

# 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.

### RECOMMENDED:

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

- Food & Beverage Industry
- Hospital & Commercial Kitchens
- Swimming Pools
- Pharmaceutical Manufacture

### 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.



Acid Proofing & Industrial Flooring • Specialty Ceramic Tiles



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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 14 days old.

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

	By weight	By volume
<b>Metz Epoxy Primer:</b>		
Liquid	1.85	1.6
Hardener	1	1
<b>Metz 20M:</b>		
Liquid	4	4
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 (refer below drawing)

The bond breaker/tape used should have a minimum width of 35mm.

Recoat times at 20°C

Minimum: 4 hours      Maximum: 24 hours

#### 5. Setting/Curing

Setting Time:      Overnight at 20°C

Full Cure:      7 days at 20°C.

#### 6. Storage

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

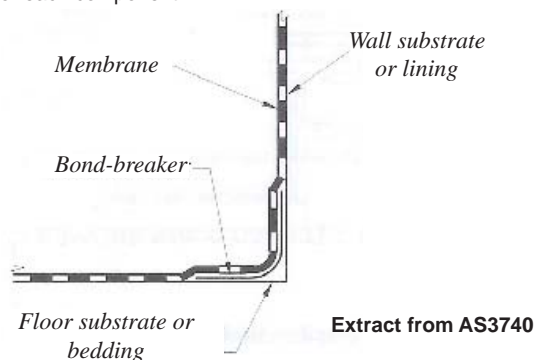
#### 7. Safety Precautions

##### 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 Material 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)

- 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:
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