

## Technical Data Sheet

<p><b>In Compliance With</b> EN norms – EN C2 TE S1</p>	<p>Calcibond Advance is a unique Eco-friendly, very high polymer modified, high flexible &amp; deformable upto 2.5 mm., light weight, based on high quality mineral and ready to use adhesive for doing work on external facade, public infrastructure, on Industrial floor to fix all type and size of tiles, natural stone and re-composed stone material which are not sensitive to moisture. Suitable for internal &amp; external areas.</p>
<p><b>Main application</b></p> <p>Fixing large slab of tiles &amp; stone on walls &amp; floor including external façade and in other heavy-duty areas.</p>	

### Technical advantage of Calcibond Advance over others flexible adhesive

- Best for high rise facade, external areas & for public infrastructure.
- Guaranteed fixing of all kind of tiles & stone slab including thin tiles slab, mosaic etc. on façade.
- High flexibility to accommodate surface movement including of high external temperature.
- Very high polymer modified, which makes adhesive highly deformable and it exceed EN C2 TE S1 standard.
- Fully thixotropic (Slip < 0.5mm.) for wall application and for big format of natural stone.
- Long life assurance of performance.
- Suitable to use on all cement based surfaces including all kind of cement based plaster, concrete, cement board of stable nature interior.
- The extreme white colour of adhesive for white stone & other transparent material.
- No water curing required.
- Very high coverages with best performance even at 2mm. thickness of use. Minimum 2 mm. till 15 mm. use.
- Best value using Calcibond Advance as an adhesive of superior class with no match.
- No need to mix any extra cement or sand. Ready to use.
- Very low VOC and suitable for green building.

### Suitable areas

- Internal & external wall & floor including high rise facade.
- Residential & commercial buildings.
- Public infrastructure project including swimming pools and water tank.
- 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.
- 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

- Large format tiles of all type including vitrified low thickness slab of 3mm. or more.
- All type & size of ceramic & vitrified tiles.
- All type & size of ceramic mosaic, & glass mosaic.
- All kind of stable marble & granite including recomposed stone, which are not sensitive to moisture.

## Product not to be used

- On metal, wood & rubber & other difficult substrate. Use Calcibond Ultima.
- To fix stone which are very sensitive to moisture. Use Calcibond Ultima.
- Dry walls which are sensitive to moisture and have movement due to temperature. 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 10x10 mm. for big format tiles.
- 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 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.
- If surface area are larger, provide movement joint every 3 meter.
- 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.
- Follow concrete expansion joint and connection joint as per standard.

## Mixing:

- Mix Calcibond Advance 20 kg. grey with approx. 6 lt. and white with 6.2 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. 6 for grey and 6.2 lt. for white per 20 kg. bag.
Vertical slip resistance	: < 0.5 mm. (As per European norms).
Pot life	: > 2 hours
Thickness	: Minimum 1.5 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 1.10 kg. / m <sup>2</sup> / 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 S1 standard for class 2 adhesive

Tensile adhesion	: $\geq 3.0 \text{ N / mm}^2$	: As per EN 1348
Shear adhesion	: $\geq 3.0 \text{ N / mm}^2$	: As per ANSI A- 118.1
Tensile Adhesion after heat cycle	: $\geq 2.65 \text{ N / mm}^2$	: As per EN 1348
Tensile Adhesion after water immersion	: $\geq 2.9 \text{ N / mm}^2$	: As per EN 1348
Tensile Adhesion after freeze / thaw cycle	: $\geq 2.4 \text{ N / mm}^2$	: As per EN 1348
Transverse deformation	: $\geq 2.6 \text{ mm}$	: Pass <b>S1</b> category requirements

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

### In compliance with IS 15477: 2019 Type 4 adhesive

Tensile adhesion strength dry condition	: $\geq 3.0 \text{ N / mm}^2$
Tensile adhesion strength wet condition	: $\geq 2.8 \text{ N / mm}^2$
Shear adhesion strength dry condition	: $\geq 2.6 \text{ N / mm}^2$
Shear adhesion strength wet condition	: $\geq 2.4 \text{ N / mm}^2$
Shear adhesion strength heat ageing	: $\geq 2.2 \text{ N / mm}^2$

(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.

## 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 product to be applied on cement based board, check the manufacturer instruction about suitability of board. Apply suitable primer in case needed. Consult Walnut technical representative, if needed.
- When fixing resin based recomposed stone, ensure to provide movement joint and check the movement of stone.
- 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 are 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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