation.

##### c) Cleaner:

Inflammable. No smoking. Avoid formation of sparks. 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](http://www.metz.net.au)

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REV 08/04

**METZ SPECIALTY  
MATERIALS PTY LTD**

A.C.N. 140 636 639

15A Stanton Road, Seven Hills NSW 2147

Facsimile: (02) 9671 4292 Phone: (02) 9671 1311

6 University Place, Clayton North, VIC 3168

Facsimile: (03) 9561 6944 Phone: (03) 9561 6144

Unit 16, 42 Smith Street, Capalaba QLD 4157

Facsimile: (07) 3823 5552 Phone: (07) 3823 5555

**Distributor**