



奧迪美®

# DB391

## ADHESIVE SLURRY (RAPID-SETTING)

### EN12004 C2F COMPLIANT TILE ADHESIVE

#### PRODUCT DESCRIPTION

**OPTIMIX DB391 ADHESIVE SLURRY (RAPID-SETTING)** is a high quality polymer modified cementitious fast-setting adhesive. It is designed for rapid fixing and easy adjustment of floor tiles on traditional semi-dry bedding system. It is ready for grouting and can receive foot traffic in 6 hours after installation.

Ideal for use with **OPTIMIX DB390 SEMI-DRY BEDDING MORTAR (RAPID-SETTING)** as a screeding and tiling system with fast return to service.

A normal setting time option, **OPTIMIX DB391N** Adhesive Slurry is also available (and it is ready for grouting and for foot traffic in 24 hours after installation).

For additional efflorescence resistance both versions are available as **-S** grades.

#### TYPICAL USAGE

- Suitable for bonding high quality tiles or stone panels onto concrete surfaces of floor application
- Suitable for fixing moisture sensitive tiles such as composite tiles, limestone, and etc.
- Ideal for fixing floor tile onto **OPTIMIX DB390 Semi-Dry Bedding Mortar (Rapid-Setting)**



#### FEATURES AND BENEFITS

- Simple and Easy to Use
- Low VOC – complies with HK EPD regulation
- C2F High Early and Ultimate Strength
- Rapid Setting



## TECHNICAL DATA

### Mixing

Water Demand	5.5 – 6.0 L per 25 kg powder
Mixing Method	Forced Action Mixer e.g. Low Speed (~500rpm) Drill & Paddle
Mixing Time	Mix for 5 minutes or until homogeneous and lump-free, Leave to stand for 5 minutes, Briefly remix before use

### Pot Life <sup>1) 2)</sup>

Temp.	DB391	DB391N
@ 22°C	~ 25 minutes	~ 60 minutes
@ 30°C	~ 15 minutes	~ 40 minutes
@ 38°C	~ 10 minutes	~ 25 minutes

### Performance

Product Characteristics	Specification	DB391	DB391N <sup>2)</sup>
Early Tensile Adhesion Strength (6 hours) (MPa)	≥ 0.5 <sup>3)</sup>	~ 1.0	N.A.
Initial Tensile Adhesion Strength (MPa)	≥ 1.0 <sup>3)</sup>	2.5	
Tensile Adhesion Strength After Water Immersion (MPa)	≥ 1.0 <sup>3)</sup>	1.5	
Tensile Adhesion Strength After Heat Aging (MPa)	≥ 1.0 <sup>3)</sup>	2.5	
Tensile Adhesion Strength After Freeze Thaw Cycles (MPa)	≥ 1.0 <sup>3)</sup>	1.3	
Open Time	≥ 0.5 MPa	@ 10 minutes <sup>3)</sup>	@ 20 minutes <sup>4)</sup>

### Environmental Data

Volatile Organic Compounds (VOC)	≤ 10 g/L <sup>5)</sup>
Potential BEAM points	Product is manufactured within 800km of Hong Kong project sites
Packaging Composition	Paper bags incorporating 40% recycled paper

### Packaging & Yield <sup>6)</sup>

Wet Density (kg/m <sup>3</sup> )	1,850
Coverage (kg/mm/m <sup>2</sup> )	~ 1.5
Yield (per bag)	~ 16.6 L (or ~ 3.3m <sup>2</sup> @ 5mm thick)
Packing Size (per bag)	25 kg
Shelf Life	6 months

#### Notes

- 1) Typical results achieved in laboratory conditions and for reference only. Actual results on site will vary with ambient, substrate and tile conditions.
- 2) In-house specification and/or in house test method.
- 3) EN12004 C2F specification.
- 4) EN12004 C2 specification.
- 5) VOC limits for ceramic tile adhesives <https://www.epd.gov.hk/>
- 6) Approximate figures make no account for wastage of any kind.



## **INSTALLATION GUIDE**

*(Refer to Method Statement for more details)*

### **SURFACE PREPARATION**

Substrate must be clean and free from loose particles, oil, grease and other contaminants which may affect the bond.

Excessive shrinkage, drying, settlement and other movement of the substrate must have taken place before tiling works can begin.

Site concrete should be allowed to cure for a minimum of 4 weeks;

Normal site screeds should be allowed to cure for a minimum of 7 days before laying of tiles.

For rapid completion of works **OPTIMIX DB390** can be used as a semi-dry screed and immediately overlaid with **OPTIMIX DB391**.

### **MIXING**

Mix one bag of **OPTIMIX DB391** dry powder with 5.5 – 6.0 L of potable water to achieve the desired consistency. Mechanical mixing with a slow speed drill and paddle is recommended.

Apply the powder to the water and mix for about 5 minutes or until a lump-free homogeneous mix is achieved.

The mixed material is immediately ready for use and should be used quickly so as not to exceed the pot life.

### **APPLICATION**

Use a flat trowel to spread the adhesive in an even layer onto the substrate. Use a few passes of the trowel to ensure that the adhesive is in full contact with the substrate.

If the back of the tile is rough or heavily textured, then a thin scratch coat of adhesive may be applied to the back of the tile, but the tile must then be placed immediately while the scratch coat is still wet.

While the adhesive is still wet, press the tiles firmly into place with a slight twisting action to ensure good contact. The tile will settle into the adhesive a little and can be gently persuaded by tapping near the centre with a rubber mallet if necessary. Avoid applying too much pressure at the tile edges as this can lead to raised edges and voids under the tile.

As a rough guide, the target thickness of the adhesive should be approximately 3 to 5mm after bedding and levelling the tile. This will allow sufficient material to allow the system to find its level while avoiding voids under the tile.

### **TILE ADJUSTMENT**

Adjustment of the installed tile can be carried out while the adhesive is still workable. Once the adhesive begins to firm up – which can be as soon as 10 minutes depending on site conditions – then no further adjustment should be carried out.

Note no additional water should be added and the material must not be used beyond its pot life. Take care to ensure that the adhesive has not dried out or begun to set prior to installing or adjusting the tile.

### **FINISHING AND CURING**

Take care to ensure the tile is properly protected while the adhesive sets and hardens. Avoid touching, trafficking or otherwise loading the tiles until the installation has developed sufficient strength.

For installations on minor inclines, trials should be carried out to ensure that the adhesive stays in place and the tiles do not move. For slopes or significant inclines, consider using **OPTIMIX SA329 STONE FLOOR ADHESIVE (FAST-SETTING)**.

Depending on the tile, it is usually better to clean off any excess adhesive from the tile while the adhesive is still wet. This can be done with a little water and a sponge but take care not to add water to the adhesive supporting and bonding the tile.

Protect the installation from extremes of temperature for at least the first 7 days.

## GROUTING

Grouting of joints should be commenced not earlier than 6 hours after the tiles have been installed. Optimix recommends **TG410E Tile Grout (High Performance)**.

## LIMITATIONS

**OPTIMIX DB391 ADHESIVE SLURRY (RAPID-SETTING)** should not be used on Gypsum substrates without pre-treating the substrate.

**OPTIMIX DB391 ADHESIVE SLURRY (RAPID-SETTING)** is water resistant but is not a waterproof barrier. When using porous natural stones such as marble Optimix strongly recommend installing a waterproof membrane to prevent long term moisture staining on the tile surface.

## HEALTH AND SAFETY

**OPTIMIX DB391** is alkaline in nature and can cause irritations to persons with sensitive skin. Avoid inhalation of dust and contact with skin and eyes. Wear suitable protective gloves and masks while handling the product. If contact with eyes, rinse immediately with plenty of clean water and seek medical advice. This product is non-toxic and is not flammable.

## STORAGE

Store the products in a cool and dry place with the original unopened bags on pallets with plastic wrapping. Protect from direct sunlight, rainfall and exposure to high humidity conditions. Avoid excessive stacking of pallets. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging and reduce shelf life.

## ALTERNATIVE PRODUCTS

Other similar products in the Optimix range include:

- **TA313** Tile Adhesive (Semi-Flexible)
- **TA314** Tile Adhesive (2-in-1 Fix and Grout)
- **TA328** Tile Adhesive (Flexible)
- **SA329** Stone Floor Adhesive (Fast-Setting)



**Important Note:** The information contained herein is, the best of our knowledge, true and reliable and is supported by the present state of our knowledge. No warranty is given or implied in connection with any recommendations or suggestions made by us or our representatives as the conditions of use and any labour involved are beyond our control.



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