

Technical Data Sheet

Ref.: C-Fx-09- 011024-03

<p>In Compliance With EN C2 TE S1 and IS Type 3 T S1 standard</p>	<p>Calcibond Flex is an Eco-friendly, high polymer modified, deformable flexible adhesive of more than 2.5 mm., light weight, based on high quality mineral, ready to use for fixing of all type of natural stable stone, vitrified slab of low thickness & glass mosaic of all type including in swimming pool. Suitable for internal & external areas.</p>
<p>Main application Adhesive for fixing of all type & size of natural stone and tiles.</p>	



Technical advantage of Calcibond Flex over others flexible adhesive

- Guaranteed fixing of all type & size of vitrified low thickness slab, & glass mosaic.
- Highly suitable for fixing all type & size of natural marble which are not sensitive to moisture.
- Best to use inside swimming pool and for high quality glass mosaic application.
- Far exceed strength of class C2 TE adhesive as per European Norms.
- Fully thixotropic (Slip < 0.5mm.) for wall application and for large format of tiles & marble.
- Extreme White colour of adhesive for natural marble and transparent glass mosaic.
- Long life assurance of performance.
- No water curing required.
- Very High coverages with minimum thickness of 2 mm. and maximum upto 15 mm.
- No need to mix any extra cement or sand. Ready to use.
- Very low VOC and suitable for green building points.

Suitable areas

- Internal & external wall & floor.
- Residential & commercial buildings.
- Public infrastructure project including swimming pools and water tank.
- Industrial facility.

Suitable surfaces

- Full dry and sound new or old traditional plaster.
- New or old absorbent IPS or PCC floors which are sound and stable.
- Screed made with Zeorich Base, Zeorich Base Rapid or similar kind.
- Fully cure stable concrete of all type including machine cut concrete block and fly ash brick.
- Existing tiles or stone surfaces.
- Gypsum base plaster, screed or AAC block, Panel (Autoclaved Aerated concrete). Apply primer before use.

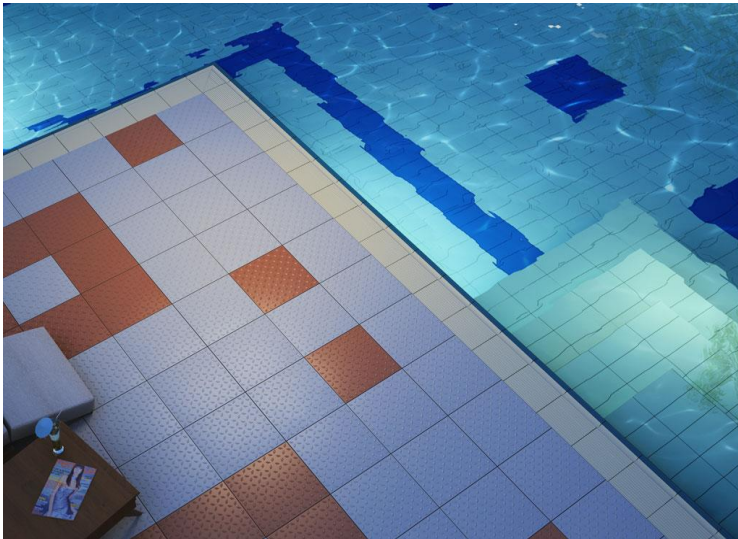
Suitable covering material

- All type of stable natural stone which are not sensitive to moisture. Re-engineered stone of stable nature in internal.
- All type & size of vitrified, ceramic & glass mosaic.
- Large format tiles slab of all type including low thickness vitrified slab of 3mm. thickness.

Product not to be used

- On metal, wood, rubber & other difficult surfaces. Use Calcibond Ultima.
- Onto cement base backer board. (Consult Walnut Technical Representative)
- To fix stone which are very sensitive to moisture. Use Calcibond Ultima.
- Over expansion joint or in area with extreme movement in structure.
- More than 15 mm. of thickness.

How to Use



Important tools for application:

- Electric low speed mixing stirrer.
- Walnut notch trowel of 3x3 mm. for mosaic & 10x10 mm. for big format.
- Auto spirit level
- Other mixing & finishing tools such as mixing trowel, bucket, brush, broom, measuring tape etc.

Cleaning of tools:

- While still the material is fresh, all the tools can be cleaned with normal water. Once material is hardened, the material can be removed only by mechanical means.

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Surface Preparation:

- Ensure that surface is sound, clean and free from all foreign material such as oil, grease, dust etc.
- If surface is uneven of more than 15 mm. than first do the levelling by using correct levelling material in order to avoid using excess thickness of adhesive or apply first thin coat of same adhesive to level the surface and wait for 24 hours.
- Onto dry clean surface, splash enough water and let it surface dry to improve the workability of adhesive.
- In case working on external façade, avoid direct sun exposure to surface and to finishing material. Let cool the surface before starting application. Hot surface may compromise final performance.
- If surface area is larger, provide movement joint every 3 meters.
- Follow concrete expansion joint and connection joint as per standard.

Mixing:

- Mix Calcibond Flex 20 kg. grey with approx. 4.6 to 5 lt. of clean water. Use slow speed electric stirrer for mixing to have desire results. Manual mixing can compromise performance of adhesive.
- Adjust the water quantity as per ambient temperature and dryness of surface. The final mix must be workable paste.

How to apply:

- Spread the adhesive in desire thickness from 2 to 15 mm. onto the base surface using Walnut notch trowel.
- Once adhesive is applied, fix the tiles or stone onto adhesive before skin formation and press firmly. In case tiles or stone are of big size, also apply the adhesive layer at the back of tiles.
- Leave the space between tiles or stone to have proper grouting and to accommodate surface movement.
- Leave the tiles or stone for 24 hours to bond well and then follow the grouting process.

Product & Working Data

Product appearance	: White & Grey colour powder
Packing	: 20 Kg. moisture proof bag
Shelf life	: 12 months from the date of manufacturing.
Water ratio	: Approx. 4.6 to 5 Lt. for grey and white per 20 kg. Bag
Vertical slip resistance	: < 0.5 mm. (As per European norms).
Pot life	: > 2 hours
Thickness	: Minimum 2 to 15 mm.
Open Time	: ≥ 30 minute
Adjustability	: ≥ 30 minute
Initial setting	: 6 to 8 hours.
Final setting	: 24 hours.
Walking on floor	: After 24 hours.
Grouting	: After 24 hours.
Normal use of surface	: After 2 weeks.
Full strength of adhesive	: At 28 days.
Coverage	: Approx. 90 sq. ft. / bag of 20 kg. using 2 mm. thick or 1.15 kg. / m ² / mm.
Application temperature	: + 5°C to + 35° C.

(Data @ 23° C. & 50% humidity)

Technical Performances

In compliance with (Indian Standard) IS 15477-2019: for Type 3 Tile Adhesive

Tensile Adhesion (Dry condition)	: ≥ 1.75 to 2 N/mm^2
Tensile adhesion strength wet condition	: $\geq 1.5 \text{ N/mm}^2$
Deformability	: $\geq 2.5 \text{ mm}$.

Sheer Adhesion:

Dry Condition	: $\geq 1.5 \text{ N/mm}^2$
Heat Ageing Condition	: $\geq 1 \text{ N/mm}^2$
Wet Condition	: $\geq 1 \text{ N/mm}^2$

(Final results @ 28 days. 27° C. & 65% humidity)

- Final resistance to temperature after 28 days or full cure: -30 to $+70^\circ \text{C}$.
- The final results at test site may vary based on temperature and humidity & surface condition.

In compliance with EN 12004: EN C2 TE S1 standard for class 2 adhesive

Tensile adhesion	: \geq upto 2 N/mm^2	: As per EN 1348
Adhesion after heat cycle	: $\geq 1 \text{ N/mm}^2$: As per EN 1348
Adhesion after water immersion	: $\geq 1 \text{ N/mm}^2$: As per EN 1348
Adhesion after freeze / thaw cycle	: $\geq 1 \text{ N/mm}^2$: As per EN 1348
Transverse deformation	: $\geq 2.5 \text{ mm}$.	: As per EN 12002

(Final results @ 28 days. 23° C. & 50% humidity)

- Final resistance to temperature after 28 days or full cure: -30 to $+80^\circ \text{C}$.
- The final results may vary based on temperature and humidity.

Walnut exclusive technology



Important instructions

- Once bags are open, entire material must be consumed within 24 hours. Store the bags in safe environment.
- In case of very weak surface, please ensure that proper strength or correction are done before use of adhesive.
- If temperature is more than 35°C ., than avoid using the products under direct sun.
- In case temperature is cold and below 5°C ., the initial and final setting may affect.
- Expansion & connection joint must be followed of concrete and all other elements of concrete structure.
- For any structure related issue, follow local code and appropriate consultant guidelines.
- In case the performance of Walnut products is not as per technical data mentioned, please call Walnut technical helpline.

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Fixing Material									
Walnut® Tile & Stone Adhesives	AAC Block / Fly Ash bricks	Ceramic / Clay & Glazed tiles	Vitrified Tiles upto 2x2'	Vitrified Tiles Slab	Ceramic Mosaic	Glass Mosaic	Marble & Granite tiles	Marble Granite Slab	Enginnered Quartz Stone
Lite Tile	X	✓	X	X	X	X	X	X	X
Lite Tile Plus	X	✓	✓	X	X	X	X	X	X
Lite Block	✓	✓	X	X	X	X	X	X	X
Lite Floor	X	✓	✓	✓	X	X	✓	✓	X
Calcibond Smart	✓	✓	✓	✓	✓	X	✓	✓**	X
Calcibond Smart Plus	✓	✓	✓	✓	✓	X	✓	✓**	X
Calcibond Secure	✓	✓	✓	✓	✓	✓	✓	✓**	X
Calcibond Flex	✓	✓	✓	✓	✓	✓	✓	✓**	X
Calcibond Advance	✓	✓	✓	✓	✓	✓	✓	✓	✓**
Calcibond Ultima	✓	✓	✓	✓	✓	✓	✓	✓	✓

Strike with star (**) mark it is recommended to use Walnut Calcibond Latex as replacement of water in part or full for best results. For further detail and if any fixing material not covered above or doubt, please consult Walnut Technical Department before using the product.

Application Surfaces									
Walnut® Tile & Stone Adhesives	Plaster	Cement Screed / PCC	Traditional Concrete	Mivan / Precast Concrete	Existing Tiles	Wood	Metal	Dry Wall	Rubber floor
Lite Tile	✓	✓	X	X	X	X	X	X	X
Lite Tile Plus	✓	✓	X	X	X	X	X	X	X
Lite Block	✓	✓	X	X	X	X	X	X	X
Lite Floor	✓	✓	X	X	X	X	X	X	X
Calcibond Smart	✓	✓	✓	✓**	✓**	X	X	X	X
Calcibond Smart Plus	✓	✓	✓	✓	✓	X	X	X	X
Calcibond Secure	✓	✓	✓	✓	✓	X	X	X	X
Calcibond Flex	✓	✓	✓	✓	✓	X	X	X	X
Calcibond Advance	✓	✓	✓	✓	✓	X	X	X	X
Calcibond Ultima	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Application Areas									
Walnut® Tile & Stone Adhesives	Internal Floor	Internal Wall	External floor	External Wall upto 10 feet	External Building Façade	Lift area / Lobby	Roof / Terrece	Balcony	Swimming Pool
Lite Tile	✓	✓	X	X	X	X	X	X	X
Lite Tile Plus	✓	✓	X	X	X	X	X	X	X
Lite Block	X	✓	X	✓	X	X	X	X	X
Lite Floor	✓	X	✓	X	X	X	X	X	X
Calcibond Smart	✓	✓	✓	✓	✓**	✓**	X	✓	X
Calcibond Smart Plus	✓	✓	✓	✓	✓**	✓**	X	✓	X
Calcibond Secure	✓	✓	✓	✓	✓**	✓**	✓	✓	✓
Calcibond Flex	✓	✓	✓	✓	✓**	✓	✓	✓	✓
Calcibond Advance	✓	✓	✓	✓	✓	✓	✓	✓	✓
Calcibond Ultima	✓	✓	✓	✓	✓	✓	✓	✓	✓

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Walnut Green Building Index

Walnut range of products are most eco-friendly and suitable to use in all kind of buildings including certified green. Apart from using best of international raw material for best performance, Walnut procure the major raw material locally to safeguard environment.



- Recycled raw material used.
- VOC-Very low organic compounds.
- 100% suitable to recycle after expiry.
- Suitable for all kind of green/normal buildings.

Walnut Quality & Safety Assurance

Products supplied are safe to use by any worker at site. However proper tools and safety measures must be in place for prolong working. The gloves, safety glasses and other protection measure must be followed as per local regulation.



Declaration

All the above information and results are provided based on Walnut internal quality test. Customer must check before using the product about performance and final expected results. Walnut cannot be held responsible for any damage of whatsoever nature at site.

Technical Help

Walnut Building Solutions India Private Limited | CIN: U36999MH2017PTC289638

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