

Technical Data Sheet

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<p>In Compliance With EN norms – EN R 2T & ISO 13007</p>	<p>Calcibond Ultima is a unique Eco-friendly, very high flexible & deformable >10 mm., two-part POLYURETHANE ADHESIVE based on high quality minerals and ready to use adhesive for doing work on flexible surfaces, external facade, areas under heavy vibration, heavy duty Industrial floor, metal & wood surfaces including all kind of dry-wall boards to fix all kind of large format & slim tiles slabs, natural stone and re-composed stone material. Suitable for internal & external areas.</p>
<p>Main application Fixing of all type and size of large format tiles & stone on high rise façade, are under vibration & shock, metal, wood, rubber & dry wall surfaces.</p>	

Technical advantage of Calcibond Ultimate over other flexible adhesive

- Super flexible polyurethane-based system for superior performance with high ageing.
- Best for flexible surfaces and areas under continuous movement such as high-rise façade under wind & temperature pressure, public infrastructure etc.
- To act as a waterproofing cum adhesive to fix tiles & stone in wet areas.
- Fully thixotropic to install all kind of tiles & stone without sagging.
- Economical single-pack easy to use two-component system.
- Chemical and highly water resistant.
- Highly flexible and exceeds the EN 12004- S2 norms requirement.
- Deformability of >10 mm., hence can be used on most flexible surfaces.
- Freeze-thaw and thermal shock resistant.
- Supreme bond between plywood systems including heavy duty marine grade plywood.
- Guaranteed performance to fix large format tiles & stone, slim slab, stone slab which are sensitive to moisture, and re- engineered stone based on resin system.
- Long life assurance on performance.
- Extreme white colour for very lite colour natural stone including Australian white and other transparent material.
- Best performance even at low thickness of 1.5 mm. Can be used upto 6 mm, or more.

Suitable areas

- Internal & External floor & wall including high rise façade.
- Residential & commercial buildings areas such as kitchen & bathroom counter tops, window seal, metal staircase etc.
- Industrial buildings and chemical resistance areas such as laboratory, Industrial kitchen, staircase etc.
- Public infrastructures such as railways, airports, stadium, bridges etc.
- Large size swimming pools, Jacuzzi & saunas for public uses.

Suitable surfaces

- Stable structure of metal, marine grade plywood, Vinyl PVC & rubber surfaces.
- Existing surfaces of Epoxies & PU coating.
- All kind of dry wall boards made with cement based, wood particle, gypsum, calcium silicate etc.
- Fully dry and sound new or old traditional plaster.
- Existing tiles or stone surfaces.
- New or old absorbent IPS or PCC floors which are sound and stable.
- Screed made with Walnut Zeorich Base, Zeorich Base Rapid or similar kind.
- Fully cured Stable concrete of all type including precast concrete
- Surfaces are made with AAC (Autoclaved Aerated concrete) panel,

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Suitable covering material

- All kind of ceramic & vitrified tiles of all size including tiles made in metal and wood.
- All kind of natural stone which are sensitive to moisture, stone veneer, slate stone, laminated stone, Corian solid surface, Onyx stone & agglomerated re-engineered resin-based quartz stone.
- Large size slab of tiles & stone bonded with fiber glass mesh on back surface.
- All type & size of ceramic & glass mosaic. Slim Tiles slab in 3 mm. thicknesses or cut stone with minimal thickness.

Product not to be used:

- Over expansion joint.
- Surfaces made with polystyrene in nature.
- Surfaces with standing water or continuous moisture.

How to Use



Important tools for application:

- Electric low speed mixing stirrer.
- Walnut notch trowel.
- Auto spirit level
- Other mixing & finishing tools such as mixing trowel, bucket, brush, tape etc.

Cleaning of tools:

- This material can be cleaned with solvents only. Paint thinner or varnish can be used to clean the equipment while the material is fresh. After curing the material will be difficult to remove since the strong bonding with metal.

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.
- Do not pre wet the surface with water.
- If surface area is larger, provide movement joint every 3 meter or as per local standard.
- 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: (Part A - Hardener : Part B -Resin Paste : Ratio: (1: 10) (3.63 Kg. : 0.36 Kg.)

- Open Calcibond Ultima mono pack. Mix full quantity of part A hardener into Part B thick paste. Use slow speed electric stirrer until it become homogeneous paste. Manual mixing can compromise performance of adhesive.
- In case part quantity of adhesive to be mixed, it is advisable to use strictly the correct ratio of Part A: Part B (1:10). For taking correct ratio, a measurement jar can be used. (In case Part A & B mixing ratio are not correct, the final result may vary and adhesive performance can be compromised.)
- Use the mixed material within pot life period.

How to apply:

- Spread the adhesive in desire thickness onto the 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 side.
- In case using as a spot bonding, ensure that minimum 25 percent of tiles or stone surface is covered with adhesive.
- 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 follow the grouting with Walnut Connect & Lock Epoxy Grout.

Product & Working Data

Product appearance	: Part A Liquid hardener in bottle. Part B thick white paste.
Packing	: 4 kg single mono pack. (Part A paste 3.63 Kg. Part B hardener 0.36 Kg.)
Mixing ratio	: 1:10 – hardener: Paste
Colour	: Extreme white
Shelf life	: 24 months from the date of manufacturing.
Vertical slip resistance	: < 0.5 mm. (As per European norms).
Pot life	: 1 hour +
Thickness	: Minimum 1.5 mm.
Open Time	: ≥ 40 minute
Adjustability	: ≥ 30 minute
Initial setting	: 8 hrs.
Final setting	: 24 hours.
Foot traffic allowed	: After 24 hours.
Grouting	: After 24 hours.
Normal use of surface	: After 3 days.
Full strength of adhesive	: At 7 days.
Coverage	: Approx. 1 Kg. / M ² / mm. of thickness.
Application temperature	: + 5° C. to + 35° C. (Data @ 23° C. & 50% humidity)

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Technical Performances

In compliance with EN 12004: EN R 2T (Standard for reactive adhesive)

Initial shear adhesion strength	: > 4.5 N / mm ²	: As per EN 12003
Shear adhesion after water immersion	: > 4.0 N / mm ²	: As per EN 12003
Tensile adhesion after 7 days on concrete	: ≥ 3 N / mm ²	: As per EN 1346
Tensile adhesion strength after freeze / thaw cycle	: ≥ 2.75 N / mm ²	: As per EN 1346
Elongation after full strength	: > 30 %	
Vertical slip	: < 0.5 mm.	: As per EN1308
Transverse deformation	: S ₂ ≥ 10 mm.	

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

In compliance with IS 15477 Type 5 Adhesive

Shear adhesion strength dry condition	: ≥ 6.2 N / mm ²
Shear adhesion strength heat ageing	: ≥ 4.2 N / mm ²
Tensile adhesion strength dry condition	: ≥ 3.15 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.

Walnut exclusive technology



Important instructions

- In case part quantity to be mixed, be careful to measure the correct ratio of Part A : Part B (1:7) by weight. Incorrect ratio can lead to performance failure of product. Any part quantity of Part A and B must be stored in safe area.
- In case of very weak surface, please ensure that proper strength or corrections 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 that adequate joints are provided in internal area.
- If temperature is more than 35° C., then 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.

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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).
- 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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