



# **TECHNICAL DATASHEET**

# FIXOBOND"+

High Strength & Durable Adhesive Designed for Medium to Large Profile Tile & Stone Installations.











Extended Open Time



Excellent Dual Bond Strength





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VERSION 3 (Apr. 2024)









# **PRODUCT DESCRIPTION**

**FIXOBOND+** (available in **WHITE** or **GREY**) is a cement-based adhesive with advanced polymer modifications, offering self-curing capabilities and exceptional adhesive strength. This adhesive is specifically formulated for securely fixing tiles, natural stones, vitrified tiles, marble, granite and mosaic tiles on both interior and exterior walls and floors.

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# STANDARD COMPLIANCE

FIXOBOND+ adhesive complies to the Type 2T specifications outlined in "IS 15477: 2019 - Adhesives for ceramic, mosaic, and stone tiles." Additionally, it aligns with class C2TE, which designates it as a cementitious (C), improved (2), slip resistant (T) with extended open time (E) tile adhesive in accordance with EN 12004: 2017.

# **KEY FEATURES**

- Extended open time
- Superior workability
- Excellent dual bond strength
- No vertical slip
- Low VOC (Volatile Organic Compounds)
- Suitable for wet areas

# TECHNICAL INFORMATION

#### APPLICATION PROPERTIES

PROPERTY: TEST METHOD	TYPICAL VALUES	
Appearance	Grey / White powder	
Bulk density	Grey: $1435 \pm 1535 \text{ kg/m}^3$ White: $1340 \pm 1440 \text{ kg/m}^3$	
Water demand @ 27 ± 2°C Ambient & water temperature	Grey: $23 \pm 2\%$ by weight White: $28 \pm 2\%$ by weight	
Mixing ratio @ 27 ± 2°C  Ambient & water temperature (Powder : Water)	Grey: approx. 2.5 : 1 by volume White: approx. 3 : 1 by volume	
Pot life @ 23 ± 2°C	2 hours 45 minutes ± 15 minutes	
@ 27 ± 2°C	2 hours 15 minutes ± 15 minutes	
@ 35 ± 2°C	1 hour 15 minutes ± 15 minutes	
Open time @ 23 ± 2°C	30 – 35 minutes	
@ 27 ± 2°C	25 – 30 minutes	
@ 35 ± 2°C	20 – 25 minutes	

Wall grouting @ 27 ± 2°C	24 hours
@ 35 ± 2℃	16 hours
Floor grouting @ 27 ± 2°C	24 hours
@ 35 ± 2°C	16 hours
Light foot traffic @ 27 ± 2°C	24 hours
@ 35 ± 2°C	16 hours
Ready for use	14 days
Ready for use  VOC content	14 days < 0.5 gm/kg
VOC content  Application temperature	< 0.5 gm/kg
VOC content  Application temperature (Substrate & laying material)	< 0.5 gm/kg +5°C to +35°C

#### PERFORMANCE PROPERTIES AS PER IS 15477:2019 (TYPE 2T) @ 27 ± 2°C

PROPERTY: TEST METHOD	TYPICAL VALUES
Tensile adhesion strength – dry condition @ 28 days	≥ 1.3 N/mm²
Wet condition @ 28 days	≥ 1.10 N/mm²
Shear adhesion strength – dry condition @ 28 days	≥ 1.40 N/mm²
Wet condition @ 28 days	≥ 1.10 N/mm²
Heat ageing condition @ 28 days	≥ 1.10 N/mm²
Open time	25 – 30 minutes
Adjustment time	20 – 30 minutes
Slip resistance (T)	≤ 0.5 mm

### PERFORMANCE PROPERTIES AS PER EN 12004:2017 (C2TE) @ 23 ± 2°C

12004:2017 (G2IE) @ 23 ± 2°C		
PROPERTY: TEST METHOD	TYPICAL VALUES	
Tensile adhesion strength – initial condition @ 28 days (dry condition)	≥ 1.20 N/mm²	
Water immersion condition @ 28 days (wet condition)	≥ 1.00 N/mm²	





Heat ageing condition @ 28 days	≥1.15 N/mm <sup>2</sup>	
Freeze thaw condition @ 28 days	≥ 1.00 N/mm²	
Open time	≥ 0.6 N/mm <sup>2</sup> @ 30 minutes	
Slip resistance (T)	≤ 0.5 mm	

### APPLICATION COMPATIBILITY

#### AREAS OF APPLICATION

Tiling of internal & external floors & walls up to 10 feet height.

#### SUITABLE SUBSTRATE

Concrete, cement renders, cement screeds, cementitious waterproof coatings, ceramic tiles\*, vitrified tiles\*, natural stones\* and **ASCORENDER**.

\*Subject to the porosity of the surface, in case of low absorption, it is recommended to use **ASCOPRIME GT** before the tile installation.

#### SUITABLE LAYING MATERIAL

Ceramic, clay, porcelain, cement mosaic tiles, vitrified tiles (Group B I & B II)\*\* and natural stone. For laying large format tiles and medium to large format natural stones on the floor, mix FIXOBOND+ with FIXOBOND AD during installation. Consult with ASCOLITE'S technical team for details.

\*\*/S 15622: 2006 - Pressed ceramic tiles specifications.

#### Note:

 In case of using FIXOBOND AD: Use 400 - 500ml of FIXOBOND AD with 3.8 - 4.5 litres of water and 20 kg of FIXOBOND+ grey and 460 - 540 ml of FIXOBOND AD with 4.15 - 4.85 litres of water and 20 Kg of FIXOBOND+ white.

### APPLICATION METHOD

#### **SUBSTRATE PREPARATION**

- The substrate must be clean, levelled, fully cured, compact, stiff, undamaged and devoid of debonding agents.
- Any contaminants that impairs bonding must be mechanically removed before the tile is installed including off-cuts, sawdust, nails, screws, loose plaster and wood by using a steel wire brush, vacuum cleaner, moist sponge or even a grinder if necessary.



- The substrate must be plumb, levelled and true with deviations from the necessary plane not to exceed ¼ inch in 10 feet (6 mm in 3 m). Make sure you use ASCORENDER (Grey or White) to level any substrate that needs to be plumbed. It could be necessary to utilise FIXOBOND AD as a bonding agent along with ASCORENDER. Contact our technical team for a comprehensive process and verification.
- Use water to clean dry, dusty surfaces and then sweep away any extra water.

#### Notes:

- The required tensile strength of the substrate should be > 1N/mm<sup>2</sup>.
- Add 11.7 litres of water and 800ml of FIXOBOND
   AD with 50 kg of ASCORENDER.

#### **MIXING**

• A 20 kg bag will require roughly 23  $\pm$  2% (for Grey) and 28  $\pm$  2% (for White) of clean water by weight to

reach a slump-free consistency. If weight mixing isn't an option, volume mixing can be done instantly with **FIXOBOND** + in a clean vessel or container. Mix 4.2 – 5 litres (for Grey)



2





- and 4.6 5.4 litres (for White) of clean water with 20 kg powder to reach a slump-free consistency.
- Use a slow speed mechanical mixer and mix the powder into the water for approximately 5 minutes. The mixture should have thixotropic characteristics with a smooth paste consistency.
- After letting the mixture slake for 2 3 minutes and remixing it for another 2 3 minutes, the adhesive is ready to be applied.
- The adhesive should have the right consistency so that it can be applied with a notched trowel of the right size without sagging.





#### **APPLICATION**

- The installation of tiles must strictly correspond to EN 12004; 2017 and IS 15477; 2019 specifications.
- It is imperative to clean the back of the tile and ensure that it is clear of any dust, filth, debris and/or releasing agent before beginning the tile installation procedure. If normal dusting and water cleaning are ineffective, ASCOCLEAN BTC can be used to clean the back side of the tile.
- To ensure full bedding of the tile, the right notched trowel size needs to be chosen according to the size and kind of tiles being used.
- Use the plain side of the appropriate notched trowel to apply the adhesive to the prepared SSD substrate before it surpasses its permitted pot life span.
   The adhesive must be distributed uniformly, making sure there are no voids or thick spots.





Whether using a notched trowel horizontally or

vertically, pay attention to the direction in which the adhesive is combed using the notched side of the trowel, keeping in mind the direction in which air can be released easily while breaking the



notches during tile laying. While applying, refrain from whirling the product.

- It is strongly advised to butter the adhesive onto the back side of the tile before laying for optimum bonding.
- Verify that the applied adhesive remains within the permissible open time and proceed with the tile installation, positioning the tiles in a manner that facilitates the escape of air from beneath the tiles. This can be done by leaving small gaps between the tiles or by using spacers.





- The open time will vary depending on the type of adhesive, substrate and the environmental conditions.
- Ensure a secure bond between the tile and the adhesive by applying pressure to achieve complete contact and the desired level of the tile. Utilize a rubber



- mallet, along with a spirit level or plumb bob, to attain linear alignment and even surfaces. Any voids or honeycomb formations must be avoided. To confirm that the adhesive is fully in contact with the tile, occasionally slightly twist and lift to inspect the tile just after application. If the desired contact area is not achieved, adjust the size of the notched trowel.
- The finished bed thickness should match the requirements mentioned in the technical specifications table.





#### **POST-APPLICATION PROCEDURES**

While the adhesive is still wet, use a damp sponge or cloth to remove any excess adhesive from the tile joints and the tile face.



- After use, immediately wash and clean all tools with warm soapy water.
- Give the installation at least 24 hours to dry completely before starting the grouting process or using the tiled areas.



# **NOTCHED TROWEL GUIDELINES**

This table offers a general guideline on selecting a notched trowel.

Laying material	Tile size in mm	Trowel size in mm (H x OW x IW)*	
		As per IS 15477 standard	As per EN 12004 standard
Ceramic tile/ Vitrified tile	300 x 300	6 x 6 x 6	6 x 6 x 12
	600 x 600	6 x 6 x 6	6 x 6 x 12
	600 x 1200	8 x 8 x 6	8 x 8 x 12
	1200 x 1200	10 x 10 x 6	10 x 10 x 12
Glass mosaic tile	25 x 25 x 3	3 x 3	3 x 3
	50 x 50 x 6	6 x 6	6 x 6





V-Notched Trowel Square-Notched Trowel

Note: These guidelines assume ideal conditions and practical situations may require adjusting the trowel size.

Notched trowel selection for tile adhesive application considers several factors to achieve optimal adhesive coverage with minimum wastage. Tile size and type

play a key role, with larger tiles requiring deeper notches for proper support and smaller tiles benefiting from shallower notches to prevent squeezing excess adhesive through grout lines. Substrate condition is also crucial, as rough or uneven surfaces may necessitate larger notches to account for variations and ensure sufficient coverage. Conducting applications on a sample area allows you to determine the most suitable trowel notch size for your specific project, considering additional factors like ambient temperature, humidity and drying time of the adhesive.

#### **SPACING**

Ensure that there is a minimum grout joint spacing of 1.5 – 3 mm between tiles. Larger joints could be needed for tiles made of stone or quarry. For precise guidelines on the required spacing between tiles, it is crucial to consult the tile manufacturer's specifications.

#### **MOVEMENT JOINTS**

When doing large span tiling work, leave movement joints spaced three meters apart and fill them with a flexible sealant in accordance with BS 5385.

#### **RECOMMENDED PRACTICES**

- Use the appropriate tile adhesive for your project, based on the type of tile and substrate to be bonded. ASCOLITE offers a range of adhesives tailored for various applications.
- It is imperative to clean the back of the tile and ensure that it is clear of any dust, filth, debris, and/or releasing agent before beginning the tile installation procedure. If normal dusting and water cleaning are ineffective. ASCOCLEAN BTC can be used to clean the back side of the tile.





- Use ASCORENDER and FIXOBOND AD to level substrates with high undulation.
- Continuously monitor the level and alignment of each tile as it is laid, making necessary adjustments to maintain linear alignment and even surfaces.
- For medium to large tile sizes, back-butter the tiles by applying adhesive to the back of each tile before setting it in place. This will ensure a strong bond between the tiles and the substrate.
- Use a low to medium speed mechanical mixer when mixing the adhesive.
- Ensure that all wall substrates are rigid, as excessive movement can cause the tile and grout to crack or loosen.
- To accommodate any floor slope, begin laying the tiles from the top and modify the size of the bottom layer as necessary.
- Make sure the color, pattern, and shade of the tiles are as desired, spread them throughout the area before the installation.
- When applying in extreme conditions, please follow the technical guidelines or contact our technical team.
- Use the necessary clamps in conjunction with adhesive and follow IS 15477: 2019 requirements when installing tiles or stones above a height of 3 meters.
- When installing natural stone on an external wall facade, it is best to apply FIXOPRIME BT to the stone's edges and back side before installation for optimal results.
- After installation, shield the tiled surface from direct sunlight and rainfall for at least 24 hours.
- Regularly check for lippage, a condition where the edges of adjacent tiles are misaligned. Promptly correct any lippage to maintain a level surface.

#### **PRACTICES TO AVOID**

 Do not accept any unsuitable adhesive or material on site without proper inspection.

- Do not apply tiles over unstable or flexible surfaces, as this can lead to tile and adhesive failure.
- Do not use with PVC heating mats or coils, polyethylene membranes, or other such membranes.
- Do not use over anti-fracture and waterproofing APP/Bituminous membranes, sheets, ply, or mats.
- Do not apply directly on AAC blocks.
- Do not further add water to the adhesive after the initial mixing process.
- Do not add any extra sand, cement, or contaminated water to the adhesive mix.
- Avoid using tiles with broken edges.
- Avoid leaving too much grout on the tile's surface. Make use of a damp sponge to remove any extra grout.
- After installation, prevent placing any heavy object or equipment on the tiled surface till the adhesive is completely set.
- Always mix adhesive according to the manufacturer's instructions. An incorrect ratio of water can have an impact on the adhesive's performance.
- Never use adhesive on a surface that is too wet.

# **PACKAGING**

• 20, 25 & 50 kg







### **COVERAGE**

- 1.3 1.5 kg/m²/mm (by weight)\*
- 7 8 ft<sup>2</sup>/kg/mm (by application area)\*

\*Subject to tile & substrate evenness.

### SHELF LIFE

 FIXOBOND ADHESIVE RANGE, when unopened, can be stored above floor level in a cool dry place for a duration of up to 12 months.







### **HFAITH & SAFFTY GUIDFLINES**

- Take preventive measures to keep children away from this product.
- Wear appropriate safety gear, such as gloves and face or eye protection during the installations.
- If the adhesive comes in contact with your eyes or skin, immediately rinse them well with lots of clean water and seek medical advice.
- Only qualified professional applicators or contractors may use this product.

# **TOOLS & ACCESSORIES**

#### **TILING TOOLS**

















WIRE BRUSH

MIXER

RUBBER MALLET









TILE VIBRATOR

SUCTION CUP

SPIRIT I EVEL

PLUMB BOB

#### **TILING ACCESSORIES**





TILE SPACER

TILE WEDGE WITH CLIP

#### **GROUTING TOOLS**







GROUT SPREADER

SPONGE

PUTTY KNIFE

#### **DISCLAIMER:**

This technical data sheet supersedes all previous versions from the immediate effect. The company guarantees its products against any manufacturing defects. The user should determine the product's usability for its intended use. Since the company has no control over site conditions and the installation procedures, the company would not be responsible under any circumstances for any loss, damage or liability from incorrect usage. For the products on which the company is offering a warranty, please refer to the warranty document to know the entire terms and conditions. The same can be availed on request or from the company website. All orders are accepted subject to our prevailing terms of sales and delivery. While the technical details & recommendations contained in this document and the related details given by the representatives of the company correspond to the best of our knowledge & experience, all the above information must in any case be considered as merely indicative and subject to confirmation. Our company maintains an active research and development policy, allowing us to continuously enhance our products. As a result, we reserve the right to revise this information at any time without prior notice. For optimal results, we recommend this product be installed by a qualified professional. By using this product, users acknowledge and agree to the terms and conditions outlined in this disclaimer.