

METZ 16VE-TOPPING HEAVY DUTY VINYL ESTER LAMINATE



DESCRIPTION:

Metz 16VE-Topping is a glass fibre reinforced novolac based vinyl ester topping system. The saturant liquid contains glass flakes to reduce permeability. It is specially formulated to provide outstanding chemical resistance and the glass fibre reinforcement provides a composite with excellent physical properties. It is designed to be used as a stand alone topping system. The typical system is 4-5mm thick.

FEATURES AND BENEFITS:

- Outstanding Chemical Resistance
Resistant to high concentrations (50%) of Nitric Acid, strong oxidizing agents solvents and bleaches. Refer to Metz Chemical Resistance Chart.
- Outstanding Physical Properties
The composite structure provides improved resistance to cracking and other damage.
- Rapid Cure
Fast setting, minimises downtime
- Cures under Adverse Conditions
Cures at low temperatures and high humidity. Winter and summer formulations available.
- Excellent Adhesion
Bonds to many substrates, including properly prepared concrete and mild steel.
- Quality Accreditation
The management system governing the development and manufacture of this product is proudly ISO9001:2015 certified.

RECOMMENDED:

As a topping to protect concrete and steel against chemical and mechanical attack in:

- Pulp & Paper Mills
- Acid Plants
- Oil refineries
- Fertiliser Plants
- Steel Mills
- C.I.P. rooms in food and beverage plants
- Solvent Extraction Processes

NOT RECOMMENDED:

For exposure to some strong inorganic acids and solvents. Refer Metz Chemical Resistant Chart.

PHYSICAL PROPERTIES: (Typical Values)

Density g/cm³: 1.0 to 1.2

Adhesion to concrete (ASTM D7234): >1.5MPa (Concrete failure)

Max. Continuous Service Temp.: 120°C

Note: For continuous temperatures over 80°C contact Metz re special primer required.

COVERAGE:

Theoretical quantities (allow for wastage)

Metz VE Primer: 0.2 to 0.3 kg/m² depending on absorption of substrate

Metz 16VE Plaster 8kg/m² for 2 x 2mm layers

Metz 16VE-Saturant 1.2kg/m² for layer of 450gsm chopped strand mat (CSM)

Chopped Strand mat to be ordered separately.

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INSTRUCTIONS FOR USE

1. Temperature of Working Area

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

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

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

Note: Materials should be kept as cool as possible.

2. Surface Preparation

All surfaces must be clean and free from all contaminants which may inhibit bond. For best results, surfaces should be dry. Concrete on grade should utilise a waterproof barrier beneath the slab.

i) New Concrete - New concrete should have attained a compressive strength of 20 MPa minimum. Surface must be free from form oils and curing compounds. The surface should be a fine wood float finish and be 28 days old. Light abrasive blast, high pressure waterblast or grind to remove laitance and provide uniform textured surface. Surface moisture content should be less than 10%.

ii) Old Concrete - Concrete must be sound. Remove laitance, loose deposits, old paints, protective coatings and attacked or deteriorated concrete. Chemically clean surface to remove any contaminants. All structural cracks should be repaired, all slopes re-established and all voids filled. Smaller voids can be repaired with Metz 16VE-Plaster.

iii) Metal - Abrasive blast to AS1627.4 Class 3 for immersion conditions and to Class 2 1/2 minimum for all other conditions, with a minimum blast profile of 50 microns. Check surfaces for soluble salt contamination.

3. Mixing

Mix Liquid component with a slow speed drill for a minimum of 30 seconds and at least until all material is of consistent appearance.

a) Mixing Equipment - Mechanical mixing is recommended. A low speed mixer or a heavy duty drill with an appropriate mixing paddle are suitable. High speed mixers should not be used.

b) Mixing Proportions - Metz 16VE Topping is supplied as 3 parts as described below:

Metz 16VE Liquid - the base resin

Metz 16VE Promoter - pre measured pack added in full to the Metz 16VE Topping Liquid to ready it for use.

Metz 16VE Hardener - added accurately immediately before use in quantity required. There is a summer and winter pack size available.

Metz VE Primer

VE Primer Liquid 1 x 3.2kg

VE Primer Hardener 1 x premeasured pack

Metz 16VE Plaster

16VE Liquid 2 x 4kg (must be promoted)

16VE Hardener 2 x premeasured packs

P6 Powder 1 x 20kg bag

Metz 16VE Saturant

16VE Liquid 1 x 4kg (must be promoted)

16VE Hardener 1 x premeasured pack

c) Mixing Procedure

Liquid component must be promoted prior to its use. As standard Metz supplies unpromoted liquid to maximise shelf life. Add entire contents of promoter to liquid and slowly mix for minimum 3 minutes ensuring thorough mixing. RELABEL LIQUID AS HAVING BEEN PROMOTED.

Metz 16VE Topping comes with a pre-measured container of hardener to suit the liquid pack size.

Remix liquid for 2 minutes prior to use.

For Metz VE Primer and Metz 16VE Saturant mix liquid and hardener together thoroughly for 3 minutes.

For Metz 16VE Plaster mix liquid and hardener together thoroughly for 3 minutes. Add powder gradually with constant stirring. Mix for 3 to 5 minutes.

At end of the mixing period material should be uniform in colour. Material which has begun to set must be discarded. Do not add any solvent, additive or adulterant to any component, or to the mixed material.

d) Pot Life at 20°C - summer 60 minutes, winter 30 minutes

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

e) Clean Up - Mixing equipment, tools etc can be cleaned with acetone or Metz Cleaner prior to initial set.

Ensure you have the latest mixing instructions, refer www.metz.au for latest data sheet version.

4. Installation

(i) Metz VE Primer - Apply to prepared surface, then back-roll with short nap roller. Ensure total area is covered and surface is completely sealed. Apply more primer if necessary to seal surface. Allow primer to dry, then inspect surface for voids. Fill any voids with Metz 16VE Plaster.

(ii) Metz 16VE Plaster - Trowel apply over the primer to an even thickness of 2mm.

(iii) Chopped Strand Mat (CSM) - Immediately apply 450gsm CSM to wet plaster and roll with consolidating roller to remove all wrinkles and bubbles. All CSM edges should be overlapped by 75mm.

(iv) Metz 16VE Saturant - Immediately apply to CSM with brush or roller then use consolidating roller to ensure CSM is fully wetted out and all air removed. Add additional liquid using a brush as needed. Allow to set before proceeding with next step.

(v) Metz 16VE Plaster - trowel apply over laminate to an even thickness of 2mm. Use paint roller to obtain required surface finish.

5. Setting/Curing:

	Setting Time	Full Cure
at 20°C	6 hours	3 days

Do not allow water, chemicals or traffic on the material surface for a minimum of 24 hours. For harsh chemical or physical environments ensure full cure occurs.

6. 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.

7. 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.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.