

STRONG BOND DIAMOND

Type-3 T S1 Tile Adhesive (Grey Base) · Light Weight, Highly Flexible

Multipurpose, partially light weight, highly polymer modified and highly flexible adhesive for installation of large format / slim tiles on most substrates, accommodating movements. Good sag and slump resistance on wall and floor.

IS 15477:2019 TYPE 3 / TS1	EN / ISO COMPLIANT	20 KG BAG SINGLE COMPONENT	INTERIOR & EXTERIOR WET AREAS
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FEATURES & BENEFITS	SUBSTRATES
- Single component, just add water - Easy to use - Usable up to a 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 on wall and floor - Good resistance against crack propagation - Good impact resistance - cushion effect to tiles - Exceeds IS 15477:2019 Type 3 / TS1	- Concrete & concrete masonry - Mivan concrete, VDF, precast concrete - Cement mortar beds - Ceramic tile, vitrified tile & natural stone - Glass mosaic tile - Brick masonry - Cement backer board - Cement terrazzo - Calcium silicate board (dry areas) - Gypsum wall boards (dry areas) <i>*Surface to be cleaned and roughened before installation of tiles or stones.</i>

Application — Designed for interior and exterior floor / wall installations of a variety of slim tiles/stones such as ceramic tile, vitreous, semi-vitreous tile, paper-faced glass mosaic tiles, precast terrazzo and natural stones, over concrete and a variety of substrates. Good underwater shear bond allows use in wet areas like swimming pools, sauna, water bodies and washrooms. Suited for tile-on-tile applications. Can be applied up to 18 mm bed thickness.

WORKING PROPERTIES — at 70°F (21°C), mixed with water

Open Time	Adjustability Time	Pot Life	Time to Foot Traffic
40-45 minutes	40-45 minutes	4-5 hours	16-24 hours

1.70-2.00 N/MM ² DRY SHEAR (TYPE 3)	1.55-1.95 N/MM ² DRY TENSILE	40-45 min OPEN TIME	2.65-2.75 mm TRANSVERSE DEFORMATION
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IS 15477:2019 TYPE 3 — PERFORMANCE DATA

Property / Test Method	Requirement	Typical Value
Shear Adhesion Strength — Annex B		
Dry Conditions, 28 days (Clause 5.2)	$\geq 1.50 \text{ N/mm}^2$	1.70 - 2.00 N/mm²
Heat Ageing, 14 days std + 14 days oven (Clause 5.2)	$\geq 1.00 \text{ N/mm}^2$	1.20 - 1.40 N/mm²
Wet Conditions, 7 days std + 21 days water (Clause 5.2)	$\geq 1.00 \text{ N/mm}^2$	1.20 - 1.45 N/mm²
Tensile Adhesion Strength — Annex A		
Dry Conditions, 28 days (Clause 5.1)	$\geq 1.50 \text{ N/mm}^2$	1.55 - 1.95 N/mm²
Wet Conditions, 7 days std + 21 days water (Clause 5.1)	$\geq 1.00 \text{ N/mm}^2$	1.25 - 1.75 N/mm²

The adhesive mortar conforms to IS 15477: Type 3 / TS1. Applicable standards: ISO 13007; IS 15477:2019. Specifications subject to change without notice. Results shown are typical and reflect the test procedures used.

EN / ISO — PERFORMANCE DATA

Property / Test Method	Requirement	Typical Value
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
Tensile Adhesion Strength — EN 1348		
Initial (Clause 8.2)	$\geq 1.00 \text{ N/mm}^2$	1.30 - 1.90 N/mm²
After Water Immersion (Clause 8.3)	$\geq 1.00 \text{ N/mm}^2$	1.20 - 1.70 N/mm²
Heat Ageing (Clause 8.4)	$\geq 1.00 \text{ N/mm}^2$	1.20 - 1.40 N/mm²
Freeze-Thaw (Clause 8.5)	$\geq 1.00 \text{ N/mm}^2$	1.30 - 1.90 N/mm²
Deformability		
Transverse Deformation (EN 12002)	$\geq 2.5 \text{ mm}, < 5.00 \text{ mm}$	2.65 - 2.75 mm

COVERAGE — PER 20 KG BAG (MIXED WITH WATER)

Trowel Size	Average Bed Thickness	Minimum Coverage	Maximum Coverage
6 × 6 mm square notch	3 mm	60 ft ² / 6.69 m ²	65 ft ² / 7 m ²
9 × 9 mm square notch	4.5 mm	40 ft ² / 4.46 m ²	46 ft ² / 4 m ²
12 × 12 mm square notch	6 mm	30 ft ² / 3.34 m ²	35 ft ² / 3.12 m ²
18 × 18 mm square notch	9 mm	20 ft ² / 2.23 m ²	35 ft ² / 3.12 m ²
6 mm surface levelling + 12 × 12 mm square notch	12 mm	16-18 ft ² / 1.67 m ²	35 ft ² / 3.12 m ²

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

PACKAGING

Packaging	Colour	Shelf Life
20 kg bags	Grey	1 year from date of manufacture, factory-sealed, if stored off the ground in a dry area. High humidity will reduce the shelf life of bagged product.

MIXING

Mix 6.5 to 7 litres of clean water with a 20 kg bag of mortar.

SURFACE PREPARATION

All surfaces should be between 50°F (10°C) and 100°F (38°C), structurally sound, clean and free of all dirt, oil, grease, loose peeling paint, laitance, concrete sealers or curing compounds. The key to easy and proper installation of large format or thin / slim porcelain tiles is preparation of the surface and complete removal of demoulding wax powder on the back surface of the tile. Should there be a fibre mesh on the back surface of the tile, ensure it is completely removed before proceeding with the installation.

Floor flatness — when installing on a floor, properly prepared substrates should not have more than a permissible variation of 1/8" in 10 feet (3 mm in 3.05 m) 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.

LARGE FORMAT / THIN TILE INSTALLATION

- Proper surface preparation
- Proper material mixing & application
- Use of a proper edge-levelling system
- Beating of tile into the mortar bed using a rubber mallet

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, 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

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 the ridges, moving back and forth; this 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, and the mortar thickness should not exceed the specified range. Ambient temperature should be maintained above 50°F (10°C) and below 100°F (38°C) for 72 hours to achieve proper bond.

b) Paper-faced glass mosaic tiles — Apply the adhesive to the surface with a notched trowel using a scraping motion to work the adhesive into good contact with the surface. A notch trowel with notches of approximately 4 mm is recommended to get a bed thickness of 1.5–2 mm; a 3 mm V-notch can also be used to get a bed thickness of 1.5 mm. Apply only so much that can be covered with tile within 10–15 minutes or while the adhesive surface is still tacky. Set the glass mosaic tiles in place and beat gently with a mallet or grouting float to ensure 100% full bedding. Align the tiles to achieve uniform joints and allow to set until firm. After the tiles are set firm, dampen the face of the sheets of front-paper-mounted mosaic and remove the face-mount paper.

HEALTH PRECAUTIONS

See the 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.

NOTE TO THE SPECIFIER AND INSTALLER

Check that 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 and area of application.

DISCLAIMER

The information in this data sheet is based on our present knowledge and experience and is offered in good faith. Specifications are subject to change without notice. Results shown are typical values from internal test procedures; actual field performance depends on installation methods and site conditions, and should be verified by the user for the intended application.