

METZ 10VE

VINYL ESTER CONCRETE



DESCRIPTION:

Metz 10VE is a novolac vinyl ester resin based polymer castable concrete, designed to replace chemically attacked concrete in many applications. It can be applied on top of, or instead of new concrete surfaces in areas subject to severe chemical and mechanical stress. Metz 10VE is applied at thicknesses of 15mm and above.

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, tensile and compressive strengths**
- **Speed of Installation**
Fast setting and can avoid the need for protective coatings
- **Quality Accreditation**
The management system governing the development and manufacture of this product is proudly ISO9001:2015 certified.

RECOMMENDED:

As a castable resinous concrete to repair or replace concrete in areas of chemical and mechanical attack in:

- Chemical and Petrochemical plants
- Pulp & Paper Plants
- Oil Refineries
- Acid plants

NOT RECOMMENDED:

- For exposure to strong solvents. Refer Metz Chemical Resistance Chart for alternative Metz materials.
- For long term immersion in concentrated oxidizing acids. Refer Metz Sauereisen 54SG and Metz 10EN.
- For thicknesses below 15 mm.

PHYSICAL PROPERTIES: (Typical Values)

Density g/cm ³	2.25 - 2.35
Compressive Strength, MPa	>100
Maximum Service Temperature °C	125
Shrinkage %	<0.3

COVERAGE:

Theoretical quantities (allow for wastage)

Topping: Metz 10VE 2.3 kg per sq. metre per mm of thickness

APPLICATION TEMPERATURE:

For optimum results, maintain a temperature of 4 to 30°C on air and substrate and components during mixing, application and curing. At temperatures below 4°C, the application becomes more difficult and curing is retarded. At temperatures above 30°C, the working time decreases.

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



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INSTRUCTIONS FOR USE

1. Temperature of Working Area

For optimum results, maintain a temperature of 4 - 30°C on air and substrate and components during application and curing.

At temperatures below 4°C, the application becomes more difficult and curing is retarded. At temperatures above 30°C, the working time decreases. Application in direct sunlight and rising surface temperatures may result in blistering of the coating due to expansion of entrapped air or moisture in the substrate.

2. Reinforcement

When casting with Metz 10VE reinforcement similar to that which would be used in a Portland cement concrete casting the same size and shape should be used.

3. Surface Preparation

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

Concrete on grade should utilise a waterproof barrier beneath the slab.

New Concrete

New concrete should have attained a compressive strength of 20 MPa minimum. Surface must be free from laitance, form oils and curing compounds. The surface should have a fine wood floated or lightly broomed finish and be 28 days old.

Old Concrete

Concrete must be sound. Remove laitance, old paints, protective coatings and attacked or deteriorated concrete chemically clean surface to remove any contaminants. Abrasive blast or high-pressure water blast to remove laitance and provide a uniform, textured surface. All structural cracks should be repaired. All prepared surfaces must be allowed to dry prior to coating application. All surfaces must be vacuumed to remove any loose deposits and contamination.

4. Mixing

i) Mixing Equipment

Mechanical mixing is recommended. A low speed mixer or a heavy duty drill with an appropriate mixing paddle are suitable.

ii) Mixing Proportions

Metz 10VE	By Weight	By Volume
16VE Liquid	100	3L
16VE Hardener	1	30mLs
P4 Powder	600	1 x 20kg bag

Note: The powder proportion can be adjusted slightly to suit conditions ($\pm 5\%$ only)

iii) Mixing Procedure:

Liquid must be promoted prior to use. Promoter is not the same as hardener. If any doubt if liquid has been promoted do not use, contact Metz.

Thoroughly mix liquid and hardener together first, in correct proportions. Add powder gradually with constant stirring.

iv) Pot Life	
at 20°C	35 minutes
at 30°C	25 minutes
at 40°C	15 minutes

Note: Increase in temperature will decrease pot life, as will leaving mixed material in a large mass.

- v) Clean Up - Mixing equipment, tools, etc., can be cleaned with Metz Cleaner, xylene, acetone or M.E.K. prior to initial set of cement.

5. Installation

Material should be placed immediately after mixing. Do not let mixed material remain in mixing vessel. Place Metz 10VE to desired thickness (minimum 15mm). Finishing must be completed within 25 minutes of mixing at 20°C.

6. Setting/Curing

Initial set:	20°C	1 hour
	30°-40°C	30 minutes

Final set:	20°C	24 hours
	30°-40°C	12 hours

Full cure:	20°C	72 hours
	30°C	48 hours
	40°C	24 hours

Do not allow water, chemicals or traffic on the material surface for a minimum of 24 hours. For harsh chemical or physical environments, cure a minimum of 72 hours at 20°C prior to exposure.

7. Storage

16VE liquids and hardener should be stored at temperatures below 25°C and should be kept away from all sources of heat for maximum shelf life.

Store in a cool, dry place out of direct sunlight. Under these conditions shelf life is 6 months minimum for unpromoted liquid and for hardener. Promoter shelf life is maximum 3 months. Promoted liquid have a reduced shelf life and should be used within 1 month. Liquid and hardener should be stored separately.

Liquid is classed as DG Class 3- Flammable Liquid and hardener is classed as DG Class 5.2 -Organic Peroxide. All precautions associated with these classes should be observed.

8. Safety Precautions

Liquid and Hardener - use Chemical goggles, PVC gloves and barrier cream. Avoid contact with skin and eyes. For full safety precautions refer to Safety Data Sheets for all components.

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

- The customer must comply strictly with the instructions contained in this product data sheet. Metz is not responsible for any advice or variations to this data sheet which are not confirmed in writing.
- If the customer has a claim against Metz in respect of any product supplied to the customer by Metz whether due to a fault in the product or the negligence or breach of contract by Metz or for any other reason:
 - Metz shall not be liable for any loss or damage including consequential loss or damage or loss of profits arising thereby;
 - Metz may at its option replace the defective product free of charge to the customer or refund all payments made to it by the buyer in respect of the defective product; and the maximum liability of Metz shall be the cost of replacing the defective product.

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