

# METZ 33EN-SL

## SLIP RESISTANT EPOXY NOVOLAC TOPPING



### DESCRIPTION:

Metz 33EN-SL Epoxy Novolac is a 100% solids pour and spread monolithic topping, based on special resins and hardeners which impart outstanding chemical resistance, especially against concentrated inorganic acids. It also cures rapidly even at low ambient temperatures, thus minimising downtime. Metz 33EN-SL with broadcast aggregate provides a textured, slip resistant surface. Metz 33EN-SL is applied to a nominal thickness of 3 mm. If using the broadcast system, the final thickness is 4-5mm.

### FEATURES AND BENEFITS:

- Outstanding Chemical Resistance  
Resistant to a wide range of concentrated acids and alkalis, solvents oils and fats. Resistant to spillages of concentrated sulphuric, hydrochloric and phosphoric acids. Refer Metz Chemical Resistance Chart.
- Range of Surface Profiles  
If required, broadcast system provides a highly slip resistant surface. Without broadcast provides a smooth, easy to clean surface
- High Temperature Resistance - Resistant to temperatures up to 150°C
- High bond, tensile and compressive strengths
- Solventless - 100% solids formulation.
- Rapid Cure - Fast setting, minimises downtime.
- Low Temperature Cure - Cures at temperatures down to 0°C
- Ease of Application - Flowable consistency enables quick, easy application.
- Quality Accreditation  
The management system governing the development and manufacture of this product is proudly ISO9001:2015 certified.

### RECOMMENDED:

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

- Secondary containment linings
- Acid plants
- Fertiliser plants
- Oil refineries
- Steel Mills
- C.I.P. rooms in food & beverage plants
- Food processing plants
- Meat and Poultry plants

### NOT RECOMMENDED:

- For exposure to some organic acids and solvents. Refer Metz 93PU series.
- For areas where appearance is critical. Metz 33EN-SL is an industrial flooring product where corrosion resistance is of paramount importance. The cured surface may contain imperfections.

### PHYSICAL PROPERTIES: (Typical Values)

Density:	1.9 - 2.1 g/cm <sup>3</sup>
Compressive Strength:	100 MPa
Adhesion to concrete (ASTM C1583):	>1.5MPa (concrete failure)
Flexural Strength:	60 MPa
Coefficient of Thermal Expansion, per °C:	75 x 10 <sup>-6</sup>

### COVERAGE: Theoretical quantities (allow for wastage)

Metz Epoxy Primer	0.21 kgs per sq metre at 0.2mm thickness
Metz 33EN-SL (Base Coat)	6 kgs per sq metre at 3mm thickness
Broadcast Aggregate (if required)	6 kgs per sq metre
33EN-Sealer (if required)	0.43 kgs per sq metre at 0.4mm thickness for standard 18/40 aggregate. Allow extra if coarser aggregate used.

### APPLICATION TEMPERATURE:

For optimum results, maintain a temperature of 10°C to 30°C on air and substrate and components during mixing, application and curing. Note: Ideally the material temperatures should be between 18°C and 25°C, to ensure easy self-levelling.

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### INSTRUCTIONS FOR USE

#### 1. Temperature of Working Area:

For optimum results, maintain a temperature of 10°C to 30°C on air and substrate and components during application and curing. At temperatures below 10°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. Surface Preparation:

All surfaces must be clean and free from oil, grease, water and other contaminants which may inhibit bond. Remove all standing water. For best results, surfaces should be dry. Abrasive blast, grind or high-pressure water blast to provide a uniform, textured surface. All surfaces must be vacuumed to remove any loose deposits and contamination. New Concrete - new concrete should have attained a compressive strength of 20 MPa minimum and be at least 28 days old. Surface must be free from laitance, form oils and curing compounds. Surface moisture content should be less than 10%. Consult Metz for details of testing equipment. Old Concrete - Concrete must be sound. Remove laitance, old paints, protective coatings and attacked or deteriorated concrete. Chemically clean surface to remove any contaminants. All structural cracks should be repaired and all slopes re-established with approved repair material. Edge Detail - Whenever an exposed edge of the material occurs, (e.g. in doorways) an anchoring groove at least 9mm deep should be cut in the substrate. Consult Metz for full details.

#### 3. Mixing:

##### (i) Mixing Equipment

Mechanical mixing is recommended. A special resinous cement mixer is required. Smaller quantities can be mixed using a heavy duty slow speed drill with a suitable paddle. Consult Metz for details.

##### (ii) Mixing Proportions

	By Weight
Metz Epoxy Primer (MEP)	
L1 Liquid Neutral	1.85
MEP Hardener	1
Metz 33EN-SL Epoxy Novolac	
33EN-SL Liquid	2
33EN Hardener	1
P1 Powder	6
Metz 33EN Sealer (if required)	
L2 Liquid	2
33EN-Sealer Hardener	1

Notes: Decant materials directly into the mixing bucket on electric scale. Measuring by volume gives inconsistent results impacting product performance. The liquid to hardener ratios must not be altered under any circumstances

##### (iii) Mixing Procedure

Remix liquids prior to use. For Metz Epoxy Primer, mix liquid and hardener together thoroughly for 1-2 minutes. For Metz 33EN-SL Epoxy Novolac, mix liquid and hardener together thoroughly for 1-2 minutes. Add powder gradually with constant stirring. Mix for 3 to 5 minutes. At the end of the mixing period, all material should be wetted out and uniform in colour and consistency. 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.

##### (iv) Pot Life at 20°C

Metz Epoxy Primer	70 minutes
Metz 33EN-SL Epoxy Novolac	40 minutes
Metz 33EN-Sealer	15 minutes

Note: Increase in temperature will decrease pot life, as will leaving mixed material in a large mass. Spread out material in a thin layer as soon as possible after mixing.

Note: Ensure you have the latest mixing instructions, refer [www.metz.net.au](http://www.metz.net.au) for most current data sheet version.

##### (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.

#### 4. Installation:

##### (i) Metz Epoxy Primer

Apply to concrete using squeegee then back-roll with short nap roller Metz 33EN-SL Epoxy Novolac can be placed after the primer has become tacky. Primer should be left for no longer than 24 hours prior to applying 33EN-SL Epoxy Novolac.

##### (ii) Metz 33EN-SL Epoxy Novolac

Material should be placed immediately after mixing. Do not let mixed material remain in mixing vessel. Spread Metz 33EN-SL Epoxy Novolac with screed rake, screed or by hand to desired thickness (nominally 3 mm). Use spiked roller to level and aid air removal. Finishing should be completed within 20 minutes of mixing at 20°C

##### (iii) Broadcast & 33EN-Sealer (if required)

Within 20 minutes (at 20°C) of applying Metz 33-SL Epoxy Novolac, broadcast the aggregate onto the surface. Apply to refusal (approximately 6 kgs per sq.m.). Spread evenly. Do not allow to clump. Next day remove excess aggregate by vacuuming, then apply 33EN-Sealer by short nap roller. Ensure sealer covers all exposed aggregate.

#### 5. Setting/Curing:

Initial set, at 20°C:	6 hours
Full cure, 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, cure a minimum of 72 hours at 20°C prior to exposure.

#### 6. Storage:

Store in original containers in cool dry place. Under these conditions minimum shelf life is 12 months.

#### 7. Standard Pack Sizes:

33EN-SL Liquid	20kg pail, 200kg drum
33EN Hardener	10kg pail, 200kg drum
P1 Powder	20kg bag

#### 8. Safety Precautions:

Liquid and Hardener - Use chemical goggles, PVC gloves and barrier cream. Avoid contact with skin and eyes.

Powder - Avoid breathing dust. Ensure adequate ventilation.

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](http://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.