SHAWAR

Brilliance Within

# TECHNICAL DATASHEET

(PU-999)

# PU-999

## Type - 5TS2 / R2T

Shawar PU-999 Tile Adhesive complies to Type 5 ‘T S2’ as per “IS 15477: 2019 - Adhesives for use with ceramic, mosaic and stone tiles.




1. Ideal for walls
2. PU / Epoxy base
3. Thicknesses up to 6mm
4. Ideal for wet areas
5. No sag
6. Very low VOC
7. For glass mosaic
8. Prolonged workability
9. Adjustable




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# DESCRIPTION

Shawar PU-999 is a two component, Polyurethane/Epoxy based, highly flexible, high performance, multipurpose, thin-set adhesive for fixing all types of tiles & stones including composites, engineered/ nanostone, metal & glass tiles on interior and exterior floor & wall. It is suitable for fixing tiles/ stones over diverse surfaces like cement-based substrate, metal substrates, epoxy/ PU based substrate, drywall boards, PVC, plywood, wood derivative and highly deformable & expandable, absorbent & non-absorbent substrates.

# Areas of application

Use

## Substrates:

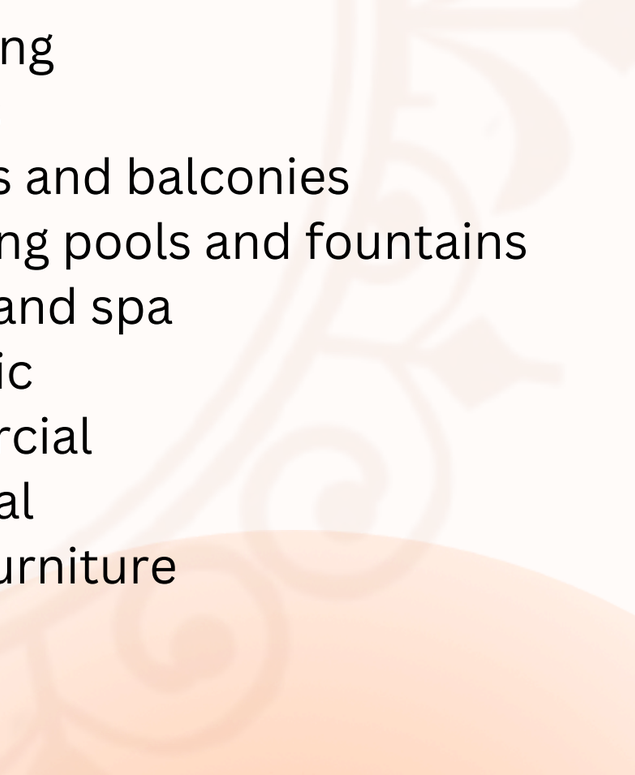
- Cement-based screeds and mortars
- Anhydrite screeds (1)
- Lime and cement-based
- Plasters / Renders Concrete
- Plyboard
- WPC/fiber board
- Metal sheets
- Heating systems
- Waterproofing products
- To overlay existing floors
- Glass/steel
- Cement slabs Thermal insulation
- Panelling systems
- Insulating panels

## Uses:

- Floors and walls
- For internal use
- Outdoor
- overlaying
- Facades
- Terraces and balconies
- Swimming pools and fountains
- Saunas and spa
- Domestic
- Commercial
- Industrial
- Street furniture

## Materials:

- Granite/stone
- Nano/vietnam marble and tiles
- Large size slabs
- Quartz
- Engineered marble/stone
- Marble and natural stone
- Various mosaics
- Insulating and soundproofing panels






# Instructions for use

- Apply adhesive to the substrate with the flat side of the trowel.
- Comb on additional adhesive with the notched side.
- Use the proper sized notched trowel to ensure full bedding of the tile.
- Tiles must be fixed within 60 minutes of adhesive being applied, depending on atmospheric conditions.
- Check the adhesive ribs periodically and if a skin has formed, remove the dried adhesive and apply fresh adhesive.
- Press the tiles firmly into position with a slight twisting action, checking periodically that good contact is maintained with the back of each tile and beat in using rubber mallet to imbed tile and adjust level.
- Leave no voids behind tiles.
- For large size tiles or irregular surfaces, adhesive can additionally be buttered on the backs of the tiles to ensure full adhesive contact.
- Use suitable support along with adhesive for fixing tiles on vertical surfaces.
- Leave adequate joints between individual wall and floor tiles using shawar spacers.
- The joint width shall be as per the recommendation of architect / engineer.
- Provide joints (spaces) on the periphery of the area without allowing the tile / stone to be bound by the peripheral area.
- Fill the resulting grout joints with flexible materials like shawar epoxy range/ suitable silicon or acrylic sealants.
- Clean off surplus adhesive from the tile face and between joints.
- Clean tools and tile work with water or suitable solvent while adhesive is fresh. Once cured, the adhesive can only be removed by mechanical means.

# FEATURES AND ADVANTAGES

- Two components; justmix and use.
- Long open time - suitable for large format & external condition too.
- Water, freezing, thermal shock resistant.
- Sustains heat ageing - Idea for external & high temperature applications.
- Highly flexible adhesive - sustains heavy vibrations.
- Chemical resistant & resistance to solvents, alkalis & oils.
- Suitable for multiple substrates including glass, metals, drywalls & plywood.
- Suitable for fixing all tiles/ stones including composites, artificial stones, meta tiles.
- Low VOC - for healthy living.

# Technical Data compliant with Shawar Conchem Quality Standard

Performance properties as per is 15477:2019 (Type ‘5’ TS2)

| Testing Properties | Requirments | Testing Result |
|---|---|---|
| a) Tensile adhesion at dry condition, after 28 days | ≥ 2.0 N/mm² | ≈2.1-2.5 N/mm² |
| b) Tensile Adhesion at Wet condition | - | |
| c) Shear Adhesion at Dry Condition | ≥ 6.0 N/mm² | ≈6.12-7.2 N/mm² |
| d) Shear Adhesion at Wet condition | - | |
| e) Shear Adhesion at Heat Ageing | ≥ 3 N/mm² | ≈4.5-6.0 N/mm² |
| f) Slip resistance | <0.5 mm | ≈0.12-0.33 mm (T) |
| g) Deformation | ≥ 5 mm | ≈ 12-32 mm (S2) |

Values taken at +27 °C, 65% R.H. and no ventilation. Data mayvarydependingonspecificconditionsatthebuildingsite,i.e.temperature, ventilation and absorbency level of the substrate and of the materials laid. all test results arefor aspecifiedbatchofmeterialandpracticalValuesareSubjectedtoDeivationup to ± 10% to 15% as per the practical Implications by various technician under Specified LaboratoryEquipments&condition

# Technical Information

## Application Properties

| Testing Properties | Testing Result |
|---|---|
| Component Appearance | Part A (Base) : White Paste Part B (Hardener) : Liquid |
| Mixing Ratio (Part A : Part B) | Part A - 3.600 kg & Part B - 0.400 kg (Part A : Part B – 9 : 1 by weight) |
| Mixed Material Appearance | Off White Paste Consistency |
| Mixed Density | 1.65 ± 0.1 kg/ litre |
| Open Time | Min. 60 minutes |
| Adjustability | Min. 60 minutes |
| Pot Life | Min. 120 minutes |
| Sag/ Slip | ≤ 0.5 mm |
| Application Temperature (substrates and materials) | 10°C to 40°C |
| Resistance to temperature | –40°C to +100°C |
| Setting/ Trafficable/ Grouting Time | 48 hours |
| Interval before normal use | 3 days (7 days for heavy duty traffic) |

## SUBSTRATE PREPARATION

- Thesubstratemust belevel,cured, undamaged, compact, rigid, resistant, dry and free from any debonding agents and from damp rising.
- All surfaces must be plumb and true to within 6 mm in I0 ft(3m)_
- Dry, dusty surfaces should be dampened with water & excess water should be swept off.
- New concrete slabs shall be damp cured and 28 days old before application which will reduce the shrinkage from tile fixing surface.
- Rust on iron surfaces must be removed by sandblasting .
- Expansion joints to be provided & filled with suitable sealant.
- Do not cover expansion joints with thin set tile adhesive/ tile.

Values taken at +23 °C, 50% R.H. and no ventilation. Data may vary depending on specific conditions at the building site

# PRECAUTIONS & NOTE

- Do not use on damp surfaces or where there is a risk of rising damp.
- The packs are pre-measured, therefore mixing errors are impossible. For partial mixing, weigh the two parts precisely.
- Any modification and/or inappropriate ratio could cause incorrect hardening of the product.
- Protect against direct rain/ foot traffic for at least 24 hours.
- Tiles/ stones should not be installed directly on expansion joints.
- Leave gap between the tile & fill gaps with Shawar grout.
- Designer/ applicator must evaluate the use of an additional mechanical fastening system for extra security for more than 3 m height (such as steel hooks fastened.

## COVERAGE

- 16 - 20 sq. ft/ 4 kg pack - 1.5 mm bed thickness (using 3 mm x 3 mm notch).
- 8 - 10 sq. ft/ 4 kg pack - 3 mm bed thickness (using 6 mm x 6 mm notch).

Coverage will vary depending on trowel notch size, type, size of tile and substrate smoothness and evenness.

## SHELF LIFE

12 months for sealed pack when stored under cover, out of direct sunlight, dampproof condition and protect from extremes of temperature.

## GROUTING

Grouting should be carried out after 24 hours of tiling. Use the appropriate grouting material from Shawar range of cementitious and epoxy grouts.

## SAFETY PRECAUTIONS

Keep out of reach of children. Wear suitable protective clothing, gloves and eyes/face protection. After contact with skin, wash immediately with plenty of clean water. In case of contact with eyes rinse immediately with plenty of clean water and seek medical advice. Limited to professional use only.
For more details please refer the relevant Material Safety Data Sheet, available on request.

Spring the lesson of Humanity

Please note that this datasheet supersedes all previous versions. For Feedback/complaints, write to Customer Relationship Manager at SHAWAR CONCHEM PVT LTD

OR

MAIL US AT SHAWARCONCHEM@GMAIL.COM