

# SILVER STAR

## Polymer Modified Tile Adhesive

### DESCRIPTION

Polymer modified Grey/White cement-based general purpose adhesive having excellent application properties with good bond strength used for fixing terracotta and ceramic tiles on both interior floor and wall in dry areas on cementitious substrate. also suitable for installing porous natural stones on interior floors only.

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

### STANDARDS

Confirms to **IS 15477: 2019 Type 1T** “Adhesives for use with Ceramic, Mosaic and Stone Tiles”.

Confirms to **EN 12004:2017** and is a normal set cementitious adhesive (C1) with slip resistance (T) of class **C1T**

### FEATURES

- Good bond strength
- Easy mixing & application
- Can be used up to 6 mm bed thickness (can be extended up to 12 mm thickness in area of limited extent)
- Enhanced flexibility & adhesion can be obtained with addition of ADMIX AD1 (latex additive)

### SUITABLE SUBSTRATES

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

### PHYSICAL PROPERTIES @ 27 ± 2°C

Pot Life	3 hours
Setting Time	24 hours
Temperature Resistance	-30°C to 150°C
VOC Content	0.84 g/L

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

Property with Test Method	Min. Requirements	Typical Result
Tensile Adhesion Strength (as per Annex A) Dry condition	0.50 N/mm <sup>2</sup>	>1.00 N/mm <sup>2</sup>
Shear Adhesion Strength (as per Annex B) Dry condition	1.00 N/mm <sup>2</sup>	>1.10 N/mm <sup>2</sup>
Open time (as per Annex C)	As per Mftr.	15 mins
Adjustment time (as per Annex D)	As per Mftr.	10 mins
Slip (as per annex E)	< 0.50 mm	0.35 mm

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

Property with Test Method (as per Part 2)	Min. Requirements (as per Part 1)	Typical Result
Tensile Adhesion Strength (Clause 8.3)		
Initial	≥ 0.50 N/mm <sup>2</sup>	> 0.65 N/mm <sup>2</sup>
After water immersion	≥ 0.50 N/mm <sup>2</sup>	> 0.60 N/mm <sup>2</sup>
After heat aging	≥ 0.50 N/mm <sup>2</sup>	> 0.65 N/mm <sup>2</sup>
After freeze-thaw cycles	≥ 0.50 N/mm <sup>2</sup>	> 0.60 N/mm <sup>2</sup>
Open time @ 20 mins: Tensile Adhesion Strength (Clause 8.1 & 8.3)	≥ 0.50 N/mm <sup>2</sup>	> 0.55 N/mm <sup>2</sup>
Slip (T) (Clause 8.2)	≤ 0.50 mm	0.35 mm

### COVERAGE ESTIMATES

#### Coverage

Approx. 1.45 - 1.55 kg/m<sup>2</sup>/mm

Square notch Trowel size	Consumption/m <sup>2</sup> (@ 45° angle of trowel)
6mm X 6mm	3.10 - 3.30 Kgs
8mm X 8mm	4.10 - 4.40 Kgs
12mm X 12mm	6.10 - 6.50 Kgs

**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.

#### Pack size

2 kg & 20 kg  
(Available in 50 kgs bag as DURAFIX SILVER STAR for project supply)

### APPLICATION INSTRUCTIONS

#### Substrate Preparation

Before starting any work ensure that the base is:

- Sufficiently flat to permit the specified flatness of finished 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 Concrete Bases:

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

New Cement Sand rendering:

Before commencing tiling, allow plastered surface to air dry for at least 2 weeks.

Existing Concrete/Screed Bases:

Cut out all loose or hollow portions and make good with a 1:3

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cement : sand mortar applied over a slurry bonding coat\* and let it cure and dry for 7 days.

\*Slurry bonding coat is prepared by mixing 2 parts of portland cement to 1 part of ADMIX AD1. Brush on the base immediately before applying the adhesive.

### Mixing

Add SILVER STAR to clean water. Mix thoroughly until a lump-free mortar is obtained. The adhesive is immediately 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 (water : powder)

### Water Content

20 kg Bag : 3.55 to 3.65 ltrs (Grey)

20 kg Bag : 4.20 to 4.40 ltrs (White)

50 kg Bag : 8.80 to 9.25 ltrs (Grey)

50 kg Bag : 10.50 to 11.0 ltrs (White)

In case of using latex additives,

Water+ADMIX AD 1

20 kg Bag : 2.55 to 2.65 ltrs (Grey)+1 ltrs of ADMIX AD 1

20 kg Bag : 3.20 to 3.40 ltrs (White)+1 ltrs of ADMIX AD 1

50 kg Bag : 6.30 to 6.75 ltrs (Grey)+2.5 ltrs of ADMIX AD 1

50 kg Bag : 8.00 to 8.50 ltrs (White)+2.5 ltrs of ADMIX AD 1

### 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. (data removed)
- Use suitable clamps along with adhesive at the time of installation of tiles/stones above 3m height as recommended by IS 15477: 2019
- 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 (minimum 2mm) for uniform joint width.

### GROUTING

Grouting should be carried out after 24 hours. Use the appropriate grouting material from the range of cementitious and epoxy grouts. EPOXY GROUT is strongly recommended for locations with requirement of hygiene & chemical resistance.

**Note:** The addition of ADMIX GT1 to cement - based grouts will enhance adhesion to tile edges, increase water-resistance and improves flexibility.

### SEALERS

ARDEX ENDURA offers a range of Tile & Stone surface sealers depending on the desired finish:

- Wet look finish: Use 'Heavy Duty Impregnating Tile & Stone Sealer`
- Glossy finish: Use 'Impregnating Tile & Stone Sealer`
- Natural look: Use 'FC SS' or 'FC Sealer`

### 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

SILVER STAR 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.

### 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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## ARDEX ENDURA (INDIA) PRIVATE LIMITED

an ISO 9001:2015 & ISO 14001:2015 certified company  
Corporate Office & Regd. Office: Unit No. 406 & 407,  
"Brigade Rubix" No. 20, HMT Campus,  
Yeshwanthpur Hobli, Bengaluru - 560013.  
CIN No: U24233KA1997PTC022383 Tel: +91 80 66746500  
Email: [customercare@ardexendura.com](mailto:customercare@ardexendura.com)  
Website: [www.ardexendura.com](http://www.ardexendura.com)

### Branches

• AHMEDABAD	+919228019132	• GUWAHATI	+917896002188	• MUMBAI	022 65133299
• AURANGABAD	+918605445577	• HUBBALLI	0836 2970505	• MYSURU	0821 2570171
• BENGALURU	+919972922333	• HYDERABAD	+919703250099	• NAGPUR	+919822223743
• BHUBANESHWAR	0674 2578101	• INDORE	0731 4021148	• PUNE	+919881249292
• CALICUT	0495 2740334	• JAIPUR	0141 2392993	• RAIPUR	0771 4038300
• CHENNAI	044 42805544	• KOLKATA	+919831071084	• SALEM	0427 2211454
• DELHI	+9198106 03431	• LUCKNOW	0522 4043251	• TRIVANDRUM	0471 2598648
• ERNAKULAM	0484 2341044	• LUDHIANA	0161 2532170	• VIJAYAWADA	+918688354587
• GOA	0832 2750992	• MANGALURU	0824 2442176	• VISAKAPATNAM	0891 6469499