

Polyglaze®

PZ 400 FLEX + & PZ W400 FLEX +

FLEXIBLE ADHESIVE FOR HD TILE & STONE APPLICATION

PRODUCT DESCRIPTION

Polyglaze PZ 400 Flex+ / PZ W400 Flex+ is a flexible, cement-based adhesive suitable for both thin and thick bed applications. It is specially formulated for bonding wide variety of tiles such as ceramic and vitrified / precast terrazzo / large format tiles and stones / natural stones / quarry tiles and cement body tiles to a variety of substrates in both vertical and horizontal applications.

SUITABLE SUBSTRATES

- ◆ New and old Concrete surfaces
- ◆ Cement screed beds and mortar beds
- ◆ Concrete and Concrete masonry
- ◆ Plastered surfaces
- ◆ Bricks and AAC Blocks masonry
- ◆ Cement Terrazzo
- ◆ Calcium Silicate Board
- ◆ Gypsum Wallboard

AREAS OF APPLICATION

- ◆ Interior and Exterior Floors and Walls
- ◆ Residential, Commercial application and Industrial projects
- ◆ Recommended for high-stress applications such as airports, metro and railway stations, lift lobbies, and industrial machine areas
- ◆ Wet areas like bathrooms, swimming pools and saunas

ADVANTAGES

- ◆ Very high tensile and shear adhesion strength
- ◆ Suitable for demanding interior and exterior applications
- ◆ Suitable for application of thin and large format tiles and heavy-duty applications with moderate structural movements
- ◆ Water resistant
- ◆ Enhanced pot life and open time
- ◆ Suitable for use on fibre / cement boards and panels, seasoned wood and metal surface
- ◆ Highly durable and flexible

STANDARDS

- ◆ IS 15477: 2019 Classified as Type 4TS2
- ◆ EN 12004 and ISO 13007 Classified as C2TES2

APPLICATION METHODOLOGY

To ensure a successful installation of very large format or thin stone tiles, it is essential to follow specific recommendations, including surface condition assessment, proper material mixing and application, use of a tile levelling system and using appropriate tools and equipment for lifting and handling heavy stones.

Surface Preparation

- ◆ The surface should be clean, dry, free from dust, grease, oil, and other contaminants



- ◆ The surface should be properly levelled for best results; in case of undulations or damage, correct the substrate at least 48 hours before application
- ◆ Allow concrete floors and walls to cure and dry for at least 3 - 4 weeks prior to tiling

Mixing

- ◆ Take 4.6 L to 5.0 L of clean water (approx. 23-25% by weight) in a bucket and gradually add 20Kg of Polyglaze PZ 400 Flex+ or PZ W400 Flex+ while mixing continuously
- ◆ Mixing can be done mechanically by stirrer or manually by hand
- ◆ Mix thoroughly until a homogeneous, lump-free paste is achieved, ensuring no lumps or unmixed material remain
- ◆ Let the paste rest for 5 - 10 minutes for polymeric dispersion
- ◆ The paste should be kept away from direct sunlight and heat

Tile Fixing

- ◆ Before fixing the tiles or stones, clean their backsides with wet cloth to remove all dust particles
- ◆ Use a proper size notched trowel to ensure full bedding of the tile or stone
- ◆ Apply the mixed paste on to the surface using the straight edge of the trowel and then run the notched side of the trowel to achieve the desired thickness
- ◆ Before placing the tiles, apply a layer of adhesive behind the tiles using notched trowel and press firmly to the substrate. Then knock properly all around with a rubber hammer in order to spread the adhesive equally for a good contact
- ◆ For large format tiles and stones, back buttering is necessary to ensure full bedding and firm support
- ◆ Ensure a gap is maintained between adjacent tiles using spacers to allow for thermal expansion and achieve uniform joint thickness
- ◆ Any adjustment should be done within 30 - 35 minutes before paste starts hardening
- ◆ Carefully remove any excess paste immediately from the joints and the face of the tiles

Grouting & Cleaning

- Once tiles are laid, remove excess / loose material with sponge and clean water
- Grouting must be done after 24 hours for better results.
- If opting for a cementitious grout, use PZC Tile Grout mixed with either clean water or PZ TG Admix (400 ml for 10 kg material)
- If opting for a Stain- Free Epoxy grout then use PZ SF Epoxy Grout or PZ 2K Epoxy Grout
- Clean the tools with water immediately after use

PACKAGING

- Polyglaze PZ 400 Flex and PZ W 400 Flex+ are available in 20kg BOPP bags

STORAGE & SHELF LIFE

- Store in a dry place away from moisture and sunlight
- Best before 12 months from the manufacturing date in original sealed condition

PRECAUTIONS AND LIMITATIONS

- Tiling should be avoided during very hot or rainy weather conditions
- Always use clean, potable water for mixing
- Avoid using high-speed mixing when using electric mixing equipment
- Always add powder to water (not water to powder) to prevent lump formation
- Do not exceed the recommended water ratio; never add extra water
- Do not add cement, sand, or any additives to the tile adhesive
- Do not exceed the bed thickness of 15mm

- Applicators must carefully evaluate the use of a mechanical fastening system, especially when installing heavy stones or tiles above 10 feet
- Follow the specified pot life and open time for each tile adhesive for optimal results
- Protect the tiled surface from direct sunlight and rain for at least 24 hours after application

HEALTH & SAFETY

- Use a respiratory mask and protective gloves during application.
- Clean hands with soap and water after application.
- Avoid contact with skin / eyes. In case of unlikely contact, rinse eyes immediately with plenty of clean water and cleanse skin with soap and lukewarm water. Seek medical advice if irritation occurs / persists.
- In case of unlikely swallowing, seek medical attention immediately.



Disclaimer:

The information in this TDS is for general guidance only. Specific advice for site conditions is available upon request. Details provided by the company are in good faith, when product is properly stored, handled, and applied under normal conditions. The site conditions, material compatibility, and workmanship are beyond our control, no warranties expressed or implied are given. The company accepts no liability for unsatisfactory results or consequential damages arising from product use.



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TECHNICAL DATA SHEET

PHYSICAL PROPERTIES

Physical Appearance	Dry Powder
Colour	Grey and White
Water Mixing Ratio	Approx. 23 - 25% by weight
Pot Life	Approx. 3 - 4 hrs
Open Time	Approx. 35 minutes
Adjustability Time	Approx. 40 minutes
Setting Time	24 hrs
Time to foot traffic	24 hrs
Grouting Time	24 hrs
Working Temperature	10° C to 40° C

PERFORMANCE PROPERTIES

As per IS 15477 : 2019 Classified Type 4TS2 Adhesive

PROPERTIES		IS REQUIREMENT	PZ 400 FLEX+ / PZ W400 FLEX +
Tensile adhesion strength	Dry condition (28 days)	Min. 1.50 N/mm ²	1.80 - 2.20 N/mm ²
	Wet condition (28 days)	Min. 1.0 N/mm ²	1.50 - 1.70 N/mm ²
Shear adhesion strength	Dry condition (28 days)	Min. 1.50 N/mm ²	2.0 - 2.50 N/mm ²
	Heat Ageing (28 days)	Min. 1.0 N/mm ²	1.30 - 1.80 N/mm ²
	Wet Condition (28 days)	Min. 1.0 N/mm ²	1.30 - 1.50 N/mm ²
Slip (mm)		Max. 0.5 mm	0.20 - 0.40 mm
Deformability		Min. 5.0 mm	5.20 - 5.50 mm

As per EN 12004 : 2017 / ISO 13007 Classified C2TES2

PROPERTIES		EN / ISO REQUIREMENT	PZ 400 FLEX+ / PZ W400 FLEX +
Tensile adhesion strength	Initial / Dry condition @28 days	>1.0 N/mm ²	1.80 - 2.20 N/mm ²
	Water immersion @ 28 days	>1.0 N/mm ²	1.50 - 1.70 N/mm ²
	Heat ageing @ 28 days	>1.0 N/mm ²	1.40 - 1.80 N/mm ²
	Freeze thaw @ 28 days	>1.0 N/mm ²	1.40 - 1.80 N/mm ²

COVERAGE

For a bed thickness of 3 - 4 mm (6mmx6mm Square - Notched trowel)	Approx. 50 - 60 Sq.ft / 20kg bag
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Note :

- ♦ Coverage will vary depending on the surface and the application method.
- ♦ All the above values are based on testing conducted at 27 ± 2°C and relative humidity of 65 ± 5%. Actual results may vary depending on specific site conditions such as weather, surface and application method.