

TECHNICAL DATASHEET

FIXOBOND™ PU

A 2 - Component, Polyurethane-Based Multipurpose Adhesive
Designed for the Most Versatile Types of Tiling Installations.



EXCELLENT STRENGTH
& ULTIMATE ADHESION



HIGHLY
FLEXIBLE



INTERIOR &
EXTERIOR USE



PRODUCT DESCRIPTION

FIXOBOND PU is a versatile adhesive comprising two components, featuring a modified polyurethane base with remarkable flexibility, zero vertical slip and excellent tensile adhesion properties. This adhesive is outstanding for multiple applications, as it delivers exceptional bonding strength across a broad spectrum of materials, including concrete, glass, plastic, wood, metal and more.

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STANDARD COMPLIANCE

FIXOBOND PU adhesive complies with the Type 5TS2 specifications outlined in "IS 15477: 2019 - Adhesives for ceramic, mosaic, and stone tiles." Additionally, it aligns with class R2T, which designates it as a reaction resin (R), improved (2) and slip resistant (T) tile adhesive in accordance with EN 12004: 2017.

KEY FEATURES

- Thixotropic
- Chemical and heat resistant
- Excellent strength and ultimate adhesion
- Highly crack resistant
- Appropriate for exposed surfaces
- Highly flexible
- Excellent bonding
- Thermal shock and impact resistant
- Extended open time
- Ideal for critical applications

TECHNICAL INFORMATION

APPLICATION PROPERTIES

PROPERTY: TEST METHOD	TYPICAL VALUES
Appearance	Part A – Viscous White Paste Part B – Smooth Off-White Paste
Mixed density	1610 to 1710 kg/m ³
Mixing ratio @ 27 ± 2°C Ambient temperature	4 (Part A) : 1 (Part B) - by weight
Pot life @ 23 ± 2°C	1 hour 30 minutes ± 15 minutes
@ 27 ± 2°C	1 hour 15 minutes ± 15 minutes
@ 35 ± 2°C	1 hour ± 15 minutes
Open time @ 23 ± 2°C	2 hours ± 15 minutes

@ 27 ± 2°C	1 hour 30 minutes ± 15 minutes
@ 35 ± 2°C	1 hour 15 minutes ± 15 minutes
Wall grouting @ 27 ± 2°C	10 – 12 hours
@ 35 ± 2°C	10 – 12 hours
Floor grouting @ 27 ± 2°C	22 – 24 hours
@ 35 ± 2°C	22 – 24 hours
Light foot traffic @ 27 ± 2°C	24 hours
@ 35 ± 2°C	16 hours
Ready for use	24 hours
VOC content	< 0.5 gm/kg
Application temperature (Substrate & laying material)	+5°C to +40°C
Service temperature	-10°C to +70 °C
Final bed thickness	2 mm – 5 mm

PERFORMANCE PROPERTIES AS PER IS 15477: 2019 (TYPE 5TS2) @ 27 ± 2°C

PROPERTY: TEST METHOD	TYPICAL VALUES
Tensile adhesion strength – dry condition @ 28 days	≥ 3.2 N/mm ²
Shear adhesion strength – dry condition @ 28 days	> 10.0 N/mm ² @ 7 Days (dry)
Shear adhesion strength – heat ageing condition @ 28 days	> 5.1 N/mm ² @ 7 Days (heat)
Open time	1 hour 30 minutes ± 15 minutes
Adjustment time	1 hour ± 10 minutes
Slip resistance (T)	≤ 0.5 mm
Deformability	≥ 30 mm

PERFORMANCE PROPERTIES AS PER EN 12004: 2017 (R2T) @ 23 ± 2°C

PROPERTY: TEST METHOD	TYPICAL VALUES
Tensile adhesion strength – initial condition @ 28 days (dry condition)	> 3.0 N/mm ² @ 7 Days

Shear adhesion strength – water immersion @ 7 days	> 5.0 N/mm ²
Shear adhesion strength – thermal shock @ 7 days	> 5.0 N/mm ²
Open time	≥ 1.0 N/mm ² @ 50 minutes
Slip Resistance (T)	≤ 0.5 mm
Transverse deformation	≥ 20 mm

APPLICATION COMPATIBILITY

■ AREAS OF APPLICATION

Flooring and walls for all types of indoor/outdoor use.

■ SUITABLE SUBSTRATES

All cementitious substrates, pre-cast concrete, cementitious waterproof coatings, ceramic tiles, vitrified tiles, natural stones, gypsum block, metal surfaces, glass surfaces, natural seasoned wood and drywall panels like gypsum boards, calcium silicate boards, plywood, medium density fiber cement board and **ASCORENDER**.

■ SUITABLE LAYING MATERIAL

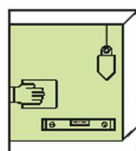
Ceramic, clay, porcelain, cement mosaic tiles, vitrified tiles (Group B I & B II)*, basalt tiles, natural stone, artificial/engineered stone, glass mosaic/tiles and thin tiles and various types of decorative Interior panelling material

**IS 15622: 2006 – Pressed Ceramic Tiles Specifications.*

APPLICATION METHOD

SUBSTRATE PREPARATION

- The substrate must be clean, level, 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, level, 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:

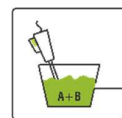
- The required tensile strength of the substrate should be > 1N/mm².
- Add 11.7 litres of water and 800ml of **FIXOBOND AD** with 50 kg of **ASCORENDER**.

MIXING

- Pour Part B of **Fixobond PU** in to the container or vessel containing Part A of **Fixobond PU**, with the preset ratio of 1:4 (Part B : Part A) of the packs.



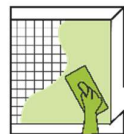
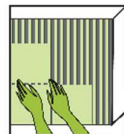




- Using a mechanical mixer set to medium to high speed, thoroughly mix both components until a smooth paste consistency is achieved having thixotropic properties.




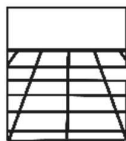
- Allow the mixture to slake for 2 – 3 minutes, and then re-mix before application.
- The adhesive should have a proper consistency, allowing it to be easily applied with the appropriate size notched trowel without sagging.

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 notch 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 prior to 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.

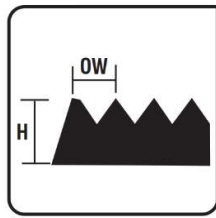
POST-APPLICATION PROCEDURES

- 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.

Trowel Size in mm (H X OW)	Final bed thickness
3 x 3	1.5 - 2 mm
6 x 6	3 - 3.5 mm



V-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 test 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 **SCORENDER** 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 slow 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.
- In order 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 colour, 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 metres.
- 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. Regularly check for lippage, a condition where the edges of adjacent tiles are misaligned. Promptly correct any lippage to maintain a level surface.

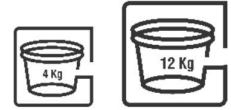
- After installation, shield the tiled surface from direct sunlight and rainfall for at least 24 hours.
- Regularly check for lippage, a condition where the edges of adjacent tiles are misaligned. Promptly correct any lippage to maintain a level surface.
- For the consistent and successful installation of large and extra-large format tiles, it is highly recommended to employ the double notching technique in conjunction with appropriate suction cups and tile vibrator
- Employ tile vibrators to gently settle the tiles into the adhesive, ensuring even distribution and eliminating air pockets.

PRACTICES TO AVOID

- Do not accept any unsuitable adhesive or material on site without proper inspection.
- Do not apply tiles over weak, 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 mix with water or any other foreign component.
- 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.
- Never use adhesive on a surface that is too wet.

PACKAGING

- 4 kg & 12 kg



COVERAGE

- 1.5 - 1.7 kg/m²/mm (by weight)*
- 6 – 7 ft²/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.



HEALTH & SAFETY GUIDELINES

- Take preventive measures to keep children away from this product.
- Wear appropriate safety gear, such as gloves and face or eye protection during the installation.
- 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

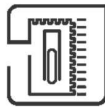
TILLING TOOLS



ROLLER



BUCKET



NOTCHED TROWEL



HAMMER & CHISEL



BRUSH



WIRE BRUSH



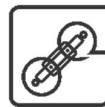
MIXER



RUBBER MALLET



TILE VIBRATOR



SUCTION CUP



SPIRIT LEVEL



PLUMB BOB

TILLING 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.