

# METZ HSA

## HIGH PERFORMANCE CERAMIC TILE ADHESIVE



### DESCRIPTION:

Metz HSA is a high performance powder with special additives that is mixed with water to produce a flexible, multi-purpose thin-bed tile adhesive. Metz HSA conforms to Australian Standard AS ISO 13007.1-2013 for a C1 (normal cementitious adhesive) with special characteristics of non slump (T) and extended open time (E). This adhesive can be used to bond a wide range of ceramic tile and natural stone to various backgrounds, including concrete, sand/cement screed, fibre cement and other tiles after suitable preparation. Metz HSA has good pot life and open time making it a user friendly product.

### FEATURES AND BENEFITS:

- Conforms to AS ISO 13007.1-2013 C1TE adhesive - normal cementitious adhesive with slip resistance (non slump) and extended open time.
- High bond strength to a wide range of materials.
- Can be used to bond highly vitrified or porcelain tiles.
- Flexible. Can take up minor substrate movements caused by expansion, vibration, thermal stress or other factors.
- Non-slump. Can be used to fix large format tiles to vertical surfaces.
- Long open time. At least 20 minutes at 23°C and 50% relative humidity.
- Easy to use. Just add water.
- Can be used to bond to green sand/cement screeds - refer Metz for details.
- **Quality Accreditation**  
The management system governing the development and manufacture of this product is proudly ISO9001:2008 certified.

### RECOMMENDED:

As a thin-bed adhesive for bonding:

- Ceramic tiles, including highly vitrified and porcelain tiles
- Natural stone including marble, slate etc.

*Note:* Natural stone should be tested with Metz HSA prior to use to ensure staining does not occur.

To the following substrates:

- Concrete
- Sand/cement screeds and renders
- Fibre cement sheet
- Many other surfaces (refer Metz for details)

### NOT RECOMMENDED:

- For bed thicknesses above 6 mm.
- For areas subjected to acids and other strong chemicals
- For constant immersion application - refer Metz 27

### PHYSICAL PROPERTIES: (Typical Values)

Density g/cm<sup>3</sup> (when mixed with water) 1.65 - 1.75

Following properties tested in accordance with AS ISO 13007.2-2013

Characteristic	Requirement	Result
Tensile adhesion strength	≥ 0.5 N/mm <sup>2</sup>	2.02 N/mm <sup>2</sup>
Tensile adhesion strength after water immersion	≥ 0.5 N/mm <sup>2</sup>	0.53 N/mm <sup>2</sup>
Tensile adhesion strength after heat ageing	≥ 0.5 N/mm <sup>2</sup>	1.10 N/mm <sup>2</sup>
Adhesion strength after freeze-thaw cycle	≥ 0.5 N/mm <sup>2</sup>	0.64 N/mm <sup>2</sup>
Open time: tensile adhesion test	≥ 0.5 N/mm <sup>2</sup> after not less than 20 minutes	1.63 N/mm <sup>2</sup>

  

Special Characteristic	Requirement	Result
Slip (T)	≤ 0.5mm	≤ 0.1mm
Extended Opentime (E) after 30 minutes	≥ 0.5 N/mm <sup>2</sup>	1.56 N/mm <sup>2</sup>

### COVERAGE:

Theoretical quantities (allow for wastage):

1 x 20 kg bag will cover 7 m<sup>2</sup> with a 6 x 6 mm notched trowel.

1 x 20 kg bag will cover 4.5 m<sup>2</sup> with a 10 x 10mm notched trowel.



## INSTRUCTIONS FOR USE

### 1. Temperature of Working Area

Maintain a temperature of between 10 and 35°C on METZ HSA powder, tiles, substrate and air during mixing, application and cure. Use cool, potable water for mixing. At temperatures below 10°C, METZ HSA may not cure fully. At temperatures above 35°C, initial set will take too rapidly and open time will be greatly reduced. This difficulty can be overcome by mixing in a cooler area, cooling components and mixing equipment with ice water and ensuring mixing water is cold.

### 2. Surface Preparation

All surfaces must be clean and dry. Remove all oil, grease and other contaminants that may inhibit bond. Concrete surfaces must be free from laitance, form oils and curing compounds and be at least 14 days old. Renders should be at least 7 days old. Consult Metz if floor screeds are to be tiled before 7 days cure is achieved.

### 3. Mixing

#### a) 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.

#### b) Mixing Proportions

Metz HSA Powder: 1 x 20 kg bag  
Water: 5.5 - 6.0 Lts

(Water must be clean, cool and of drinking quality.)

#### c) Mixing Procedures

Place water in mixing container. Add powder gradually with constant stirring. Mix for at least 3 minutes until a smooth, lump-free paste is obtained. After mixing is completed, allow to stand for 5 minutes, restir and use.

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

#### d) Pot Life

3 - 4 hours at 20°C.

e) *Open Time* (time after application of adhesive during which tiles can be laid)

Approx. 20 minutes at 23°C and 50% relative humidity. Note that this time will decrease with increase in temperature or decrease in humidity.

Note: Increase in temperature will reduce both pot life and open time. Every 10°C will approximately halve both times.

### 4. Application

Spread only sufficient adhesive to cover an area that can be tiled within the open time of the product (20 minutes at 23°C). Do not lay tiles over adhesive that has skinned. For mosaics and flat back tiles having dimensions less than 200 x 200mm, use 6 x 6mm notched trowel. For larger tile sizes the following notched trowel sizes are recommended: (refer AS3958.1-2007)

- 200 x 200mm - 8 mm notched trowel
- 250 x 250mm - 10 mm notched trowel
- 300 x 300mm - 12 mm notched trowel
- 400 x 400mm - and above - 12 mm notched trowel plus buttering of the tile.

For keyed back tiles, fill keys with adhesive prior to laying.

Clean off any excess adhesive with water before it begins to set.

### 5. Setting/Curing

Setting time: Overnight at 20°C

Full cure: 7 Days at 20°C

### 6. Storage

Keep bags sealed and store in a cool, dry environment. Under these conditions, minimum shelf life is 12 months.

### 7. Safety Precautions

Avoid contact with skin and eyes. Avoid breathing dust.

For full safety precautions refer to Material Safety Data Sheet.

**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.
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