● TECHNICAL DATA SHEET

Calcibond Series — Adhesive

Calcibond Ultima

A unique Eco-friendly, very high flexible & deformable (>10mm) two-part **Polyurethane Adhesive** for fixing all large format tiles & stone on flexible surfaces, high-rise façades, metal, wood, rubber and dry-wall boards. Suitable for internal & external areas.

✓ **EN 12004** R 2T Standard	✓ **ISO 13007** International Standard	✓ **IS 15477** Type 5 — Indian Standard	★ **S2 · R 2T** Highest Grade

>4.5 N/mm²	>30 %	S2 ≥10mm	≥40 min	7 days	24 mo
SHEAR ADHESION	ELONGATION	DEFORMABILITY	OPEN TIME	FULL STRENGTH	SHELF LIFE

— 01 — MAIN APPLICATION & TECHNICAL ADVANTAGES

Main Application & *Technical Advantages*

PRIMARY USE

Fixing large format tiles & stone on:

- High-rise façades under wind & temperature pressure
- Metal, marine plywood, rubber & PVC surfaces
- All dry-wall boards — cement, gypsum, calcium silicate
- Areas under heavy vibration & shock
- Wet areas — simultaneous waterproofing cum adhesive

Waterproofing Cum Adhesive

Acts as both waterproofing membrane AND tile adhesive in wet areas — pools, bathrooms, Jacuzzi & saunas

Key Technical Advantages

- **Super flexible polyurethane** — superior performance & high ageing
- **Fully thixotropic** — installs on walls without any sagging
- **Economical single-pack** — easy to use 2-component system
- **Chemical & water resistant** — labs, industrial kitchens
- **Exceeds EN 12004 S2** — deformability >10mm
- **Freeze-thaw & thermal shock resistant** — -30°C to +80°C
- **Extreme white** — for light natural stone & Australian white
- **Performance from 1.5mm** — best even at low thickness
- **Supreme bond on plywood** — including marine-grade plywood

— 02 — SUITABLE AREAS & SURFACES

Where to *Use*

Suitable Areas

- Internal & external floor & wall, high-rise façade
- Kitchen & bathroom countertops, window seals
- Industrial — labs, industrial kitchens, staircases
- Public infrastructure — railways, airports, stadiums
- Large swimming pools, Jacuzzi & saunas

Suitable Substrates

- Metal, marine plywood, Vinyl PVC & rubber
- Existing epoxy & PU coatings
- Dry-wall boards — cement, gypsum, wood particle
- New or old traditional plaster (fully dry & sound)
- Zeorich Base screed or similar polymer screed
- Cured concrete (all types), AAC panel

Covering Materials

- All ceramic & vitrified tiles, all sizes
- Natural stone sensitive to moisture
- Stone veneer, slate, laminated, Corian, Onyx
- Resin-based quartz & agglomerated stone
- Large slabs with fibreglass mesh backing
- Slim tiles/slabs 3mm & glass mosaic

⚠ PRODUCT NOT TO BE USED

- Over expansion joints
- Surfaces made of polystyrene
- Surfaces with standing water or continuous moisture

— 03 — PRODUCT & WORKING DATA

Complete *Specifications*

OPEN TIME	ADJUSTABILITY	FOOT TRAFFIC	FULL STRENGTH
≥40 min	≥30 min	24 hrs	7 days
@ 23°C & 50% RH	Repositioning window	After application	Complete PU cure

Parameter	Value	Notes
Product type	2-Part Polyurethane	Part A hardener + Part B paste
Packing	4 kg mono-pack kit	Part A 3.63kg + Part B 0.36kg
Mixing ratio (A : B)	1 : 10 by weight	Strictly follow ratio
Colour	Extreme White	For light-coloured stone
Shelf life	24 months	From date of manufacture
Vertical slip resistance	< 0.5 mm	As per EN 1308
Pot life	1 hour+	Use within pot life
Bed thickness	1.5 mm – 6 mm+	Best at 1.5mm
Open time	≥ 40 minutes	EN 1346 @ 23°C & 50% RH
Adjustability time	≥ 30 minutes	Repositioning window
Initial setting	8 hours	Do not disturb
Final setting	24 hours	Safe for foot traffic
Grouting allowed	After 24 hours	Use C&L Epoxy Grout
Normal surface use	After 3 days	Regular use
Full adhesive strength	At 7 days	Complete polyurethane cure
Coverage	~1 kg / m² / mm	Varies with substrate
Application temperature	+5°C to +35°C	Data @ 23°C & 50% RH

— 04 — APPLICATION METHOD

How to *Apply*

1 — Prepare Surface

Ensure surface is sound, clean, free from oil, grease & dust. Level if uneven >15mm. Do NOT pre-wet.

2 — Mix (1:10)

Add Part A hardener into Part B paste at 1:10 ratio. Mix with slow-speed electric stirrer until homogeneous.

3 — Apply Adhesive

Spread with Wallnut notch trowel. Back-butter large tiles. Ensure ≥25% coverage for spot bonding.

4 — Fix Tiles

Press firmly before skin formation. Leave space between tiles for grouting and surface movement.

5 — Grout at 24h

Allow 24 hours before grouting. Use Wallnut Connect & Lock Epoxy Grout for best results.

⚗️ Mixing Ratio — Part A (Hardener) : Part B (Resin Paste) = 1 : 10 by weight

PART A — HARDENER		PART B — RESIN PASTE		FINAL MIXED ADHESIVE
Liquid Hardener (bottle)	+	Thick White Paste	=	Ready to Apply
0.36 kg		**3.63 kg**		**4.00 kg**

⚠️ Critical: When mixing partial quantities, strictly maintain 1:10 ratio using a measurement jar. Incorrect ratio compromises adhesive performance. Clean tools with paint thinner while fresh — cured material is very difficult to remove.

— 05 — TECHNICAL PERFORMANCE

Tested *Performance Data*

EN 12004: EN R 2T — Standard for Reactive Adhesive	Final results @ 28 days · 23°C · 50% RH	
Initial shear adhesion strength	> 4.5 N/mm²	As per EN 12003
Shear adhesion after water immersion	> 4.0 N/mm²	As per EN 12003
Tensile adhesion after 7 days on concrete	≥ 3.0 N/mm²	As per EN 1346
Tensile adhesion after freeze/thaw cycle	≥ 2.75 N/mm²	As per EN 1346
Elongation at full strength	> 30 %	Polyurethane flexibility
Vertical slip resistance	< 0.5 mm	As per EN 1308
Transverse deformation	S2 ≥ 10 mm	Highest deformability class

IS 15477 — Type 5 Adhesive (Indian Standard)	Final results @ 28 days · 27°C · 65% RH	
Shear adhesion strength — dry condition	≥ 6.2 N/mm²	IS 15477 Type 5
Shear adhesion strength — heat ageing	≥ 4.2 N/mm²	IS 15477 Type 5
Tensile adhesion strength — dry condition	≥ 3.15 N/mm²	IS 15477 Type 5

Final resistance to temperature after 28 days / full cure: **-30°C to +80°C** · Final results may vary based on site temperature and humidity conditions.

— 06 — WALLNUT EXCLUSIVE TECHNOLOGY

Proprietary *Technology*

HIGH FLEXIBLE TECHNOLOGY

Polyurethane polymer network delivers industry-leading S2 deformability >10mm. Critical for façades and all movement-prone substrates

HIGH PERFORMANCE

Dual EN & IS certified. Shear adhesion exceeds 4.5 N/mm² initial, maintaining >4.0 N/mm² after full water immersion

HIGH GRIP TECHNOLOGY

Supreme bond on non-porous surfaces — metal, plywood, rubber, PVC where all cementitious adhesives fail

— 07 — IMPORTANT INSTRUCTIONS

Read Before *Using*

Mixing Ratio is Critical

Incorrect Part A:Part B ratio compromises final performance. Use a measurement jar. Store unused components safely.

Temperature Limits

Above 35°C: avoid direct sun. Below 5°C: setting times affected. Let hot surfaces cool before application.

Surface Condition

Weak surfaces must be corrected before application. For cement boards, check manufacturer instructions and apply primer if required.

Follow Expansion Joints

Concrete expansion & connection joints must be followed. Provide movement joints every 3m for large areas.

Resin Stone Joints

When fixing resin-based recomposed stone, ensure adequate movement joints are provided in internal areas.

Performance Issues

If product performance does not match technical data, call Wallnut technical helpline immediately: +91-22-4971 3322

— 08 — SAFETY & SUSTAINABILITY

Quality, Safety & *Green Building*

Wallnut Green Building Index

Eco-friendly formulation — suitable for all building types including certified green buildings. Major raw materials are locally procured to safeguard the environment.

- Recycled raw material used in production
- Very Low Organic Compounds (VOC)
- Suitable for certified green & all normal buildings
- Locally sourced major raw materials

Wallnut Quality & Safety Assurance

Products are safe for all site workers with proper tools and safety measures in place for prolonged working.

- Wear gloves and safety glasses during application
- Follow local safety regulations for all protection measures
- Proper tools required for prolonged working

★★★		2
QUALITY	SAFETY	YR SHELF LIFE

DECLARATION

All the above information and results are provided based on Wallnut internal quality tests. Customer must check before using the product about performance and final expected results. Wallnut cannot be held responsible for any damage of whatsoever nature at site. Technical data provided at 23°C and 50% relative humidity — actual results may vary based on site conditions.

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