

METZ PR1

ONE-PART CEMENT BASED RENDER



DESCRIPTION:

Metz PR1 is a multi-purpose, single-component high performance mortar containing special additives that is mixed with water to produce a low shrinkage product with strong adhesion to concrete. Metz PR1 was developed specifically for concrete pool render works where the finished product will be membraned, tiled or epoxy coated.

FEATURES AND BENEFITS:

- Can be applied from 3mm to 20mm in one layer
- One part, simply add water on site
- No need for wet priming layer, just dampen surface prior to applying
- Good adhesion to properly prepared concrete
- Low water absorption
- Minimum shrinkage

RECOMMENDED:

- Suitable as a render product for cast concrete, concrete block and unglazed ceramic brick substrates
- Concrete patch repairs
- For render of wall on concrete substrate
- For tiling wet edge pool tiles

NOT RECOMMENDED:

- For thicknesses less than 3mm. Use Metz 27
- For reinforced concrete using proprietary admixtures that block capillaries
- For a finely finished and exposed render product where perfectly smooth appearance is required, eg internal residential walls to be painted
- For area subjected to strong chemical exposure, refer Metz 33EN Series
- For industrial floors subject to heavy traffic, refer Metz 33 or 94 Series

PHYSICAL PROPERTIES:

Density	2.0 g/cm ³
Adhesion strength (concrete substrate)	≥ 1MPa
Shrinkage	<0.1%
Water absorption	<4%

COVERAGE:

One 20kg bag will cover 1 sq. m approximately 10mm thick.

Note: Metz has a fully detailed specification covering use of this material as part of a full system for permanent immersion conditions such as swimming pools. Please refer to Metz for a copy for any such project.



INSTRUCTIONS FOR USE

1. Temperatures of Working Area

Maintain a temperature of between 10 and 30°C on Metz PR1 powder, substrate and air during mixing, application, and cure. Use cool, potable water for mixing. At temperatures below 10°C, Metz PR1 will take much longer to cure. Do not use if temperature will drop below 5°C for 7 days after application. At temperatures above 30°C, initial set may occur too rapidly, and open time will be greatly reduced. This difficulty should be overcome by some combination of mixing in a cooler area, working at night, shading surfaces, cooling Metz PR1 prior to use and use of cold mixing water. Dampening substrates can also be effective at lowering their temperature.

2. Surface Preparation

All surfaces must be clean, and free from oil, grease, and other contaminants which may inhibit bond. Do not acid wash the concrete. Do not use curing agents or any chemical treatment on concrete substrate to achieve texture.

Pool shells must be suitably prepared by either ultra-high pressure water blasting (min 10,000psi), abrasive blasting, diamond grinding, needle gunning or other mechanical means to provide an open, textured surface. Such treatment must expose any weak layers over entrapped air bubbles (egg-shelling) in formed walls, and leave the concrete's sand particles exposed. Any defects, significant cracks etc. exposed by this treatment must be repaired with materials suitable to accept render.

Referring to ICRI Guideline No. 310.2SR-2013 standard required is either CSP2 (Diamond Grinding) or CSP3 (Other methods) To be clear the required preparation level is required across the entire surface, so for example with grinding (CSP2) the entire concrete surface must have been removed by the grinding process.

All surfaces must be damp for the installation Metz PR1 but remove any excess water on substrate.

- (i) New Concrete should have attained a compressive strength of 25 MPa minimum and be at least 8 weeks old for immersed service eg pools, 28 days old for other applications
- (ii) Old Concrete - Concrete must be sound. All structural cracks should be repaired. Consult Metz for recommendations.

3. Mixing

- i. Equipment - Mechanical mixing is recommended. A low speed mixer should be used. High speed mixers can break down components in the material and cause air entrapment.
- ii. Mixing ratio - Mix 20 kg of Metz PR1 with 3.5-3.8 litres of potable water, nominally at 20°C. Mix to a plastic consistency.
- iii. Mixing Procedure - Pour minimum recommended water requirement into mixing container. Add powder gradually with constant stirring. Mix for 2-3 minutes until a uniform mix is obtained. Add water to suit aiming for a paste consistency and continue stirring. Do not exceed the maximum recommended water addition as final properties will be affected. After mixing is completed, allow to stand for 2 minutes prior to use. Do not 'freshen' material by adding water.
- iv. Pot Life at 20 to 30 minutes at 20°C
- v. Clean Up - Clean mixing equipment, tools etc, with water before the Metz PR1 is fully set.

4. Installation

Mix only sufficient Metz PR1 material to cover an area within the open time of the product (20 minutes at 20°C). No slurry bond coat is required prior to rendering using Metz PR1. Dampened the substrate surface with damp cloth or mist spray.

For wall render application: All works should be performed in accordance with AS3958.1-2007.

Apply mixed Metz PR1 with a steel trowel pressing the mortar against the prepared substrate, ensuring good contact between the substrate and Metz PR1. Apply "scratch coat" first to fill up holes and cover the substrate and then spread and build up Metz PR1 to the desired thickness straight after. Do not exceed 20 mm thickness. Allow Metz PR1 to sit for approximately 5-10 minutes before cutting/smoothing the surface. Float to finish before the material stiffens noting that thicker layers harden slower.

If an additional layer is required, scratch the surface of the first layer before it hardens. After the first layer is set, apply the next layer working the mortar into good contact with the first layer. Do not exceed 20 mm thickness per lift. More than 2 layers will likely require reinforcement, refer the pool engineer for recommendations. Float walls with steel trowel and straight edges to achieve a plumb and true mortar surface. Allow the completed render coats to cure for min 4 days prior to applying membrane, 7 days if direct tiling.

Note: Metz PR1 will give slightly rough finish and is to be used as an underlay prior to installation of waterproofing / tiling. It is not possible to achieve a perfectly smooth finish.

5. Setting/Curing

Initial set at 20°C: approx. 3 hours
Full cure at 20°C: 7 days

Note that thicker layers will harden slower than thinner areas, so a patchy appearance over uneven surfaces will occur until full cure.

6. Overcoating/Tiling

Allow 4 days cure prior to use of Metz 27M Membrane
Allow 7 days cure prior to overcoating Metz Epoxy coating products, or tiling with Metz 27 adhesive or Metz 8X2.

Note any time spent underwater, or at less than 5°C, do not count curing. For overcoating/tiling do not count this period of time.

7. Storage

Store dry and undercover away from direct sunlight and avoid extreme temperature variation. When stored under these conditions in its original packaging between 5°C to 35°C the minimum shelf life is 6 months from date of manufacture.

8. Standard Pack Size

20kg bag

9. Safety Precautions

Ensure good ventilation. Use proper respirator, chemical goggles, PVC gloves and barrier cream.
Avoid contact with skin and eyes. Avoid breathing fumes.
For full safety precautions, refer to the Safety Data Sheets for all components.

Always ensure you have the latest data sheet version, refer 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.