



HYDA CON
Innovative chemical solutions

Technical Data Sheet

HYDAPOXY AD 17 3C

High Strength Epoxy Adhesive

ABOUT HYDAPOXY AD 17 3C

HYDAPOXY AD 17 3C is a three-component, chemical-resistant epoxy thinset adhesive designed for interior and exterior floor and wall tile or stone applications. It offers excellent bond strength, high chemical resistance, and is ideal for demanding industrial, commercial, and residential areas. Specially formulated to resist staining of white and light-coloured marbles, HYDAPOXY AD 17 3C ensures superior performance even under thermal shocks and water exposure.

The adhesive meets international and Indian standards, including **EN 12004 / ISO 13007 (R2T)**, **ANSI A118.3**, and **IS 15477 Type 2**, ensuring reliable and durable installations.

SURFACE APPLICATION MATERIALS

- | | |
|---|---|
|  Marble & Granite |  Agglomerates (Engineered Stones) |
|  Vitrified & Ceramic Tiles |  Precast Terrazzo Tiles |
|  Glass Mosaic Tiles |  Clay Tiles, Terracotta Tiles, Metal Tiles |

RECOMMENDED SURFACES / SUBSTRATES

- | | |
|---|--|
|  Concrete – VDF, Tremix, MIVON |  Brick Masonry & Cement Plaster |
|  Tile, Stone & Cement Terrazzo |  Metal Floors & Walls |
|  Epoxy Resin Based Surfaces |  Wood, Plywood, Cement & Gypsum Backer Boards |
|  Rubber, PVC & Linoleum Substrates | |

APPLICATION AREAS

- | | |
|---|--|
|  Industrial & Manufacturing Facilities |  Commercial Kitchens & Cafeterias |
|  Hospitals & Laboratories |  Residential Floors & Walls |
|  Exterior Facades & Podiums |  Swimming Pools & Water Features |
|  Saunas & Wet Areas |  Educational Institutions & Clean Rooms |

PRODUCT HIGHLIGHTS

- ❖ **THREE COMPONENT SYSTEM** – Epoxy resin, hardener, and filler for controlled, high-strength bonding
- ❖ **HIGH CHEMICAL RESISTANCE** – Ideal for harsh chemical environments
- ❖ **SUITABLE FOR SENSITIVE MATERIALS** – Prevents curling or staining of white/light marble and agglomerated stones
- ❖ **STRONG ADHESION** – Bonds to concrete, metals, wood, tiles, and more
- ❖ **STANDARDS COMPLIANT** – Meets EN 12004 / ISO 13007 (R2), ANSI A118.3, and IS 15477 Type 2
- ❖ **THERMAL SHOCK RESISTANT** – Maintains bond strength even in fluctuating temperatures
- ❖ **WATER CLEANABLE WHEN FRESH** – Easy to handle during installation
- ❖ **NON-FLAMMABLE FORMULATION** – Safe to use and store

TECHNICAL DETAILS

ANSI DATA

PROPERTY	TEST METHOD	REQUIREMENT	HYDAPOXY AD 17 3C VALUES
Compressive Strength	ANSI A118.3 – Cl. 5.6	≥ 3500 psi (24.13 MPa)	> 8151 psi (56.21 MPa)
Tensile Strength	ANSI A118.3 – Cl. 5.7	≥ 1000 psi (6.90 MPa)	1801–2701 psi (12.42–18.62 MPa)
Shear Bond Strength (Tile to Tile)	ANSI A118.3 – Cl. 5.5	≥ 1000 psi (6.90 MPa)	1201–1451 psi(8.28–10.01 MPa) Tile failure
Shear Bond Strength (Marble to Marble)	ANSI A118.3 – Cl. 5.5	≥ 1000 psi (6.90 MPa)	1201–1801 psi (8.28–12.42 MPa) Stone failure
Shear Bond Strength (Marble to Metal)	ANSI A118.3 – Cl. 5.5	≥ 1000 psi (6.90 MPa)	1201–1801 psi (8.28–12.42 MPa) Stone failure
Thermal Shock Resistance	ANSI A118.3 – Cl. 5.8	≥ 500 psi (3.45 MPa)	1101–1601 psi(7.59–11.04 MPa) Tile/Stone failure

EN / ISO DATA

PROPERTY	TEST / REFERENCE	REQUIREMENT	HYDAPOXY AD 17 3C VALUES
7 Day Cure Shear Adhesion Strength	ISO 13007-2 4.3.4 (EN 12003-7.3)	≥ 2 N/mm ²	11–14 N/mm ² (≈ 1595–2031 psi), Tile/Stone failure
Shear Adhesion Strength after Water Immersion	ISO 13007-2 4.3.5 (EN 12003-7.4)	≥ 2 N/mm ²	11–14 N/mm ² (≈ 1595–2031 psi), Tile/Stone failure
Shear Adhesion Strength after Thermal Shock	ISO 13007-2 4.3.8 (EN 12003-7.5)	≥ 2 N/mm ²	9.5–13 N/mm ² (≈ 1378–1885 psi), Stone failure
Open Time after 20 Minutes	ISO 13007-2 4.1 (EN 1346)	≥ 0.50 N/mm ²	4.0–5.0 N/mm ² (≈ 580–725 psi) (20 minutes)

IS DATA

PROPERTY	TEST / REFERENCE	REQUIREMENT	HYDAPOXY AD 17 3C VALUES
Shear Bond Strength (24h, Dry)	IS 15477-Type 2 Annex A (Clause 4.5)	Minimum 4.00 kN	21kN
Shear Bond Strength (14 Days, Dry)	IS 15477-Type 2 Annex A (Clause 4.5)	Minimum 10.00 kN	31–36 kN
Shear Bond Strength (Heat Ageing)	IS 15477-Type 2 Annex A (Clause 4.5)	Minimum 5.00 kN	31–36 kN
Shear Bond Strength (Wet Condition)	IS 15477-Type 2 Annex A (Clause 4.5)	Minimum 5.00 kN	31–36 kN

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION GUIDELINES

- CLEAN & STABLE SURFACE** – Ensure the substrate is level, firm, and free from dust, grease, loose particles, or any contaminants that may compromise adhesion.
- EVEN & LEVEL BASE** – The surface should be plumb and true within 6 mm over a 3-meter (10 ft) span to prevent tile misalignment and irregularities.
DRY & MOISTURE-CONTROLLED – The substrate must be dry, structurally sound, and free from rising dampness or excessive moisture, which can affect bonding performance..
- PRE-WET IF NECESSARY** – For dry or highly absorbent surfaces, lightly dampen the area before application, ensuring no excess water remains.
- CURE NEW CONCRETE** – Newly laid concrete must be cured for at least 28 days to reduce shrinkage and ensure a stable foundation for tiling.
- PRESERVE EXPANSION JOINTS** – Maintain expansion joints and fill them with a flexible sealant. Do not cover them with tile adhesive or tiles to prevent structural stress.

HOW TO MIX THE ADHESIVE (HYDAPOXY AD 17 3C)

- MIXING RATIO** – For 5 Kg Pack (Part A : B : C = 1 : 2.5 : 10 by weight). Do not alter the ratio.
- BLENDING PROCESS** – Pour Part B into Part A and mix until a smooth, uniform mixture is obtained. Then slowly add Part C and continue mixing until a homogeneous paste is formed. Use a low-rev (approx. 400 RPM) mixer.
- RESTING PERIOD** – Use immediately after mixing. Do not allow to rest or remix.
- APPLICATION CAUTION** – Mix full quantity only. Part mixing is not recommended as it alters working properties.

STEP-BY-STEP TILE APPLICATION GUIDE

1. SURFACE PREPARATION

- Apply adhesive evenly to the substrate using the flat side of a notched trowel.
- Use the notched side to create uniform ridges for optimal adhesion.

2. TILE PLACEMENT

- Set tiles while adhesive is still fresh and tacky.
- Press tiles firmly and beat with a rubber mallet for full bedding.
- For large format tiles, back-butter tiles for full contact.
- Remove and replace any adhesive that has skinned over.
- Clean excess adhesive from tile surface while still fresh.

3. GROUTING

- Begin grouting after minimum 24 hours curing at 21°C (70°F).
- For interior joints, use HYDAPOXY 711 Grout or equivalent stain-free epoxy grout.
- For exterior or flexible joints, use a durable grout with an additive for better performance.

4. SPECIAL NOTE FOR DRYWALL & EXTERIOR APPLICATIONS

- Provide flexible joints when fixing on drywall boards.
- Use spacers and fill joints with flexible sealants or epoxy grout.
- For external applications, ensure peripheral joints and expansion joints are honored and properly filled.

PRO TIPS & PRECAUTIONS

- ✓ Shield freshly fixed tiles and stones from rain, traffic, or disturbance for at least 24 hours.
- ✓ Use only the full pre-measured components—do not add any extra materials like cement or sand.
- ✓ Maintain the proper component ratios strictly during mixing for consistent performance.
- ✓ For tile installations above 3 meters height, provide mechanical fastening support for safety and stability.
- ✓ Mix components by adding the powder into the liquid parts gradually—never pour liquid into powder.
- ✓ Do not use adhesive to level or patch uneven substrates deeper than 15 mm—use proper leveling compound.
- ✓ Ensure substrate is fully cured and free from moisture—avoid applying on freshly poured or wet surfaces.

PRODUCT SPECIFICATIONS & STORAGE GUIDELINES

AVAILABLE PACKAGING

- Part A – Resin
- Part B – Hardener
- Part C – Filler Powder

UNIT NET WEIGHT: 5.0 kg

SHELF LIFE

Minimum 24 months from the date of manufacture when stored unopened in original containers, in a cool, dry place between 10°C and 35°C.

STORAGE LIFE

- Store between 10°C and 35°C
- Keep containers tightly sealed when not in use
- Discard product if packaging is damaged or contents have hardened.
- Keep away from:
 1. Direct sunlight
 2. High humidity or moisture
 3. Extreme cold or heat (<5°C or >35°C)

GROUTING INSTRUCTIONS

1. **WAITING TIME:** Begin grouting only after allowing a minimum of 24 hours of curing time at 70°F (21°C) to ensure the substrate and adhesive have properly set.
2. **RECOMMENDED PRODUCTS:**
 - For internal spacer joints where maximum stain resistance is required, use HYDAPOXY 711, a stain-free epoxy grout ideal for such applications.
 - For external joints where both stain resistance and flexibility are essential, select a grout formulated specifically for outdoor durability and weather resistance.
 - As an alternative, you may use cement-based grouts enhanced with HYDAADMIX 141 to improve durability and stain resistance in general-purpose installations.
3. **APPLICATION TIP:**
 - Conduct a trial application on a small test area with the actual tile/stone before full-scale application.
 - Ensure tile surfaces are clean, dry, and free from dust.
 - For porous or absorbent tiles, pre-wet or test beforehand to prevent staining or discoloration.
 - Use conventional grouting methods such as rubber float or caulking gun as appropriate.
 - Protect newly applied grout from direct sun exposure and avoid heavy foot traffic until fully cured.

COVERAGE DETAILS

Coverage depends on several job-site variables.

FACTORS AFFECTING COVERAGE:

- Tile size, joint width and depth
- Surface porosity and smoothness
- Application technique (float or gun)
- Wastage and site conditions

SAFETY & APPLICATION GUIDELINES FOR HYDAPOXY AD 17 3C

1. PERSONAL PROTECTION

- Wear appropriate protective gloves, goggles, and suitable clothing during mixing and application.
- Store in a cool, dry place out of reach of children and unauthorized users.
- For industrial and professional use only; not recommended for domestic or DIY use.

2. EMERGENCY PROCEDURES

- Skin Contact: Wash immediately with plenty of clean water and soap.
- Eye Contact: Flush eyes thoroughly with water for at least 15 minutes. Seek medical attention if irritation persists.
- Inhalation/Ingestion: In case of inhalation or accidental ingestion, seek immediate medical assistance.

MAINTENANCE

- Regular cleaning using neutral-pH soap and clean water is recommended.
- Avoid acidic or solvent-based cleaners. Use cleaning products compatible with epoxy-based materials for long-lasting performance.
- Routine maintenance ensures retained appearance and chemical resistance.

PERFORMANCE LIMITATIONS

- Not advised on delicate surfaces like soft polished marble or high-gloss tiles prone to scratching.
- Ensure proper movement joints are provided in all tile/stone installations to prevent cracking or dislodging due to surface movement.
- Not to be used as a substitute for a waterproofing system; ensure proper waterproofing is in place where required.
- Lighter-colored grout may darken over time under prolonged sunlight exposure.
- Full chemical and stain resistance develops after complete curing — typically 7 days. Avoid harsh cleaning agents during this period

End of TDS