

## **STRONG BOND-DIAMOND** **Type-3 Tile Adhesive (Grey** **Base)**



Multipurpose partially light weight highly polymer modified and highly flexible adhesive for installation of large format/ slim tiles on most of the substrates to accommodate movements. It offers very good handling properties with good sag and slump resistance while doing installation on wall or floor respectively. It can be applied up to 18 mm bed thickness

### **Features / Benefits**

- Single component, just add water
- Easy to use
- Can be used up to Maximum 12 mm bed thickness
- Light weight formula-15% higher coverage than standard adhesive
- High strength with high polymer modification
- Extended open time
- Non sag & non slump formula for large format tiles in wall and floor systems
- Good resistance against crack propagation
- Good impact resistance-provides cushion effect to tiles
- Exceeds IS 15477:2019 Type3/TS1

### **Substrates**

- Concrete & Concrete Masonry
- MIVON Concrete, VDF, Precast concrete Cement
- Mortar Beds Cement Mortar Beds Ceramic tile, Vitrified Tile and Natural Stone Glass mosaic tile
- Brick Masonry Cement Backer Board Cement Terrazzo Calcium silicate board for dry areas Gypsum wall boards for dry areas

\* Surface to be cleaned and roughened before installation of tiles or stones.

## Application

Designed to suit both interior and exterior floor/wall installations of variety of slim tiles/stones such as ceramic tile, vitreous, semi-vitreous tile, paper faced glass mosaic tiles, precast terrazzo and natural stones. Suitable for installing tiles over concrete and on a variety of substrates. Good underwater shear bond allows this product to be used for wet areas like swimming pools, sauna, water bodies and washrooms. Befitting for tile-on-tile applications.

## TECHNICAL DATA

### Performance Properties:

**STRONG BOND-DIAMOND** Multipurpose  
Adhesive mixed with Water

### Applicable Standards:

ISO 13007;  
IS15477:2019

IS 15477: Type -3		
Property: Test method	Requirement	Typical Values
<b>Shear Adhesion strength</b>		
Dry Conditions (28 days) – Annex B (Clause 5.2)	$\geq 1.50 \text{ N/mm}^2$	1.70 – 2.00 N/mm <sup>2</sup>
Heat Ageing		
Conditions (14 Days Std+14 Days Oven) – Annex B (Clause 5.2)	$\geq 1.00 \text{ N/mm}^2$	1.20 – 1.40 N/mm <sup>2</sup>
Wet Conditions (7 Days Std+21 Days Water) – Annex B (Clause 5.2)	$\geq 1.00 \text{ N/mm}^2$	1.20 – 1.45 N/mm <sup>2</sup>
<b>Tensile Adhesion Strength</b>		
Dry Conditions (28 days) – Annex A (Clause 5.1)	$\geq 1.50 \text{ N/mm}^2$	1.55 – 1.95 N/mm <sup>2</sup>
Wet Conditions (7 Days Std+21 Days Water) – Annex A (Clause 5.1)	$\geq 1.00 \text{ N/mm}^2$	1.25 – 1.75 N/mm <sup>2</sup>

EN / ISO Data		
Property: Test Method	Requirement	Typical Values
Open Time: EN 1346	$\geq 0.50 \text{ N/mm}^2$	40 – 45 Minutes
Slip Resistance: EN 1308	$\leq 0.50 \text{ mm}$	0.20 - 0.30 mm
<b>Tensile Adhesion Strength</b>		
Initial: EN 1348 – Clause 8.2	$\geq 1.00 \text{ N/mm}^2$	1.30 – 1.90 N/mm <sup>2</sup>
After Water Immersion: EN 1348 – Clause 8.3	$\geq 1.00 \text{ N/mm}^2$	1.20 – 1.70 N/mm <sup>2</sup>
Heat Ageing: EN 1348 – Clause 8.4	$\geq 1.00 \text{ N/mm}^2$	1.20 – 1.40 N/mm <sup>2</sup>
Freeze- Thaw: EN 1348 – Clause 8.5	$\geq 1.00 \text{ N/mm}^2$	1.30 – 1.90 N/mm <sup>2</sup>
Transverse Deformation: EN12002	$\geq 2.5 \text{ mm}$ $< 5.00 \text{ mm}$	2.65mm - 2.75mm

The Adhesive mortar conforms to IS 15477: Type 3/TS1 Adhesive

### Packaging:

20 kg bags Colour: Grey

**Coverage: Per 20 Kg bag when mixed with water:**

Coverage will vary depending on trowel notch size, type and size of tile and substrate smoothness and evenness.

Coverage Details (per 20kg bag):			
Trowel Size	Average Bed Thickness	Minimum Coverage	Maximum Coverage
6 x 6 mm Square Notch	3 mm	60 ft <sup>2</sup> /6.69 m <sup>2</sup>	65 ft <sup>2</sup> /7 m <sup>2</sup>
9 x 9 mm Square Notch	4.5 mm	40 ft <sup>2</sup> /4.46 m <sup>2</sup>	46 ft <sup>2</sup> /4 m <sup>2</sup>
12 x 12 mm Square Notch	6 mm	30 ft <sup>2</sup> /3.34 m <sup>2</sup>	35 ft <sup>2</sup> /3.12 m <sup>2</sup>
18 x 18 mm Square Notch	9 mm	20 ft <sup>2</sup> /2.23 m <sup>2</sup>	35 ft <sup>2</sup> /3.12 m <sup>2</sup>
6mm surface levelling + 12 x 12 mm Square Notch	12 mm	16-18 ft <sup>2</sup> /1.67 m <sup>2</sup>	35 ft <sup>2</sup> /3.12 m <sup>2</sup>

**Working Properties:**

at 70° F (21° C) STRONG BOND DIAMOND Multipurpose Adhesive mixed with Water

Open Time 40-45 minutes

1.Adjustability Time 40-45 minutes

2.Pot Life 4-5 hours

3.Time to Foot Traffic 16 - 24 hours

\*Specifications are subjected to change without notification.

Results shown are typical but reflect test procedures used.

Actual field performance will depend on installation methods and site conditions.

## INSTALLATION

To achieve a successful installation of large format/ thin tiles, adhere to the following recommendation:

- Proper surface preparation
- Proper material mixing & application
- Use of a proper edge-leveling system
- Beating of tile into mortar bed using a Rubber Mallet

**Surface Preparation:**

All surfaces should be between 50° F(10°C) and 100° F(38°C) and structurally sound, clean and free of all dirt, oil, grease, loose peeling paint, laitance, concrete sealers or curing compounds. Key to have easy and proper installation of the large format or thin/slim porcelain tiles is the preparation of the surface and complete removal of demolding wax powder on the back surface of the tile. Should there be a fiber mesh present on the back surface of the tile, ensure that it is completely removed before proceeding with the installation using Laticrete 335 Maxi. Before installation on floor with Floor flatness: While installing on floor, it is recommended that the substrate has the following:

- Properly prepared substrates should not have more than a permissible variation of 1/8" in 10 feet (3mm in 3.05m) from the required plane; nor more than 1/16" in 24 inches (2 mm in 600 mm) when measured from high points in the surface with a straight edge

**Bonding to Concrete Surfaces:** Concrete or plaster must be fully cured and must accept water absorption. Test by sprinkling water on various areas of the substrate. If water is absorbed, then a good bond can be achieved; if water beads, it indicates surface contaminants and hence loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure. Concrete slabs should have a coarse finish to enhance the bond. Smooth concrete slabs must be mechanically abraded to achieve improved bond with the adhesive mortar.

#### **Application of Product:**

a) Tile/Stone Use a properly sized notch trowel to ensure proper coverage under tiles. Using the flat side of the trowel, apply a skim coat of mortar to the surface. With the notch side of the trowel held at a 45° angle, apply additional mortar to the surface, combing in one direction. Press the tile firmly into place in a perpendicular motion across ridges, moving back and forth. The perpendicular motion flattens ridges and closes valleys, allowing maximum coverage. For all large format tiles, back buttering is mandatory. With some tile, back-buttering is advisable. If the material has skinned over (not sticky to the touch), recomb with the notch trowel; if too dry, remove and replace the dry material with fresh material. Adhesive Mortar should not be used to fill low spots in the flooring. The mortar thickness should not exceed the specified range. Ambient temperature should be maintained above 50° F (10° C) or below 100° F (38° C) for 72 hours to achieve proper bond

B) Paper faced Glass Mosaic tiles The STRONG BOND DIAMOND Tile adhesive shall be applied to the surface to be tiled with a notched trowel using a scraping motion to work the adhesive into good contact with the surface to be covered. Notch trowel with notches approximately 4mm is recommended to get a bed thickness of 1.5-2mm. V- notch of 3mm also can be used to get bed thickness of 1.5mm. Apply only so much that can be covered with tile within 10-15 minutes or while the adhesive surface is still tacky. The Glass Mosaic tiles shall then be set in place and beaten gently with mallet or grouting float to ensure 100% full bedding. Tiles shall be aligned to achieve uniform joints and then allowed to set until firm. After the tiles are set firm, the face of the sheets of front paper mounted glass mosaic tiles shall then be dampened and the face mount paper can be removed.

#### **Mixing Ratios:**

#### **Health Precautions:**

See Safety Data Sheet for more information. This product contains Portland cement and silica. Avoid eye contact and prolonged contact with skin. Wash thoroughly after handling. If eye contact occurs, flush with water for 15 minutes and consult a physician. Do not breathe dust; wear a P2 type respiratory mask. Follow the safety norms as per ISO 45001 Occupational Health and Safety Clauses.

Mix 6.5 to 7 L clean water to 20 kg bag of mortar.

#### **Shelf Life:**

Factory sealed containers of this product are guaranteed to be of first quality for (1) year \* If stored off the ground in a dry area . \*High humidity will reduce the shelf life of bagged product

**NOTE TO THE SPECIFIER AND INSTALLER:** Check if the adhesive mortar chosen is the right mortar for the installation of the tile, based on the following: • Type of Substrate • Size of Tile • Type of Tile • Area of Application

### **CUSTOMER CARE**

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