

# METZ 20M

## POLYURETHANE MEMBRANE



### DESCRIPTION:

Metz 20M is a 100% solids polyurethane chemical resistant membrane, used as an underlay beneath Metz ceramic tiling and coating systems. Metz 20M meets the requirements of AS4858 as a Class II (medium extensibility) membrane.

### FEATURES AND BENEFITS:

- Waterproof - protects substrate from penetration of water and chemicals
- Components not dangerous for transport or storage
- 100% solids, does not contain solvents
- Tough but flexible - not a brittle product
- Crack-bridging - Can bridge cracks up to 0.3mm (min thickness 500 microns)
- Excellent adhesion to concrete and steel
- Liquid applied, eliminating joints and providing a continuous lining
- Excellent chemical resistance - resistant to a wide range of chemicals including acids, alkalis and salts. Refer Metz Chemical Resistance Chart (Polyurethane 'B')
- Excellent Adhesion - Bonds to many substrates, including properly prepared concrete, mild steel and 304 and 316 stainless steel.
- Quality Accreditation - The management system governing the development and manufacture of this product is proudly ISO9001:2008 certified.

### RECOMMENDED:

As a corrosion resistant membrane used under Metz ceramic tiling and coating systems in.

- Food & Beverage industry
- Chemical containment areas
- Process areas
- Floors, pits, trenches, sumps

### NOT RECOMMENDED:

- For heavy traffic or abrasion without protective overlay - refer Metz for alternative products

PHYSICAL PROPERTIES:	(Typical Values)
Solid content:	100%
Density (mixed product):	1.4 - 1.5 g/cm <sup>3</sup>
Hardness, Shore D	40
Tensile Strength:	10 MPa
Tear propagation resistance:	27 MPa
Elongation at break:	100%
Adhesion to concrete: (ASTM D7234)	>1.5MPa (concrete failure)
Max. service temperature (continuous):	100°C

Tested to AS4858:2004 Wet Area Membranes

Durability of Membrane:

Elongation at break	123% (Class II)
After water immersion	143% (PASS)
Acceptance of cyclic movement:	Pass. No fatigue cracking exhibited
Moisture Vapour transmission rate:	1.28g/m <sup>2</sup> /24hrs (mean) (standard: <8g/m <sup>2</sup> /24hrs)
Water Absorption:	1.62% (mean)

### COVERAGE:

Theoretical quantities (allow for wastage)

Metz Epoxy Primer: 0.2 - 0.3kg/sq.m depending upon absorbency of surface

Metz 20M: 0.38kgs/sq.m for 250 micron thickness. 2 coats, each 250 microns, are recommended

*Note:* For cracking bridging minimum 500 microns required.

### APPLICATION TEMPERATURE:

The recommended temperature range for application is 5°C to 40°C, with a maximum relative humidity of 90%.

At temperatures below 5°C, curing may be inhibited and final technical properties may be altered. At temperatures above 40°C, pot life and open time will be affected.

The material temperature should be below 35°C.



Acid Proofing • Industrial Flooring • Specialty Ceramic Tiling

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### INSTRUCTIONS FOR USE

#### 1. Temperature of Working Area

Maintain a temperature of between 5 and 40°C on substrate and air during mixing, application and cure.

At temperatures below 5°C, Metz 20M may not cure fully. At temperatures above 40°C, working time will be greatly reduced.

The material temperature should be below 35°C.

Application in direct sunlight and rising surface temperatures may result in blistering of the coating due to expansion of trapped air or moisture in the substrate.

#### 2. Surface Preparation

All surfaces must be clean, smooth and dry. Remove all oil, grease and other contaminants that may inhibit bond. Concrete on grade should utilise a waterproof barrier beneath the slab.

a) *New Concrete* - Surface must be free from laitance, form oils and curing compounds. Surface should have a fine wood float finish and be at least 28 days old, 14 days for cement render. Any laitance should be removed by grinding or light abrasive blasting.

b) *Old Concrete* - Concrete must be sound. Remove laitance, old 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.

c) *Metals* - Abrasive blast to AS1627:4 Class 3 for immersion conditions and Class 2.1/2 for all other conditions with a minimum blast profile of 50 microns. Check surfaces for soluble salt contamination. If not immediately overcoating apply Metz Metal Primer. Metz Metal Primer must also be applied for immersion conditions.

#### 3. Mixing

##### a) *Mixing Equipment*

Mechanical mixing is recommended. A low speed mixer or a heavy duty drill with an appropriate mixing paddle should be used.

##### b) *Mixing Proportions*

<b>Metz Epoxy Primer:</b>	By weight	By volume
Liquid	1.85	1.6
Hardener	1	1

<b>Metz 20M:</b>	By weight	By volume
Liquid	4	3.7
Hardener	1	1

##### c) *Mixing Procedure*

###### **Metz Epoxy Primer**

Mix liquid and hardener together thoroughly for 1-2 minutes.

###### **Metz 20M**

Mix liquid and hardener together thoroughly, until a uniform colour and consistency is obtained. Mix for a minimum of 2 minutes.

Do not add any solvent, additive or adulterant to either component, or to the mixed material.

After mixing, transfer contents to a different container and mix again for 1-2 minutes to ensure complete mixing.

##### d) *Pot Life at 20°C:*

Metz Epoxy Primer	70 minutes
Metz 20M	30 minutes

##### e) *Clean Up*

Mixing equipment, brushes, rollers etc can be cleaned with Metz Cleaner, xylene, acetone or MEK prior to initial set.

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

#### 4. Installation

(i) Metz Epoxy Primer - Apply to surface using squeegee, then back-roll with short nap roller. Metz 20M can be applied after primer has become tacky.

(ii) Metz 20M - Apply mixed materials to prepared substrate by squeegee, brush or roller. Apply first coat at a thickness of 250 microns. Within 24 hours, apply second coat at a thickness of 250 microns.

If Metz 20M is to be left for more than 24 hours prior to application of the Metz overlay, the second coat should be sprinkled with Metz Broadcast Aggregate (30/60) whilst the 20M is still wet. Any excess aggregate should be removed before application of the Metz overlay.

(iii) Treatment of wall/floor junctions: Junctions should be treated according to AS3740 for a class II membrane. The bond breaker/tape used should have a minimum width of 35mm.

(iv) Recoat times at 20°C

Minimum: 4 hours	Maximum: 24 hours
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#### 5. Compatibility

Compatible with the following Metz products to fix tiles or overcoat.

- All Metz epoxy adhesives, Metz 12P & Metz 15VE.
- The following coating products without priming - Metz 5EN, Metz 4HB-EN & Metz 4HB.
- The following Metz products with prior priming - Metz 33-VG, 33EN-VG, 33EN-TG & Metz 33-TG. Refer to Metz for appropriate primer

#### 6. Setting/Curing

Setting Time:	Overnight at 20°C
Full Cure:	7 days at 20°C.

#### 7. Storage

Store in sealed containers in a cool, dry environment. Under these conditions, minimum shelf life is 6 months.

#### 8. Safety Precautions

##### *Liquid and Hardener:*

- Use chemical goggles, PVC gloves and barrier cream. - Avoid contact with skin and eyes.
- Ensure adequate ventilation.

For full safety precautions refer to the Safety Data Sheets for each component.

**Always ensure you have the latest data sheet version, refer [www.metz.net.au](http://www.metz.net.au)**

1. 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.
2. 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:
  - a) Metz shall not be liable for any loss or damage including consequential loss or damage or loss of profits arising thereby;
  - b) 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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