



HYDA CON
Innovative chemical solutions

Technical Data Sheet

REGULAR 501

Polymer Based Tile Adhesive For Interior Floor & Wall

ABOUT REGULAR 501

REGULAR 501 is a high-performance, polymer-based adhesive specially designed for installing small types of natural stone tiles and ceramic tiles. It is suitable for horizontal applications in dry environments, making it ideal for indoor use.

REGULAR 501 Exceeds the performance standards

IS 15477:2019 (Type 1T)

EN 12004/ISO 13007 C1T

ANSI A118.1 T

REGULAR 501 is perfect for commercial spaces, as it absorbs shocks and withstands heavy traffic, ensuring long-lasting durability.

SURFACE APPLICATION MATERIALS

-  Small natural stones
-  Small-format tiles
-  Precast terrazzo
-  Ceramic tiles
-  Terracotta tiles

RECOMMENDED SURFACES / SUBSTRATES

-  Brickwork & AAC blocks
-  Concrete surfaces
-  Cement-based screeds & mortar beds
-  Other cement-based substrates
-  Cement-plastered & rendered surfaces

APPLICATION AREAS

-  Dry areas
-  Internal Flooring
-  Terraces, balconies & podium decks
-  Residential applications

PRODUCTS HIGHLIGHTS

- ✓ **EASY TO USE** – Simply mix with water at the site, no complicated preparation required.
- ✓ **IDEAL FOR INDOOR APPLICATIONS** – Perfect for floors in interior spaces.
- ✓ **STRONG ADHESION** – Binds effectively to cement-based surfaces for a reliable and lasting hold.
- ✓ **SELF-CURING FORMULA** – Automatically cures without extra steps, saving time and reducing labour.
- ✓ **LOW VOC EMISSION** – Designed to support healthier indoor air quality with minimal chemical emissions.

TECHNICAL DETAILS

ANSI DATA

| PROPERTY | TEST METHOD | REQUIREMENT | REGULAR 501 VALUES |
|--|-------------------------|----------------------|-------------------------------|
| Open Time (20 min at 28°C) | ANSI A118.1 – Cl. 5.3 | ≥ 75 psi (0.50 MPa) | 97–102 psi (0.67–0.70 MPa) |
| Sag | ANSI A118.1 – Cl. 6.0 | ≤ 0.02 in (0.50 mm) | 0.018–0.020 in (0.46–0.51 mm) |
| Glazed wall tile shear strength – 7 Days | ANSI A118.1 – Cl. 7.1.2 | > 200 psi (1.38 MPa) | 202–227 psi (1.39–1.56 MPa) |
| Glazed wall tile – 7 Days Water Immersion | ANSI A118.1 – Cl. 7.1.3 | > 150 psi (1.03 MPa) | 152–177 psi (1.05–1.22 MPa) |
| Porcelain mosaic tile – 1 Day | ANSI A118.1 – Cl. 7.2.2 | > 50 psi (0.34 MPa) | 52–77 psi (0.36–0.53 MPa) |
| Porcelain mosaic tile – 7 Days | ANSI A118.1 – Cl. 7.2.3 | > 150 psi (1.03 MPa) | 152–177 psi (1.05–1.22 MPa) |
| Porcelain mosaic tile – 7 Days Water Immersion | ANSI A118.1 – Cl. 7.2.4 | > 100 psi (0.69 MPa) | 127–152 psi (0.88–1.05 MPa) |

EN / ISO DATA

| PROPERTY | TEST METHOD | REQUIREMENT | REGULAR 501 VALUES |
|-------------------------------------|----------------------|-------------------------|-------------------------------|
| Open Time | EN 1346 | ≥0.50 N/mm ² | 0.67 – 0.71 N/mm ² |
| Slip Resistance | EN 1308 | ≤0.50 mm | 0.42 – 0.47 mm |
| Tensile Adhesion Strength (Initial) | EN 1348 – Clause 8.2 | ≥0.50 N/mm ² | 0.52 – 0.62 N/mm ² |
| After Water Immersion | EN 1348 – Clause 8.3 | ≥0.50 N/mm ² | 0.52 – 0.62 N/mm ² |
| Heat Ageing | EN 1348 – Clause 8.4 | ≥0.50 N/mm ² | 0.52 – 0.62 N/mm ² |
| Freeze–Thaw Resistance | EN 1348 – Clause 8.5 | ≥0.50 N/mm ² | 0.52 – 0.62 N/mm ² |

IS STANDARD

| PROPERTY | TEST METHOD | REQUIREMENT | REGULAR 501 VALUES |
|----------------------------------|----------------------|--------------------------------|-------------------------------|
| Tensile Adhesion (Dry Condition) | Annex A (Clause 5.1) | Minimum 0.50 N/mm ² | 0.62 – 0.72 N/mm ² |
| Shear Adhesion (Dry Condition) | Annex B (Clause 5.2) | Minimum 1.00 N/mm ² | 1.12 – 1.22 N/mm ² |
| Slip Resistance | Annex E (Clause 5.5) | ≤0.50 mm | 0.27 – 0.37 mm |

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION GUIDELINES

- 1) CLEAN & STABLE SURFACE** – Ensure that the surface to be tiled is structurally sound, free from dust, dirt, oil, grease, paint, curing compounds, and any loose particles that may compromise adhesion of REGULAR 501.
- 2) EVEN & LEVEL BASE** – The substrate should be plumb and level with a maximum surface variation of 6 mm over a span of 3 meters (10 feet), in order to ensure uniform tile placement and alignment.
- 3) DRY & MOISTURE-CONTROLLED** – The surface must be dry and free from rising damp or residual moisture; excess moisture can adversely affect the bonding strength and performance of the adhesive.
- 4) PRE-WET IF NECESSARY** – On very dry or highly absorbent substrates, it is recommended to lightly dampen the surface before application, while making sure no standing water remains.
- 5) CURE NEW CONCRETE** – New cement-based substrates, such as screeds or concrete slabs, must be properly cured for a minimum of 28 days to reduce shrinkage and ensure a stable, well-bonded surface.
- 6) PRESERVE EXPANSION JOINTS** – Any expansion or movement joints must remain unfilled by tile adhesive or tiles and should be filled with a suitable flexible joint sealant to allow structural movement.

HOW TO MIX THE ADHESIVE

- 1) MIXING RATIO** – For 20kg bag, Use 5.5 to 6.5 litres of water, adjusting for desired consistency.
- 2) BLENDING PROCESS** – Mix the powder and water in a clean container using a low-speed drill or mechanical stirrer (50–100 rpm) until a smooth, homogeneous, and lump-free paste is formed.
- 3) RESTING PERIOD** – Allow the mixed adhesive to stand for approximately 5 minutes before application; this allows the polymers to activate. Stir again briefly before use.
- 4) APPLICATION CAUTION** – Always mix only the quantity that can be applied within the pot life of the adhesive. Do not add water once the mixture has started to set, as this will weaken the adhesive strength.

STEP-BY-STEP TILE APPLICATION GUIDE

1. SURFACE PREPARATION

- Use the flat side of a notched trowel to apply a layer of REGULAR 501 adhesive evenly over the substrate.
- Then use the notched side to comb the adhesive into uniform ridges for better bonding.
- Recommended Notch Sizes:
 - Small tiles (up to 30×30 cm): 6 mm notch

2. TILE PLACEMENT

- Work section by section and lay the tiles within 15–20 minutes of applying the adhesive, as drying time can vary depending on site conditions and substrate porosity.
- Check frequently for skin formation on the adhesive layer. If present, remove and reapply fresh adhesive.
- Press the tile firmly into the adhesive using a slight twisting action, ensuring full contact with the tile back.
- Use a rubber mallet to gently tap the tile and ensure it is level and properly aligned.

3. ACHIEVING FULL ADHESION

- It is advisable to apply a thin layer of adhesive (back-buttering) on the rear side of the tile to guarantee full coverage and strong bonding.
- Ensure there are no air gaps or voids behind the tiles to avoid failure.

4. SPACING & CLEANING

- Use tile spacers between tiles to maintain uniform joint widths as per project specifications.
- Clean off any excess adhesive from the tile surface and joints using a damp sponge or cloth before it sets completely.

PRO TIPS & PRECAUTIONS

- ✓ Protect the tiled surface from water exposure, and foot traffic for at least 24 hours after installation, and do not alter the adhesive mixture by adding sand, cement, or any other on-site additives.
- ✓ Always follow the correct water-to-powder ratio during mixing—adding excess water may reduce the strength and bonding of the adhesive.
- ✓ Always add powder to water during mixing, never the other way around, to ensure a smooth, even blend.
- ✓ Do not use to correct surface level differences exceeding 15 mm; a suitable leveling compound should be used in such cases.
- ✓ Ensure that substrates like screeds or concrete surfaces are fully cured before tiling to prevent shrinkage or detachment.

PRODUCT SPECIFICATIONS & STORAGE GUIDELINES

AVAILABLE PACKAGING

- **20 kg bag** – Ideal for small to medium-sized installations or repair work.

SHELF LIFE : Offers a shelf life of up to 12 months from the manufacturing date, provided it is stored under suitable conditions to prevent moisture ingress or hardening of the product.

STORAGE LIFE:

- Always store in its original, tightly sealed packaging until ready to use.
- Ensure the storage area is cool and dry, ideally maintaining a temperature range between 10°C and 30°C.
- It is critical to keep the product protected from the following:
 - Direct exposure to sunlight, which can affect product integrity.
 - High humidity or damp conditions that may cause premature hardening.
 - Extreme temperatures, particularly below 5°C or above 35°C.

QUALITY CHECK:

Before using, inspect the bag for damage. If the packaging is compromised or the contents are hardened or lumpy, the product should be discarded.

GROUTING INSTRUCTIONS

1) WAITING TIME BEFORE GROUTING

- Grouting should commence only after 24 hours of tile installation to allow sufficient curing and bonding of REGULAR 501.

2) RECOMMENDED GROUT PRODUCTS

- For best compatibility and performance, use high-quality cementitious or epoxy-based grouts (HYDAPOXY 711, HYDAPOXY 712) that are suitable for the type of tiles and the application environment

3) APPLICATION TIP

- Prior to grouting, maintain uniform spacing between tiles using spacers or as per architectural guidance to achieve a consistent and aesthetically pleasing finish.

COVERAGE DETAILS

- **20 kg bag:**
5–6 m² at 3 mm thickness (using a 6×6 mm notched trowel)

FACTORS AFFECTING COVERAGE:

- Trowel size & application technique
- Tile size & material
- Surface smoothness & porosity

SAFETY & APPLICATION GUIDELINES FOR REGULAR 501

1. PERSONAL PROTECTION

- Wear protective gloves, clothing, and eye/face protection while handling.
- Keep out of reach of children at all times.
- To be used exclusively by trained professionals and experienced contractors.

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 **REGULAR 501** powder into clean water — never add water to the powder — to ensure proper consistency and prevent lump formation.
- Follow the recommended mixing ratio (approximately 5.5–6.5 liters of water for every 20 kg of powder) to achieve the right paste.
- Do not alter the mixture by adding cement, sand, or any other materials as this may reduce the effectiveness of the adhesive.

4. SURFACE PREPARATION

- Make sure the substrate is completely dry, fully cured (minimum 28 days), and level before applying **REGULAR 501**.
- The adhesive must not be used on uncured screeds or green concrete.
- For surfaces that are uneven by more than 15 mm, a separate leveling compound must be applied beforehand.

5. INSTALLATION & PROTECTION

- After installation, the tiled surface must be shielded from rain, water, dust, mechanical loads, or foot traffic for a minimum of 24 hours to ensure proper bonding.
- For high-rise applications or installations involving large or heavy tiles:
 - It is advisable to consult a structural engineer for safety assessments.
 - Consider additional mechanical fasteners, such as steel hooks or anchors, where needed.
 - Check and confirm the load-bearing capacity of the substrate before proceeding.

PERFORMANCE LIMITATIONS

- **REGULAR 501** is not intended to be used as a self-leveling material. If leveling is required, apply a suitable floor or wall leveling compound first.
- The adhesive's curing time may vary depending on temperature, humidity, and air movement at the job site.
- If there is any uncertainty regarding substrate condition or tile compatibility, it is strongly recommended to conduct a small patch test prior to full-scale application.