

TECHNICAL DATASHEET

FIXOBOND™ FLEX

FLEXIBLE & DURABLE (GREY / WHITE) ADHESIVE DESIGNED FOR HEAVY & LARGE TILE & NATURAL STONE INSTALLATIONS



EXCELLENT
DISPERSABILITY



ULTRA HIGH
ADHESION STRENGTH



FLEXIBLE



PRODUCT DESCRIPTION

FIXOBOND FLEX is a high-performance, self-curing, and flexible tile adhesive that comes as a single component. It is formulated with a unique combination of cement, well-graded minerals, and modified polymers. This specialized tile adhesive is primarily designed for securely affixing heavy or large ceramic tiles and natural stones on a wide range of typical construction surfaces, and is particularly suitable for areas that may experience vibrations or limited deflection, whether they are indoors or outdoors.

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STANDARD COMPLIANCE

FIXOBOND FLEX adhesive complies to the Type 4TS1 specifications outlined in "IS 15477: 2019 - Adhesives for ceramic, mosaic, and stone tiles." Additionally, it aligns with class C2TES1, which designates it as a cementitious (C), improved performance (2), slip resistant (T), deformable (S1) with extended open time (E) tile adhesive in accordance with EN 12004: 2017.

KEY FEATURES

- Flexible
- Excellent dispersibility
- Ultra high adhesion strength
- Shock and impact resistant
- No vertical slip
- Excellent open time
- Low VOC (Volatile Organic Compounds)
- Highly compatible with a variety of tiles & stone
- Multipurpose adhesion
- Industrial grade

TECHNICAL INFORMATION

APPLICATION PROPERTIES

PROPERTY: TEST METHOD	TYPICAL VALUES
Appearance	Grey / White powder
Bulk density	Grey: 1260 to 1360 kg/m ³ White: 1220 to 1320 kg/m ³
Water demand @ 27 ± 2°C Ambient & water temperature	Grey: 28 ± 2% by weight White: 30 ± 2% by weight
Mixing ratio @ 27 ± 2°C Ambient & water temperature (Powder : Water)	Grey: approx. 2.5 : 1 by volume White: approx. 2.5 : 1 by volume
Pot life @ 23 ± 2°C	3 hours 45 minutes ± 15 minutes

@ 27 ± 2°C	3 hours ± 15 minutes
@ 35 ± 2°C	2 hours 30 minutes ± 15 minutes
Open time @ 23 ± 2°C	35 – 40 minutes
@ 27 ± 2°C	30 – 35 minutes
@ 35 ± 2°C	25 – 30 minutes
Wall grouting @ 27 ± 2°C	24 hours
@ 35 ± 2°C	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
VOC content	< 0.5 gm/kg
Application temperature (Substrate & laying material)	+5°C to +35°C
Service temperature	-5°C to +70 °C
Final bed thickness	3 mm – 15 mm

PERFORMANCE PROPERTIES AS PER IS 15477: 2019 (TYPE 4TS1) @ 27 ± 2°C

PROPERTY: TEST METHOD	TYPICAL VALUES
Tensile adhesion strength – dry condition @ 28 days	≥ 2.0 N/mm ²
Tensile adhesion strength – wet condition @ 28 days	≥ 1.65 N/mm ²
Shear adhesion strength – dry condition @ 28 days	≥ 2.1 N/mm ²
Shear adhesion strength – wet condition @ 28 days	≥ 1.65 N/mm ²
Shear adhesion strength – heat ageing @ 28 days	≥ 1.65 N/mm ²
Open time	30 – 35 minutes
Adjustment time	25 – 35 minutes
Slip resistance (T)	≤ 0.5 mm
Deformability	≥ 2.5 mm & < 5 mm

■ **PERFORMANCE PROPERTIES AS PER EN 12004: 2017 (C2TES1) @ 23 ± 2°C**

PROPERTY: TEST METHOD	TYPICAL VALUES
Tensile adhesion strength – initial condition @ 28 days (dry condition)	≥ 1.80 N/mm ²
Tensile adhesion strength – water immersion condition @ 28 days (wet condition)	≥ 1.50 N/mm ²
Heat ageing condition @ 28 days	≥ 1.65 N/mm ²
Freeze thaw condition @ 28 days	≥ 1.40 N/mm ²
Open time	≥ 0.90 N/mm ² @ 30 minutes
Slip resistance (T)	≤ 0.5 mm
Transverse deformation	≥ 2.5 mm & < 5 mm

APPLICATION COMPATIBILITY

■ **AREA OF APPLICATION**

Tiling of internal & external floors, walls*, roof, window/door frames, waterbodies, jacuzzi, steam, sauna, spa, under-floor heating systems and industrial grade applications.

**Subject to cladding method statement by ASCOLITE, for walls above 20 feet consult with ASCOLITE'S technical team.*

■ **SUITABLE SUBSTRATE**

All cementitious substrates, pre-cast concrete, cementitious waterproof coatings, ceramic tiles, vitrified tiles, natural stones, gypsum blocks and drywall panels like gypsum boards, calcium silicate boards, plywood, medium density fibre cement boards and **SCORENDER**. Certain types of drywall panels may require priming using **ASCOPRIME GT** before the installation, consult with ASCOLITE'S technical team for details.

■ **SUITABLE LAYING MATERIAL**

Ceramic, clay, porcelain, cement mosaic tiles, vitrified tiles (Group B I & B II)**, basalt tiles, natural stone, glass mosaic/tiles and thin tiles

***IS 15622: 2006 – Pressed ceramic tiles specifications.*

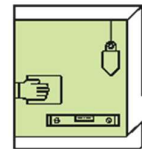
Note:

- Use 2.6 – 3 litres of **FIXOBOND AD** with 2.6-3 litres of water and 20 kg of **FIXOBOND FLEX Grey** and 2.8 – 3.2 litres of **FIXOBOND AD** with 2.8 – 3.2 litres of water and 20 kg of **FIXOBOND FLEX White**.

APPLICATION METHOD

SUBSTRATE PREPARATION

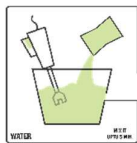
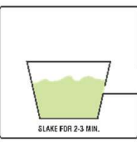
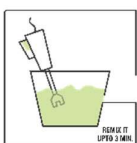
- The substrate must be clean, level, fully cured, compact, stiff, undamaged and devoid of debonding agents.
- Any contaminants that impairs bonding must be mechanically removed before the tile is installed including off-cuts, sawdust, nails, screws, loose plaster and wood by using a steel wire brush, vacuum cleaner, moist sponge or even a grinder if necessary.
- The substrate must be plumb, 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 **SCORENDER** (Grey or White) to level any substrate that needs plumb. It could be necessary to utilise **FIXOBOND AD** as a bonding agent along with **SCORENDER**. 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:

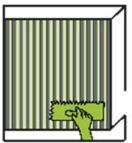

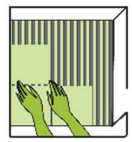


- *The required tensile strength of the substrate should be > 1N/mm².*
- *Add 11.7 litres of water and 800ml of **FIXOBOND AD** with 50 kg of **SCORENDER**.*

MIXING

- A 20 kg bag will require roughly $28 \pm 2\%$ (for Grey) and $30 \pm 2\%$ (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 FLEX** in a clean vessel or container. Mix 5.2 - 6 litres (for Grey) and 5.6 – 6.4 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

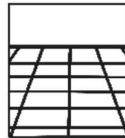
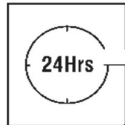
- The installation of tiles must strictly correspond to **EN 12004: 2017** and **IS 15477: 2019** specifications.
- It is imperative to clean the back of the tile and ensure that it is clear of any dust, filth, debris and/or releasing agent before beginning the tile installation procedure. If normal 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 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.



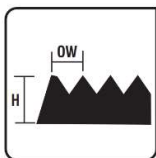
Note: These guidelines assume ideal conditions and practical situations may require adjusting the trowel size.

- 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.

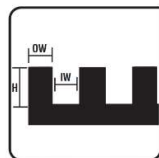
NOTCHED TROWEL GUIDELINES

- The 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
	1200 x 2400	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

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.
- For large to extra large tiles or slabs, a double notching method is strongly recommended. This method involves applying adhesive to both the substrate and the back of the tile or slab. Additionally, it's crucial to ensure that the notching on both the substrate and the tile or slab are in the same direction. This alignment promotes proper air release and creates a stronger bond between the tile or slab and the substrate. The finished bed thickness should match the requirements mentioned in the technical specifications table.
- 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.
- 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 façade, 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.
- 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 vibrators.
- Employ tile vibrators to gently settle the tiles into the adhesive, ensuring even distribution and eliminating air pockets.

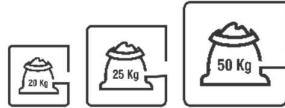
PRACTICES TO AVOID

- 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 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 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

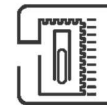
TILLING TOOLS



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.