

हर टाइल के पीछे MAGIC

ULTIMA ADHESIVE

TECHNICAL DATA SHEET



Impervious and Weather Proof



Increased Open Time



No Shrinkage



No Sagging



All Purpose Adhesive



Low VOC



Available in 20 kg Bag

PRODUCT DESCRIPTION

Ultima Adhesive is an all-purpose cementitious adhesive. It is an extremely versatile, and multi-functional adhesive with ultimate strength for fixing all format of tiles & natural stones on all types of floor and vertical surfaces. It can sustain extreme weather condition which ensures that debonding and cracking are never a problem.

SUITABLE FOR

Material & Area

- Large format and glass mosaic tiles & stones
- Internal & external application/horizontal & vertical surfaces as well.
- Tiles with porosity ≤ 3%.
- Plaster board and fibre-cement sheets.

Substrate

- Cement mortar beds
- Cement based plaster/ Concrete / Screed / Terrazzo
- Brick/ Block/ Concrete Masonry
- Tile on Tile
- Cement based self leveling screed
- Waterproofing products
- Fibre cement slabs
- Heating system
- Thermal Insulation paneling systems

TECHNICAL DETAILS

Conforms to IS 15477:2019 Type - 4'T'S1 | EN 12004 C2 TE S1

PHYSICAL PROPERTIES @ 70° F (21° C)

Tile laying adhesive mixed with water

PARAMETERS	RESULTS
Colour	Grey/White
Mixing Ratio (Powder To Water)	3.5 : 1
Bulk Density	1.3 - 1.5 gm/cc
Mixing Density	1.7 - 1.9 gm/cc
Pot Life	> 3 Hours
Open Time	> 30 Minutes
Adjustability	~30 Minutes
Final Setting Time	24 Hours
Max. Bed Thickness	15 mm
Time To Light Foot Traffic	16 - 24 Hours
Ready For Grouting	24 Hours
Ready For Use	14 Days

PERFORMANCE PROPERTIES

IS 15477:2019

PARAMETERS	REQUIREMENTS	RESULTS	TEST METHODS
Tensile Adhesion (Dry Condition 28 Days)	1.5 N/mm ²	2.6–2.8 N/mm ²	IS 15477:2019 Annexure A Clause 5.1
Tensile Adhesion (Wet Condition 28 Days)	1 N/mm ²	2.6–2.7 N/mm ²	IS 15477:2019 Annexure A Clause 5.1
Shear Adhesion (Dry Condition 28 Days)	1.5 N/mm ²	2.5–2.7 N/mm ²	IS 15477:2019 Annexure B Clause 5.2
Shear Adhesion (Heat Aging Condition 28 Days)	1 N/mm ²	1.9–2.1 N/mm ²	IS 15477:2019 Annexure B Clause 5.2
Shear Adhesion (Wet Condition 28 Days)	1 N/mm ²	1.9–2.1 N/mm ²	IS 15477:2019 Annexure B Clause 5.2
Slip Resistance	<0.5 mm	0.15–0.2 mm	IS 15477:2019 Annexure E Clause 5.5
Deformability	>2.5 mm to <5 mm	2.5–4 mm	IS 15477:2019 Annexure F Clause 5.6

Ultima adhesive mortar conforms to IS 15477:2019 Type 4T S1

EN 12004

PARAMETERS	REQUIREMENTS	RESULTS	TEST METHODS
E- Extended Open time	≥ 0.5 N/mm ² after not less than 30 min	1–1.1 N/mm ²	EN 1346
T-Slip Resistance	≤0.5 mm	0.3–0.5 mm	EN 1308
S - Transverse Deformation (S1)	≥ 2.5 mm - < 5 mm	2.8 to 3.2 mm	EN 12002
Tensile Adhesion Strength (C2)	≥ 1 N/mm ²	2.5–2.7 N/mm ²	EN 1348 Clause 8.2
Tensile Adhesion Strength (After Water Immersion)	≥ 1 N/mm ²	1.5–1.6 N/mm ²	EN 1348 Clause 8.3
Tensile Adhesion Strength (Heat Ageing)	≥1 N/mm ²	1.8–2 N/mm ²	EN 1348 Clause 8.4
Tensile Adhesion Strength (Freeze & Thaw)	≥ 1 N/mm ²	1.8–2 N/mm ²	EN 1348 Clause 8.5

Ultima adhesive mortar conforms to EN 12004 C2 TE S1/ISO 13007

ANSI A118

PARAMETERS	REQUIREMENTS	RESULTS	TEST METHODS
Open Time (20 Minutes At 28 Days)	≥ 0.5 N/mm ²	0.9–1.1 N/mm ²	ANSI A118 Clause – 5.3
Sag Resistance	≤ 0.5 mm	0.15–0.25 mm	ANSI A118- Clause 6.0
Glazed Wall Tile			
Shear Strength (7 Days)	>2.07 N/mm ²	2.8–3 N/mm ²	ANSI A118 – Clause 7.1.2
Shear Strength (7 Days Water Immersion)	>1.38 N/mm ²	2.0–2.2 N/mm ²	ANSI A118- Clause 7.1.3
Porcelain Mosaic Tile			
Shear Strength (1 Day)	>0.5 N/mm ²	1.1–1.2 N/mm ²	ANSI A118 – Clause 7.2.2
Shear Strength (7 Days)	>1.38 N/mm ²	2.5–2.7 N/mm ²	ANSI A118 – Clause 7.2.3
Shear Strength (7 Days Water Immersion)	>1.03 N/mm ²	2–2.2 N/mm ²	ANSI A118 – Clause 7.2.4
Shear Strength (28 Days)	>1.38 N/mm ²	2.5–2.75 N/mm ²	ANSI A118 – Clause 7.2.5
Shear Strength (28 Days Freeze- Thaw Cycling)	>1.2 N/mm ²	2–2.2 N/mm ²	ANSI A118 – Clause 7.2.5
Shear Strength (12 Weeks)	>1.38 N/mm ²	2.5–2.8 N/mm ²	ANSI A118 – Clause 7.2.7
Quarry Tile			
Shear Strength (28 Days)	>1.03 N/mm ²	2.4–2.6 N/mm ²	ANSI A118- Clause 7.3.2
Shear Strength (28 Days Freeze- Thaw cycling)	>0.69 N/mm ²	2.1–2.2 N/mm ²	ANSI A118 – Clause 7.3.3

Ultima adhesive mortar conforms to ANSI A118.4ET

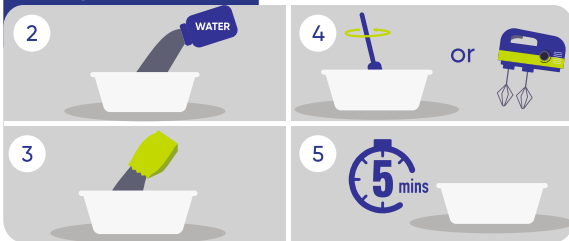
INSTALLATION

Surface Preparation



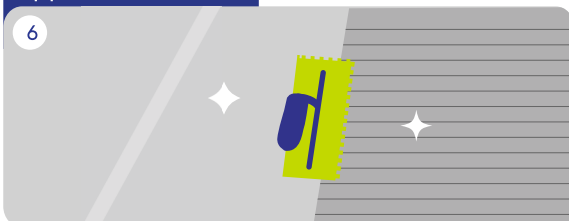
- All surfaces must conform to the dimensional stability requirements outlined in IS 1443-2018.
- They should be level, properly cured, undamaged, compact, rigid, resistant, dry, free from any debonding agents, and protected against damp rising.
- Pre-wet or dampen highly absorbent concrete surface with good quality fresh water.

Mixing



- Use 5-6 litres of potable water for every 20 kg of adhesive.
- Pour the minimum recommended amount of potable water into a clean mixing container.
- Gradually add dry mix product to the water (not vice versa) while continuously mixing it with a low-speed electric single-paddle (spiral) mixer for mixing at a speed of <math><500\text{ rpm}</math>.
- Mix thoroughly for 2-3 minutes or until you achieve a uniformly colored, smooth mixture. Add additional water, if necessary, but do not exceed the maximum specified amount.
- Allow the mixed product to 'mature' for 4-5 minutes without stirring.
- Remix for 15 seconds just before using.
- Avoid over-mixing to minimize air entrainment

Application



- The adhesive needs to be applied with a flat side of the trowel using a scrapping motion.
- Additional mortar should be then applied with the notched edge of the trowel.
- For large size tiles with sides > 2 feet, apply additional adhesive to the back of the tile surface with the flat side of the trowel.
- Occasionally check to inspect tiles are properly stuck. If the adhesive seems to be non-sticky, remove the existing and replace with fresh adhesive. Use a rubber mallet to tap the tile and ensure it is fully bedded in the adhesive.

To create elastic expansion joints, follow these guidelines:

- For external applications, create 5 mm joints at every 10 m².
- For internal applications, create 3 mm joints at every 25 m².
- In long, narrow applications, create 3 mm joints after every 8 meters.

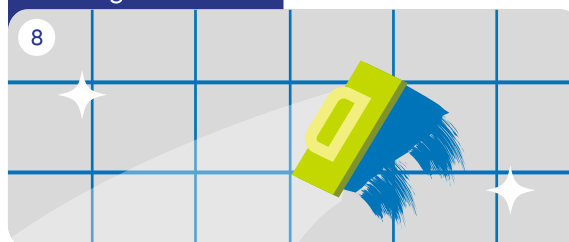
Always respect all structural, fractionizing, and perimeter joints present on the surfaces.

Cleaning



- Clean any excess adhesive from the tile surfaces and grout lines immediately with a damp sponge or cloth.

Grouting

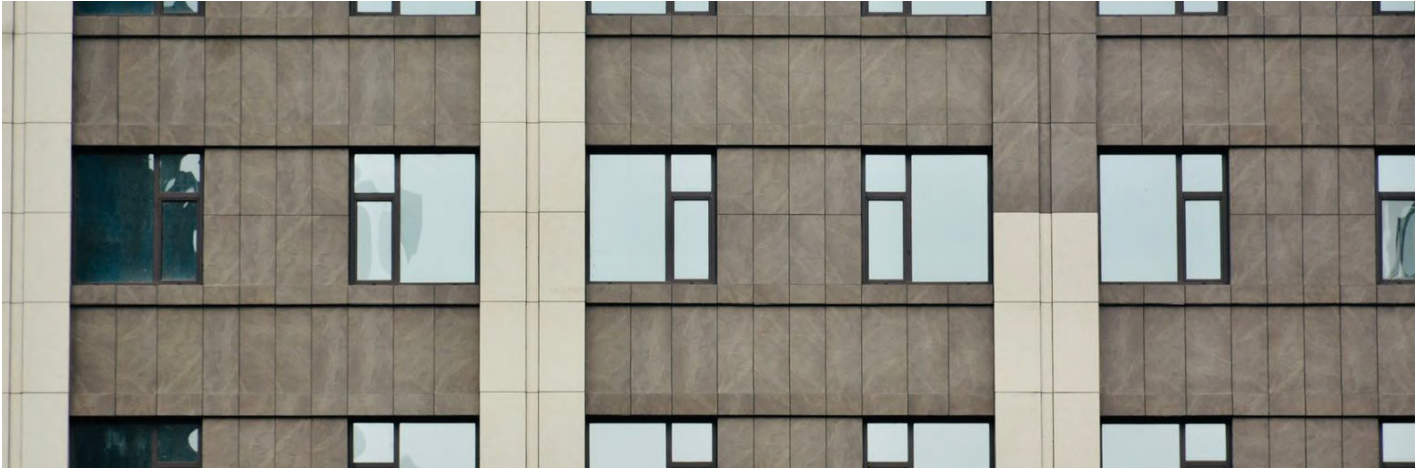


- Grouting should be carried out after 24 hours of tiling. It is advisable to use the appropriate grouting material from Magicrete range of cementitious or epoxy grouts.

COVERAGE

- A coverage of 55-60 Sq. Ft. per bag of 20 Kg is received when used with a bed thickness of 3mm (using 6mm x 6mm square notched trowel).

Note: Coverage is based on smoothness and evenness of the substrate, and the thickness of mortar used.



SHELF LIFE

Factory packed bags of Tile Laying Adhesive Ultima carries a shelf life of 12 months, if stored in cool & dry place. However, as temperature, humidity, water addition & other parameters vary from site to site.

LIMITATIONS

Adhesives and grouts for tiles are not replacements for waterproof membranes. When a waterproof membrane is required, use Magicrete waterproofing products by Magicrete or any other waterproofing product available in the market.

SAFETY PRECAUTIONS

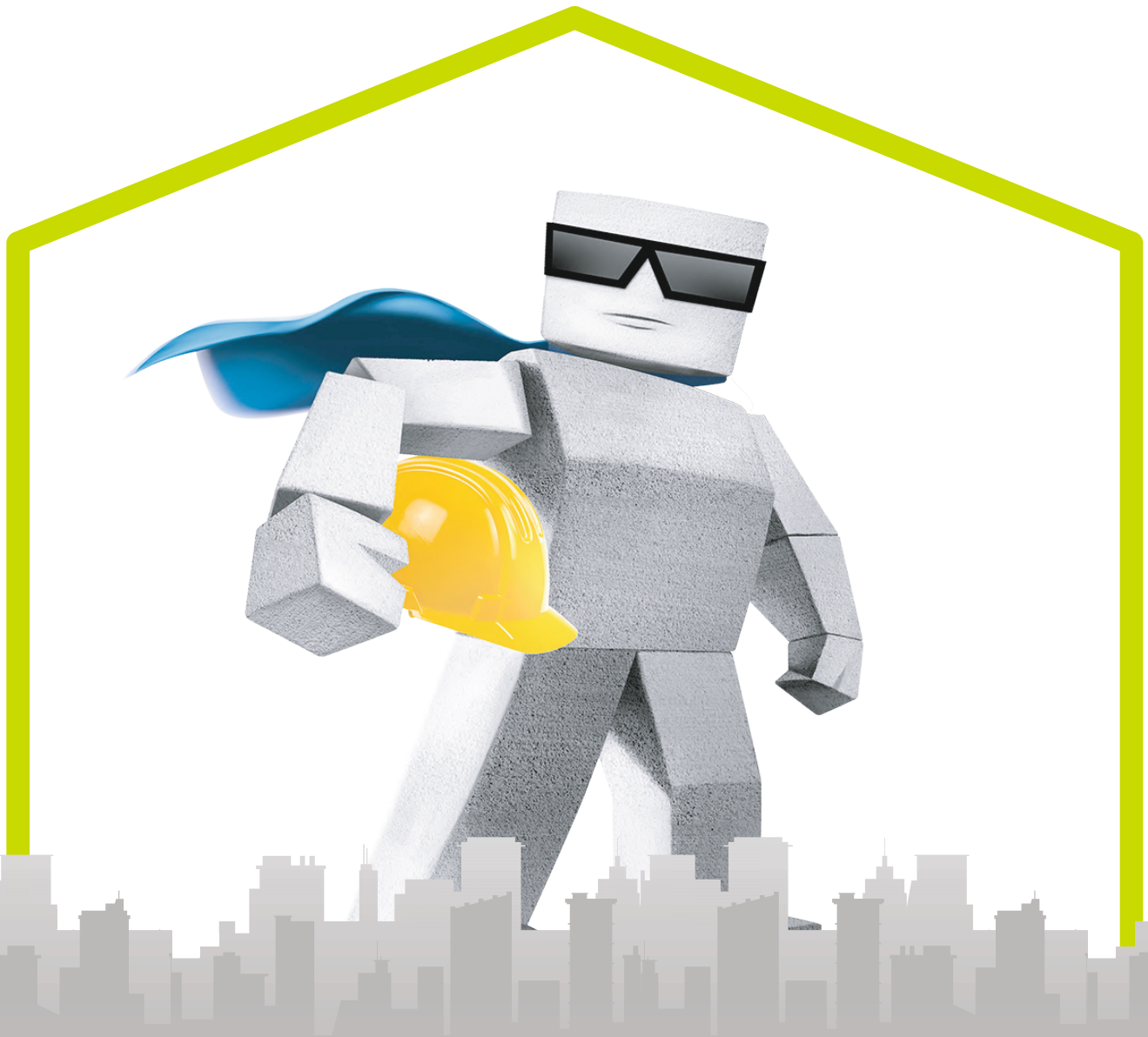
- Keep out of reach of children.
- Wear suitable protective clothing, gloves, and eye/face protection.
- After contact with the skin, wash immediately with plenty of clean water.
- In case of eye contact, rinse immediately with plenty of clean water and seek medical advice.

IMPORTANT NOTES

- Always add powder to water.
- Do not add excess water than recommended.
- Do not add extra cement or sand to tile adhesive, as it can disturb the Magicrete product's intended formulation and compromise its performance.
- Do not use on wet screed, surface must be fully cured (28 days).
- Do not use the adhesive to correct surface irregularities >12 mm. May go up to 15 mm in limited extent.
- Applicator must evaluate the use of an additional mechanical fastening system for extra security in case of heavy stone/large tiles for more than 3m height (such as steel hooks fastened to the substrate).
- Protect from direct rainfall/ foot traffic for at least 24 hours.
- Leave gap between the tiles with the help of spacers & fill gaps with Magicrete tile grout.
- It is mandatory to use appropriate size notched trowel to achieve required thickness of adhesive
- It is advisable to use Magicrete Ultrabond on the back surface of tile/stone when either substrate or tile/stoned to be applied is highly absorbent.

magicrete®

magic behind happy homes



Magicrete Building Solutions Pvt. Ltd.

(ISO 9001 :2015, ISO 14001 :2015 & ISO 45001 :2018 Certified co.)

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