

Technical Data Sheet

Ref.: C-Se-08- 010520-02

<p>In Compliance With EN norms – EN C2 TE</p>	<p>Calcibond Secure is an eco-friendly, high polymer modified, light weight, based on high quality mineral, ready to use adhesive for fixing of all type of Indian or foreign made ceramic & vitrified tiles. Also, economic marble & ceramic or glass mosaic can be fixed. Suitable for internal & external areas.</p>
<p>Main application Adhesive for fixing all type of ceramic & vitrified tiles on floor & on wall.</p>	

Technical advantage of Calcibond Secure over normal adhesive

- Guaranteed fixing for all type of ceramic & vitrified tiles.
- Fixing of economic marble and glass mosaic.
- Tiles of big size on wall can be fixed with ease in areas such as bathrooms and lobbies.
- Exceed strength of class C2 TE adhesive as per European norms.
- Fully thixotropic for ease of application with big format tiles on floor and wall (slip <0.5 mm)
- High polymer modified for improved working.
- High speed of work with ease of application.
- No water curing required.
- High coverage with minimum thickness of 2 mm. and maximum upto 15 mm.
- No need to mix any extra cement or sand. Ready to use.
- Very high mineral content & lite weight in nature.
- Very low VOC and suitable for green building credit points.

Suitable areas

- Internal & external wall & floor.
- Residential & commercial buildings.
- Public infrastructure projects such as government buildings & utility public spaces.
- Industrial facility.

Suitable surfaces

- Fully 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.
- Completely cured stable concrete.
- Machine cut concrete block and fly ash block.
- Existing ceramic and cement mosaic surfaces.
- Gypsum based plaster, screeds and AAC block panel (Autoclaved aerated concrete). Apply primer before use.

Suitable covering material

- All type of ceramic & vitrified tiles.
- Large format tiles in interior walls & floor.
- Ceramic and vitrified glass mosaic of daily use.
- Stable Indian marble stone which is not sensitive to moisture.

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Product not to be used

- On metal, wood, rubber & on cement board. Use Calcibond Ultima.
- Stone, which are sensitive to moisture and need high performance adhesive. (Use Calcibond Ultima).
- To fix stone which are soft and brittle in nature. (Use Calcibond Advance or Calcibond Ultima).
- To fix resin based recomposed stone. (Use Calcibond Advance or Calcibond Ultima).
- Over expansion joint or in area with extreme movement in structure.
- More than 15 mm. of thickness.
- For external facades on greater heights and especially with large format slabs. (use Calcibond Advance)

How to Use



Important tools for application:

- Electric low speed mixing stirrer.
- Walnut notch trowel of 6x6 mm. size & 10x10 mm.
- 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.

Surface Preparation

- Ensure that plaster / screed 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 the enough water and let it surface dry to improve the workability of adhesive.
- In case working in external environment, 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 Secure 20 kg. grey product bag with approx. 5.6 lt. and white with 5.8 lt. of clean water. Use slow speed electric stirrer 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 cement surface using proper 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 to have proper grouting and to accommodate surface movement.
- Leave the tiles for 24 hours to bond well and then follow the grouting process.

Product & Working Data

Product appearance	: Grey and white colour powder.
Packing	: 20 & 40 Kg. moisture proof bag
Shelf life	: 12 months from the date of manufacturing.
Water ratio	: Approx. 5.6 lt. for grey and 5.8 lt. for white per 20 kg. bag
Pot life	: > 2 hours
Vertical slip	: < 0.5 mm. (As per European norms).
Thickness	: Minimum 2 to 15 mm.
Open Time	: ≥ 30 minute
Adjustability	: > 30 minute
Initial setting	: 6 to 8 hours.
Final setting	: 24 hours.
Foot traffic	: After 24 hours.
Grouting	: After 24 hours.
Normal use of surface	: After 2 weeks.
Full strength of adhesive	: At 28 days.
Coverage	: Approx. 60 sq.ft. / bag of 20 kg. Using 3 mm. thick or 1.2 kg. / m ² / mm.
Application temperature	: + 5° C. to + 35° C.

(Data @ 23° C. & 50% humidity)

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Technical Performances

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

Tensile adhesion	: $\geq 1.3 \text{ N / mm}^2$: As per EN 1348
Shear adhesion	: $\geq 1.3 \text{ N / mm}^2$: As per ANSI A- 118.1
Adhesion after heat cycle	: $\geq 1.3 \text{ N / mm}^2$: As per EN 1348
Adhesion after water immersion	: $\geq 1.3 \text{ N / mm}^2$: As per EN 1348
Adhesion after freeze / thaw cycle	: $\geq 1.2 \text{ N / mm}^2$: As per EN 1348



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

In compliance with IS 15477: 2019 Type 2 adhesive

Tensile adhesion strength dry condition	: $\geq 1.5 \text{ N / mm}^2$
Tensile adhesion strength wet condition	: $\geq 1.4 \text{ N / mm}^2$
Shear adhesion strength dry condition	: $\geq 1.3 \text{ N / mm}^2$
Shear adhesion strength wet condition	: $\geq 1.2 \text{ N / mm}^2$
Shear adhesion strength heat ageing	: $\geq 1.2 \text{ N / mm}^2$

For EN test samples

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

- Final resistance to temperature after 28 days or full cure: - 30 to + 80° C.
- The final results may vary based on temperature and humidity. Freeze thaw cycles are having different curing cycles.

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 cement 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 not as per technical data mentioned, please call Walnut technical helpline.

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 and 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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