



HYDA CON
Innovative chemical solutions

Technical Data Sheet

MEGA 506

High Strength Superior Polymer Modified Tile
Adhesive

ABOUT MEGA 506

MEGA 506 is a multipurpose, highly polymer-modified adhesive formulated for fixing large-format tiles and stones on both interior and exterior floors and walls. It provides exceptional bonding strength, making it ideal for high-performance applications, including wet areas like swimming pools, saunas, and water bodies. Its advanced composition ensures long-lasting durability and reliability in diverse environmental conditions.

MEGA 506 exceeds the performance standards-

IS 15477:2019 (Type 3T S1)

EN 12004/ISO 13007 C2ETS1

ANSI A118.4

MEGA 506 is a premium-grade tile adhesive engineered for superior performance in both new construction and renovation projects. Its versatility makes it ideal for residential and commercial installations, ensuring strong adhesion and long-lasting durability across various tiling applications.

SURFACE APPLICATION MATERIALS

- | | |
|---|--|
|  Large-format tiles |  Large thin/slim tiles |
|  Low-thickness slabs |  Vitrified tiles and paver bricks |
|  Ceramic tiles (all types) |  Glass mosaic tiles |
|  Marble & natural stones |  Precast terrazzo |
|  Terracotta tiles | |

RECOMMENDED SURFACES / SUBSTRATES

- | | |
|---|--|
|  Brickwork & AAC blocks |  Cement-based screeds & mortar beds |
|  Cement-plastered & rendered surfaces |  Concrete surfaces |
|  Waterproofing products |  Existing tiled & stone surfaces |
|  Other cement-based substrates |  Thermal insulation panels |
|  Drywall (cement, bison, gypsum, fiber boards) | |

APPLICATION AREAS

- | | |
|--|---|
|  Dry & wet areas |  External shaded & open areas |
|  Flooring & walls |  Internal applications |
|  New construction & renovation |  Residential & commercial projects |
|  Saunas, spas, fountains & swimming pools |  Terraces, balconies, podium decks & facades |

PRODUCT HIGHLIGHTS

- ❖ **WATER & SHOCK RESISTANT** - Suitable for wet areas and commercial flooring.
- ❖ **HIGHLY POLYMER MODIFIED** - Provides excellent bond strength under various conditions.
- ❖ **EXTENDED OPEN TIME** - Ideal for large-format tiles and external applications.
- ❖ **HEAT-RESISTANT** - Designed to sustain high temperatures and external conditions.
- ❖ **HIGHLY DEFORMABLE** - Absorbs substrate vibrations, preventing cracks.
- ❖ **SAG-RESISTANT FORMULA** - Ensures hassle-free application on vertical walls.
- ❖ **LOW VOC** - Promotes a healthier living environment.

TECHNICAL DETAILS

ANSI DATA

PROPERTY	TEST METHOD	REQUIREMENT	MEGA 506 VALUES
Open Time (30 Minutes at 28°C)	ANSI A118.4 Clause 5.3	≥75 psi (0.50 MPa)	132 - 152 psi → (0.91 – 1.05 MPa)
Sag	ANSI A118.4- Clause 6.0	≤0.02 Inches (0.50 mm)	0.010 – 0.014 inches (0.25 – 0.35 mm)
Glazed Wall Tile Shear Strength (7 Days)	ANSI A118.4 – Clause 7.1.2	>300 psi (2.07 MPa)	352 - 377 psi → (2.43 – 2.6 MPa)
7 Days Water Immersion	ANSI A118.4- Clause 7.1.3	>200 psi (1.38 MPa)	252 - 277 psi → (1.74 – 1.91 MPa)
Porcelain Mosaic Tile Shear Strength (1 Day)	ANSI A118.4 – Clause 7.2.2	>75 psi (0.50 MPa)	127 - 177 psi → (0.88 – 1.22 MPa)
7 Days	ANSI A118.4 – Clause 7.2.3	>200 psi (1.38 MPa)	277 - 327 psi → (1.91 – 2.25 MPa)
7 Days Water Immersion	ANSI A118.4 – Clause 7.2.4	>150 psi (1.03 MPa)	227 - 277 psi → (1.57 – 1.91 MPa)
28 Days	ANSI A118.4 – Clause 7.2.5	>200 psi (1.38 MPa)	302 - 352 psi → (2.08 – 2.42 MPa)
28 Days Freeze-Thaw Cycling	ANSI A118.4 – Clause 7.2.5	>175 psi (1.20 MPa)	277 - 327 psi → (1.91 – 2.25 MPa)
12 Weeks	ANSI A118.4 – Clause 7.2.7	>200 psi (1.38 MPa)	302 - 352 psi → (2.08 – 2.42 MPa)
Quarry Tile Shear Strength (28 Days)	ANSI A118.4 – Clause 7.3.2	>150 psi (1.03 MPa)	252 - 302 psi → (1.74 – 2.08 MPa)
28 Days Freeze-Thaw Cycling	ANSI A118.4 – Clause 7.3.3	>100 psi (0.69 MPa)	202 - 252 psi → (1.39 – 1.74 MPa)

EN / ISO DATA

PROPERTY	TEST METHOD	REQUIREMENT	MEGA 506 VALUES
Open Time	EN 1346	$\geq 0.50 \text{ N/mm}^2$	0.90 – 1.15 N/mm ²
Slip Resistance	EN 1308	$\leq 0.50 \text{ mm}$	0.25 - 0.35 mm
Tensile Adhesion Strength (Initial)	EN 1348 – Clause 8.2	$\geq 1.00 \text{ N/mm}^2$	1.55 – 2.05 N/mm ²
After Water Immersion	EN 1348 - Clause 8.3	$\geq 1.00 \text{ N/mm}^2$	1.55 – 1.80 N/mm ²
Heat Ageing	EN 1348 – Clause 8.4	$\geq 1.00 \text{ N/mm}^2$	1.20 – 1.45 N/mm ²
Freeze-Thaw	EN 1348 – Clause 8.5	$\geq 1.00 \text{ N/mm}^2$	1.80 – 2.05 N/mm ²
Transverse Deformation	EN 12002	$\geq 2.5 \text{ mm} < 5.00 \text{ mm}$	2.60 mm - 2.70 mm

IS DATA

PROPERTY	TEST METHOD	REQUIREMENT	MEGA 506 VALUES
Tensile Adhesion (Dry Condition)	Annex A (Clause 5.1)	Minimum 1.5 N/mm ²	1.75-1.85 N/mm ²
Wet Condition	Annex A (Clause 5.1)	Minimum 1.0 N/mm ²	1.55-1.65 N/mm ²
Shear Adhesion (Dry Condition)	Annex B (Clause 5.2)	Minimum 1.5 N/mm ²	1.85-1.95 N/mm ²
Heat Ageing	Annex B (Clause 5.2)	Minimum 1.0 N/mm ²	1.25-1.35 N/mm ²
Wet Conditions	Annex B (Clause 5.2)	Minimum 1.0 N/mm ²	1.35-1.45 N/mm ²
Slip Resistance	Annex E (Clause 5.5)	$\leq 0.5 \text{ mm}$	0.5-0.6 mm
Transverse Deformation	Clause 5.6	$\geq 2.5 \text{ mm} < 5.00 \text{ mm}$	2.60 mm - 2.70 mm

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION GUIDELINES

- 1) **STRONG AND CLEAN SURFACE:** Ensure the substrate is free from dust, grease, loose particles, and any material that may weaken adhesion.
- 2) **LEVEL & UNIFORM BASE:** The surface should be even, with no deviations greater than 6 mm over a 3-meter (10 ft) span.
- 3) **MOISTURE-FREE & STABLE:** The substrate must be dry, structurally sound, and free from rising dampness, excess moisture, or any contaminants.
- 4) **PRE-WET IF NECESSARY:** If the surface is too dry or powdery, lightly moisten it before applying adhesive, but avoid standing water.
- 5) **CURE NEW CONCRETE BEFORE USE:** Fresh concrete must be allowed to cure for at least 28 days before tiling to prevent shrinkage cracks.
- 6) **MAINTAIN EXPANSION JOINTS:** Expansion joints should always be provided and filled with a suitable sealant. Do not cover them with adhesive or tiles.

HOW TO MIX THE ADHESIVE

1. **MIXING RATIO**—For a 20 kg bag, use 5.5 to 6.5 liters of water. Adjust slightly for the right consistency.
2. **MIXING PROCESS**— In a clean container, use a mechanical stirrer or a low-speed drill (50-100 rpm) to blend until smooth and free of lumps.
3. **RESTING TIME**— Allow the mixture to sit for 5 minutes before use, then stir again briefly.
4. **USAGE PRECAUTION**— Prepare only the amount you can use within the working time. Avoid adding extra water after mixing.

STEP-BY-STEP TILE APPLICATION GUIDE

1. PREPARING THE SURFACE

- Spread adhesive evenly on the substrate using the flat side of a notched trowel.
- Comb the adhesive with the notched side to create uniform ridges for strong tile bonding.
- Trowel Size Guidelines:
 - Small tiles (up to 30x30 cm): 6 mm notches
 - Medium tiles (30x60 cm): 8-10 mm notches
 - Large tiles (60x60 cm): 10-12 mm notches

2. SETTING THE TILES

- **Work Quickly:** Fix tiles within 30 minutes of adhesive application (time may vary with surface porosity and weather).
- **Check for Dry Film:** If the adhesive forms a skin, remove it and reapply fresh adhesive.
- **Press & Secure:** Place tiles with firm pressure and a slight twisting motion for strong contact.
- **Tap into Position:** Use a rubber mallet to adjust tile levels and ensure proper embedding.

3. ENSURING FULL COVERAGE

- **Back-Buttering (For Large or Irregular Tiles):** Apply adhesive to both the surface and the tile back to eliminate air gaps.
- **Avoid Voids:** Ensure full contact to prevent weak spots, especially in moisture-prone areas.

4. SPACING & ALIGNMENT

- **Use Tile Spacers** to maintain even gaps as per the architect/engineer's specifications.
- **Clean Excess Adhesive** from tile surfaces and joints before it dries.

5. SPECIAL CASES & RECOMMENDATIONS

- **Fixing Tiles on Walls:** Use temporary supports alongside adhesive for stability.
- **Highly Absorbent Stones:** Pre-treat with an impregnating sealer to prevent visible moisture stains.
- **Drywalls & Porous Surfaces:** Consult a technical expert for best practices.

PRO TIPS & PRECAUTIONS

- ✓ **Protect fresh tiling** from rain and foot traffic for at least 24 hours.
- ✓ **Do not modify the mix** by adding sand or cement at the site.
- ✓ **Stick to the recommended water ratio**—excess water weakens the adhesive.
- ✓ **For installations above 3m**, consider additional mechanical support (e.g., steel hooks) for extra stability.
- ✓ **Always add powder to water**—never the other way around.
- ✓ **Limit surface corrections**—adhesive should not be used to fix irregularities deeper than 15 mm.
- ✓ **Ensure the surface is fully cured**—avoid applying adhesive on wet screed.

PRODUCT SPECIFICATIONS & STORAGE GUIDELINES

AVAILABLE PACKAGING:

- Grey: 20 kg bag
- White: 20 kg bag

STORAGE LIFE: 12 months from the manufacturing date when:

- Stored in original sealed packaging
- Kept in a cool, dry place (10–30°C)
- Protected from:
 - Direct sunlight
 - Moisture/humidity
 - Temperature extremes (<5°C or >35°C)

QUALITY CHECK: Discard if the bag is torn or the contents have hardened.

GROUTING INSTRUCTIONS

1. **WAITING TIME:** Begin grouting after 24 hours of tile installation.
2. **RECOMMENDED PRODUCTS:**
 - Use HYDACON cementitious or epoxy grouts (HYDAPOXY 711, HYDAPOXY 712) for best results.
3. **APPLICATION TIP:** Maintain uniform joint gaps before applying grout.

COVERAGE DETAILS

- 20 kg bag:
 - 5-6 m² at 3 mm thickness (using a 6×6 mm notch trowel)
 - 2.5-3 m² at 6 mm thickness (using a 12×12 mm notch trowel)
- Usage Rate: ~1.2 kg/m² per 1 mm thickness

FACTORS AFFECTING COVERAGE:

- Trowel size & application technique
 - Tile size & material
 - Surface smoothness & porosity
- ✓ Best Practice: Conduct a test application before full-scale use.

SAFETY & APPLICATION GUIDELINES FOR MEGA 506

1. PERSONAL PROTECTION

- Wear protective gloves, clothing, and eye/face protection while handling.
- Keep out of reach of children at all times.
- For professional use only – not for consumer DIY applications.

2. EMERGENCY PROCEDURES

- Skin Contact: Wash immediately with plenty of clean water.
- Eye Contact: Rinse thoroughly with water for 15 minutes and seek medical attention.

APPLICATION BEST PRACTICES

3. MIXING INSTRUCTIONS

- Always add powder to water – never reverse the order.
- Follow recommended water ratios; excess water weakens adhesion.
- Do not mix with cement, sand, or other additives.

4. SURFACE PREPARATION

- Ensure substrate is dry, level, and fully cured before application.
- Not suitable for wet screeds or fresh concrete (must be at least 28 days old).
- For uneven surfaces (>15mm variation), use a leveling compound.

5. INSTALLATION & PROTECTION

- Protect newly installed tiles from rain, foot traffic, and heavy loads for at least 24 hours.
- For high-rise applications or heavy cladding:
 - Consult a structural engineer.
 - Use mechanical fastening systems if required.
 - Check substrate load capacity.

PERFORMANCE LIMITATIONS

- Not a self-leveling compound – use appropriate leveling materials if needed.
- Curing time may vary based on environmental conditions.
- Test on a small area if uncertain about substrate suitability.

-End of TDS