



DIAMOND STAR Grey

High performance, polymer modified, reduced slip adhesive

DESCRIPTION

Grey cement based, high performance, high strength adhesive for fixing tiles/stones in areas of limited movement or vibration as it can accommodate shocks due to impact load and heavy traffic. The set adhesive is water-resistant and non-slip.

DIAMOND STAR Grey is ideal for fixing ceramic, vitrified & fully vitrified tiles, glass mosaic, porcelain, industrial grade tiles, cement terrazzo, natural stone and engineered stone on wall/floor in interior/exterior situations up to 6mm bed thickness (can be extended up to 12 mm in area of limited extent).

Note: Not recommended for direct use onto gypsum plaster (wall finishes), paint or metal.

STANDARDS

Complies with **IS 15477: 2019** Type 3T "Specification for Adhesives for use with Ceramic, Mosaic and Stone Tiles"

Conforms with the requirements of **EN 12004: 2017** and is a deformable (S1), improved (2), slip resistant (T), cementitious adhesive (C) of class to **C2TS1**

FEATURES

- Very high bond strength
- Non-slip
- Deformable to accommodate minor shocks
- Water resistant
- Easy mixing, smooth application & better workability
- Enhanced flexibility & adhesion can be obtained with addition of ADMIX AD1 (latex additive)

SUITABLE BACKGROUND / BASES

New substrates:

- Concrete walls & floor
- Cement sand screed
- Cement sand render

Renovation works on existing:

- Unglazed tiles
- Hard natural stones*
- Glazed tiles* (vitrified and ceramic tiles)
- Mosaic tiles* and In-situ mosaic flooring*

*The surface should be abraded (roughened) and cleaned before installation.

PHYSICAL PROPERTIES (@ 27± 2°C)

Bed Thickness 2 - 6 mm (can be extended up to 12 mm in area of limited extent)

Pot Life 3 hours

Setting Time 24 hours

Temperature - 30°C to + 150°C

Resistance

VOC Content 1.12 g/L

Properties as per IS 15477: 2019 @ 27 ± 2°C

Property	Min. requirement	Typical Result
Tensile strength (N/mm²)		
Dry condition	1.5	>1.6
Wet Condition	1.0	>1.25
Shear adhesion strength (N/mm²)		
Dry condition	1.5	>1.8
Wet Condition	1.0	>1.5
Heat Aging Condition	1.0	>1.0
Open time in minutes	As per Mftr	20
Adjustment time in minutes	As per Mftr	20
Slip (less than 0.5mm)	< 0.50	<0.4
Deformability (mm)	≥2.5, <5.0	2.63

Properties as per EN 12004: 2017 @ 23 ± 2°C

Property	Min. requirement	Typical Result
Tensile strength (N/mm²)		
Initial	≥1.0	>1.4
After water Immersion	≥1.0	>1.1
After heat aging	≥1.0	>1.4
After freeze-thaw Cycles	≥1.0	>1.2
Open time: tensile adhesion strength (≥ 0.5 N/mm² after not less than 20 min)	≥0.5	>0.5
Slip (T) (not more than 0.5mm)	≤0.5	<0.3
Transverse Deformation (mm)	≥2.5, <5.0	2.68

COVERAGE ESTIMATES

Pack size **Coverage**
2 kg & 20 kg approx. 1.30 - 1.40 kg/m²/mm

Notch Trowel size	Consumption/m ² (@ 45° angle of trowel)
4mm X 4mm	1.80 - 1.85Kgs
6mm X 6mm	2.70 - 2.80Kgs
8mm X 8mm	3.60 - 3.70Kgs
12mm X 12mm	5.35 - 5.50Kgs

Note: Coverage will depend on the nature and flatness of the surface and the method of application. For good coverage, it is vital that all surfaces are smooth, plumb, level and free from defects and undulations.

APPLICATION INSTRUCTIONS

Substrate Preparation

Before starting any work ensure that the base is:

- Sufficiently flat to permit the specified flatness of finished

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tiling, bearing in mind the permissible thickness of the adhesive.

- Suitable for tiling in the service conditions to which it will be exposed.
- Surfaces to be tiled must be dry, clean and free from loose material and contamination.

SITE WORK INSTRUCTIONS

SURFACE CONSIDERATIONS

New Cement Sand rendering/Brick/Block Wall

Before commencing tiling, allow plastered surface to air dry for at least 2 weeks (3 weeks for swimming pools).

New Concrete Bases:

Before commencing tiling, ensure that bases have been allowed to air dry for at least 4 weeks.

Existing Concrete/Screed Bases

Cut out all loose or hollow portions and make good with a 1:3 cement:sand mortar applied over a slurry bonding coat* and dry and cure for 7 days.

Ceramic/Vitrified & Fully Vitrified Tile/Terrazzo/Hard Natural Stone Bases:

Check that existing finish is firmly adhering to the base.

Remove any loose or hollow sounding tiles and reprofile with a 1:3 cement:sand mortar over a slurry bonding coat*.

*Slurry bonding coat is prepared by mixing 2 parts of portland cement to 1 part of ADMIX AD 1. Brush on the base immediately before applying the adhesive.

Mixing

Add 20 kgs of DIAMOND STAR Grey to 3.80 to 3.90 ltrs of clean water. Mix thoroughly until a homogeneous lump-free consistency is obtained. Allow the mixed adhesive to polymerise for 2-5 minutes and mix again for 30 seconds. The adhesive is ready-for-use and has a pot life of 3 hours. No further water should be added. Where mixing by weight is not possible, volume mixing can be carried out at site in the ratio of 1: 3.5 (water: powder)

In case of using latex additives, use 1 litre of ADMIX AD 1 with 2.80 - 2.90 litres of water and 20 kg of DIAMOND STAR Grey

APPLICATION

1. Spread not more than the area which can be tiled within the open time of the adhesive.
2. The mixed adhesive is applied to the prepared surface with a trowel and then combed through with a suitably sized square-toothed notched trowel.
3. The tiles should be fixed within the open time of the adhesive and pressed into place with a twisting and sliding action ensuring solid bed fixing is achieved. The open time is dependent on site conditions and will be extended in lower temperatures and shortened at higher temperatures.
4. Check periodically that good contact is maintained with the back of each tile.
5. Touch the adhesive ribs periodically and if a skin has formed, remove the adhesive and apply a new layer.

6. Leave adequate joints between individual wall and floor tiles unless self-spacing tiles are used.

7. Clean off surplus adhesive from the tile face and between joints

Note:

- Do not use in damp conditions and temperature less than 5°C
- Seal the sides & bottom of porous stones with UNDERTILE & STONE PRIMER to avoid migration of moisture. The top surface can be sealed with a suitable protective sealer from ARDEX ENDURA range.
- Use suitable clamps along with adhesive at the time of installation of tiles/stones above 3 m height.
- For large span tiling works, leave movement joints at every 3m interval and fill with a flexible sealant as per BS 5385.
- Prevent foot traffic till the adhesive has completely set.

SPACERS

Use ARDEX ENDURA spacers for uniform joint width.

GROUTING

Grouting should be carried out after 24 hours. Use the appropriate grouting material from the range of ARDEX ENDURA cementitious and epoxy grouts.

Note: The addition of ADMIX GT 1 to cement - based grouts will enhance adhesion to tile/stones edges, increase water-resistance and improves flexibility.

CLEANING

Tools and containers may be cleaned using clean water when the adhesive is still fresh. The hardened adhesive can be removed from tools mechanically.

STORAGE AND SHELF LIFE

DIAMOND STAR Grey has a shelf life of 12 months when stored in normal dry conditions.

PRECAUTIONS

Keep out of reach of children. Wear suitable protective clothing, gloves and eyes/face protection. After contact with skin, wash immediately with plenty of clean water. In case of contact with eyes rinse immediately with plenty of clean water and seek medical advice.

For more details please refer the relevant Material Safety Data Sheet

CONDITIONS OF SALE

Sold subject to the Company's conditions of sale which are available on request.

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NOTE

The information supplied in this datasheet is based upon extensive experience and is given in good faith in order to help you. Our Company policy is one of continuous Research and Development; we therefore reserve the right to update this information at any time without prior notice. We also guarantee the consistent high quality of our products; however as we have no control over site conditions or the execution of the work, we accept no liability for any loss or damage which may arise as a result thereof.



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