

Technical Data Sheet



444
UNIVERSAL
WHITE ADHESIVE

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**WITH
PRO-FIX
TECHNOLOGY**



JKTylo 444 Universal White Adhesive is a specially formulated thin set adhesive for fixing natural stones and mosaics on interiors and exteriors. It is manufactured with high strength white cement to make this applicable for wet and dry areas. It is suitable for fixing all types of ceramic, semi - vitreous, vitrified tiles and natural stones on a variety of substrates.

Area of Application

This product is designed especially for marble slabs, medium format stone and mosaic tiles in interior and exterior applications. This product is also suitable for ceramic & vitrified tiles floor and wall application on various substrates such as cement plaster, concrete, brick masonry, existing tiles and stones*, precast terrazzo etc. It can be used upto a maximum of 12mm bed thickness. It is also applicable for wet and submerged areas like swimming pool, kitchen, bathroom and restaurant.

Substrates

- Cement screed
- Cement plaster
- Concrete masonry
- Brick masonry
- Cement terrazzo
- Existing vitrified tile* and ceramic tile*
- Existing natural stone*

* Surface should be cleaned and roughened before application of tiles or stones.

Key Benefits and Features

- Single component, just add water
- Extra whiteness
- Excellent workability & easy mixing
- No water curing required
- Superior bonding with all cementitious substrates
- Sag resistant for vertical application
- Tile on tile application
- Water and shock resistant

- Easy mixing and smooth application
- Complies with EN/ISO C2T classification
- As per IS 15477:2019 - Type 2T standard
- Fortify with latex compound for external wall applications**
- No VOC - for healthy living

** Consult with JKTylo technical team for external wall applications.

Typical Properties

Color	White
Powder Density	1.31 - 1.46 Kg/Litre
Open Time	15 ± 5 Minutes
Adjustment Time	20 ± 5 Minutes
Pot Life	90 - 120 Minutes

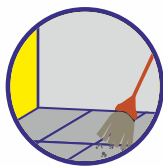
Water-Powder Ratio	25% - 28%
Foot Traffic/ Ready To Use	24 Hours

Note : Result depends on weather and site conditions

Application Method

1. Surface Preparation

- Surfaces temperature should be cool before application, ideally below 35 degrees.
- Surface should be structurally sound and free from dirt, oil, grease, loose peeling paint, concrete sealer or curing compound.
- All slabs must be plumb and true with in: Walls – 3mm in 2.5m, and Floors – 1.5mm in 1.0m
- Rough or uneven concrete surfaces should be made smooth with Screed/Plaster material. Use a wood float for better finish.
- Dry, dusty concrete slabs or masonry should be dampened and excess water should be swept off.



Installation may be made on a damp surface.

- New concrete slabs shall be damp cured and should be 28 days old before application.

2. Mixing and Blending

- Take 5.0 to 5.5 Litres of potable water into a clean container.
- Gradually mix 20 Kg JKTylo with slow speed mixer to get a uniform lump-free paste in workable consistency.
- Allow paste to settle for 5-10 minutes. Adjust consistency, if necessary.
- Mixed paste should be used within 90-120 minutes.



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Application Method

3. Fixing Application

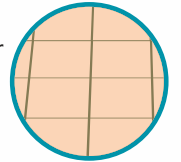
- Apply adhesive uniformly on a substrate to a desired thickness with flat side of notch trowel. Comb with a notch trowel using notched side.
- Use proper size of notched trowel to ensure full bedding of the tile.
- Spread as much adhesive paste as it can be tiled within 10 minutes.
- Large format tiles* (above 12"x12" size) should be back buttered to provide full bedding and firm support.
- Press the tile against the applied tile adhesive and fix it by using rubber mallet. Imbed tile and adjust level.
- Ensure that back of the tile is fully covered with the tile adhesive.
- Ensure adequate gap between tiles/stones to accommodate thermal expansion and contraction.



- As required one can use spacer to provide grout joints between tiles/stones. Remove the spacers when the adhesive is firmly set.
- If the Tile adhesive is dried and skinned, then adhesive should be removed and replaced with a fresh adhesive.

4. Grouting

- Grouting should be carried out after 24 hours from the time of tile installation.
- Grout with JKTylo Cementitious Grout.
- For stain resistance, use JKTylo Epoxy Grout.



* Contact customer technical services for large format tile or stone installations on exterior surfaces.

* Tiles & stones should be clamped for safety in all interior and exterior wall installation above 3 meters.

Technical Information

Test specification requirement as per IS 15477:2019

S.No.	Test Property	Test Method	Specification	Typical Value
1	Tensile Adhesion (N/mm²)			
	(a) Dry Condition - 28 days	IS 15477:2019 Annex A (Clause 5.1)	Min. 1.0 N/mm ²	1.05 - 1.20 N/mm ²
	(b) Wet Condition - 21 days	IS 15477:2019 Annex A (Clause 5.1)	Min. 1.0 N/mm ²	1.05 - 1.20 N/mm ²
2	Shear Adhesion (N/mm²)			
	(a) Dry Condition - 28 Days	IS 15477:2019 Annex B (Clause 5.2)	Min. 1.25 N/mm ²	1.35 - 1.45 N/mm ²
	(b) Heat Ageing Conditions - 28 Days	IS 15477:2019 Annex B (Clause 5.2)	Min. 1.0 N/mm ²	1.10 - 1.40 N/mm ²
	(c) Wet Condition - 28 Days	IS 15477:2019 Annex B (Clause 5.2)	Min. 1.0 N/mm ²	1.10 - 1.20 N/mm ²
3	Slip (required for vertical application only)	IS 15477:2019 Annex E (Clause 5.5)	Shall not be more than 0.5 mm	0.35 - 0.45 mm
4	Deformability (required for vertical application only)			
	(a) Deformable Adhesive S1	IS 15477:2019 Annex F (Clause 5.6)	≥ 2.5 mm, < 5.0 mm	NA
	(b) Highly Deformable Adhesive S2	IS 15477:2019 Annex F (Clause 5.6)	≥ 5.0 mm	NA

Test specification requirement as per EN 12004 & ISO 13007

S.No.	Test Property	Test Method	Specification	Typical Value
1	Open Time : Tensile Adhesion Strength (N/mm²)			
	(a) After 5 Minute	EN 1346		1.18 - 1.26 N/mm ²
	(b) After 20 Minute	EN 1346	≥ 0.5 N/mm ² After not less than 20 minute	0.76 - 0.92 N/mm ²
	(c) After 30 Minute	EN 1346	≥ 0.5 N/mm ² After not less than 30 minute	NA
2	Tensile Adhesion Strength (N/mm²)			
	(a) Dry Conditions - 28 Days	EN 1348	≥ 1.0 N/mm ²	1.15 - 1.25 N/mm ²
	(b) Water Immersion Conditions - 28 Days	EN 1348	≥ 1.0 N/mm ²	1.0 - 1.15 N/mm ²
	(c) Heat Ageing Conditions - 28 Days	EN 1348	≥ 1.0 N/mm ²	1.10 - 1.18 N/mm ²
3	Slip Resistance (for vertical application)	EN 1308	≤ 0.5mm	0.48 mm
4	Transverse Deformation			
	(a) Deformable Adhesive - S1	EN 12002	≥ 2.5 mm, < 5 mm	NA
	(b) Highly Deformable Adhesive - S2	EN 12002	≥ 5 mm	NA

Packing : 20 Kg BOPP Bags

Coverage : Approx 50-55* sq.ft. per 20 Kg bag when applied by notch trowel of size 1/4" x 1/4" (6mm x 6mm) square notched trowel at an average thickness of 3mm.

* Coverage depends upon trowel notch size, type and size of tiles and substrate evenness and smoothness

Shelf Life : 12 months from the date of manufacturing, when stored in dry area.

Note : Actual coverage and field performance will depend on installation method and site conditions.

Disclaimer :

The company provides guarantee against defective material, but the application and usage of products are made without guarantee since the application conditions are not in its control. All products are tested under the recommended conditions of temperature $27 \pm 2^{\circ}\text{C}$ and humidity $65 \pm 5\%$. Company recommends to verify the suitability of product for intended use with the latest version of data sheet. The company may modify product data sheet without any prior notice. All technical characteristics are listed for guidance only and JKTylo technical team may be contacted for more information.



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