

METZ 16VE-LINING VINYL ESTER LAMINATE



DESCRIPTION:

Metz 16VE-Lining is a glass fibre reinforced novolac based vinyl ester coating system. 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 protective membrane behind acid tile and brick systems. The typical system is 1-1.5mm thick, though multiple layers can be built up.

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
- **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 the membrane component of an acid brick or tile system used 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 Saturant 1.5kg/m² for 1 layer of 450gsm mat plus 1 layer of surface tissue. Contact Metz for other configurations.



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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

VE Primer
VE Primer Liquid 1 x 3.2kg
VE Primer Hardener 1 x premeasured pack

16VE Saturant
16VE Liquid 1 x 4kg
16VE Hardener 1 x premeasured pack

c) **Mixing Procedure** - Remix liquid prior to use for 2 minutes. Mix liquid and hardener together thoroughly for 3 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

Metz VE Primer	Metz 16VE-Lining
at 20°C 60 minutes	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.net.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-Lining - Apply the mixed liquid to the substrate in a thick layer using a brush or paint roller. Embed Chopped Strand Mat (CSM) using a consolidating roller to ensure that the mat is fully wetted out and all air removed. Add additional liquid using a brush as required. All joints in CSM should be overlapping by 100mm minimum. Once the materials have set it should be abraded to promote adhesion for subsequent layers or top coats and to remove any glass fibre protuberances.

Recoat times at 20°C

Minimum: 2 hours

Maximum: 6 hours

5. Setting/Curing:

<i>Setting Time</i>	<i>Full Cure</i>
at 20°C 6 hours	at 20°C 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

Store under cover in sealed containers in dry conditions at temperatures 16VE liquid 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 of 3 months. Promoted liquid has 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.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.
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