

# MARKLASTIK PU 919

(TWO-COMPONENT, HIGH-PERFORMANCE, POLYURETHANE ADHESIVES FOR FIXING ALL TYPES OF TILES AND STONES ON A VARIETY OF SUBSTRATES INCLUDING GLASS, METAL SURFACES AND DRYWALL BOARDS)



## DESCRIPTION

**MARKLASTIK PU 919** is a two component, high performance, universal, elastomeric polyurethane resin adhesive used for high adhesion fixing of all types of tiles & stones including composites, engineered/ nano stone, metal & glass tiles on interior and exterior floor & wall. It is also suitable for fixing all types of tiles/ stones over deformable surfaces with no vertical slip.

## FEATURES / ADVANTAGES

- Non Shrink and solvent free system
- Excellent adhesion to a wide range of construction materials
- Conforms to EN 12004:2017 with a R2T classification
- Freezing, thermal shock resistant
- High bond strength, chemical resistant
- For indoor and outdoor usage
- High elasticity and extremely flexible with ability to absorb stresses
- Non slumping, no primer required.

## FIELD OF APPLICATION

- Bonding of all types of tiles, stone material and all types of mosaics in showers and on sheets used for prefabricated bathrooms
- Fixing on screeds, renders, concrete, asphalt, wood, metal, PVC, reinforced polyester, asbestos-cement, gypsum, gypsum board, gypsum panels etc
- Bonding tiles and mosaics on wooden work surfaces or in kitchens in order to achieve a waterproof substrate
- Bonding tiles and stone material on surfaces subject to vibration and deflection
- Fixing thin and / or large tiles
- Bonding natural stones and reconstructed stone (marble of every type, slate, etc.) also subject to movement and size variation due to the absorption of water (class C of size stability according to MARKCHEM standards)

## SUITABLE SUBSTRATES

- ✓ Metal ✓ Rubber ✓ Wood ✓ Glass ✓ Plasterboard
- ✓ Sanded Surface ✓ Anhydrite Slabs ✓ Concrete
- ✓ Cement Based Plaster ✓ Asbestos Cement
- ✓ Plaster Surfaces or Gypsum Bases Pannels
- ✓ Cement And Lime Mortar ✓ Polystyrene
- ✓ Cement Based Screeds

## COMPLIANT / APPROVALS

- As Per IS 15477:2019 Type 5
- Compliant as per EN 12004 **R2 T**

## DIRECTIONS FOR USE

**SUBSTRATE PREPARATION** : All substrates must be structurally sound, able to support the weight of the new tiling and provide a firm and securely fixed background. Substrates must be clean, dry, free of any loose or friable particles, contaminants such as dust, dirt, oil, wax polish, grease, cement laitance or efflorescence. Use adequate mechanical preparation techniques to remove from the substrate, all traces of any materials that could reduce the product's adhesion to the substrate. Smooth surfaces must be roughened lightly to improve adhesion When laying tiles on non-absorbent or substrates with limited absorbency, such as existing ceramic tiles, painted surfaces etc., check these surfaces are all sound, firm and securely bonded. Use suitable degreasing / descaling products to thoroughly and completely clean the substrate. For applications in hot climates / environments, or on absorbent substrates, thoroughly pre-dampen the substrate immediately before product application. Avoid any ponding / standing water on the substrate. Surface must not be damp to touch.

**MIXING** : Add Part B (hardener) to Part A (resin). Mix continuously for 3 minutes, until a uniform mix is achieved. 2. During the final mixing stage, scrape down the sides and bottom of the mixing container with a flat or straight edge trowel at least once to ensure complete mixing.

**Note** : Mix Full Units Only. Avoid over-mixing to minimise air entrainment.

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**APPLICATION** : Apply sufficient adhesive to ensure adequate 'wetting' of the backs of the tiles. Coverage on the back of the tiles must be > 60 %. Tiling must be carried out on freshly applied adhesive. Exert adequate pressure to ensure 100 % complete and uniform contact with the adhesive to achieve optimum adhesion. Important: If a skin forms on the surface of the adhesive, immediately remove the adhesive layer with a trowel, discard material and apply a fresh layer of adhesive. Protect freshly applied material from extremely high or low (freezing) temperatures, rain, direct exposure to sun, for at least 12–24 hours from application. Do not apply to substrates that have a temperature of less than 12°C or greater than 40°C.

## GROUTING

Grouting should be carried out after 12 hours of tiling. Use the appropriate grouting material from MARKCHEM range of cementitious and epoxy grouts.

## CLEANING

Tools and containers may be cleaned using suitable industrial solvents when the adhesive is still fresh. The hardened adhesive can be removed from tools mechanically.

## CONSUMPTION

1.5 Kg /m<sup>2</sup>/mm adhesive thickness

**NOTE** : Coverages shown are approximate and are given for estimating purposes only. Actual job-site coverages may vary according to the tile size and thickness, job conditions and setting practices. For coverage values contact MARKCHEM Technical Services Department at ([info@markchemconstruction.com](mailto:info@markchemconstruction.com))

## SHELF LIFE

12 months from the date of packaging, when stored in a cool, dry environment away from sunlight

## PACKING

5 Kg Bucket

(Part A: 4.7 Kg Resin + Part B : 0.3 Kg Hardener)

## PHYSICAL AND TECHNICAL PROPERTIES

	Part A (Resin)	Part A (Hardener)
Appearance	White Paste	Liquid
Colour	White	Pale Yellow
Consistency After Mixing	Paste with no sag	
Mixing Ratio	94 (Parts) 4.7 Kg	6 (Parts) 0.3 Kg
Bulk Density	1.52 g/ml	0.94 g/ml
Mixed Density	1.5 g/ml	
Open Time	> 50 Minutes	
Adjustability	> 50 Minutes	
Pot Life	30 - 40 Minutes	
Sag / Slip	≤ 0.5 mm	
Resistance to temperature	-40°C to +100°C	
Setting/ Trafficable/ Grouting Time	Minimum 12 Hours	

## PERFORMANCE PROPERTIES

Tensile Adhesion /Shear Adhesion Strength	As Per EN 12004 Standards
Initial shear adhesion strength	≥ 5.0 N/mm <sup>2</sup>
Shear adhesion strength after water immersion	≥ 5.0 N/mm <sup>2</sup>
Shear adhesion strength after thermal shock	≥ 5.0 N/mm <sup>2</sup>
Tensile adhesion - Open time (at 60 minutes)	≥ 1.5 N/mm <sup>2</sup>
Slip resistance (T)	≤ 0.3 mm

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PERFORMANCE PROPERTIES	
Tensile Adhesion /Shear Adhesion Strength	AS PER IS 15477 : 2019 (TYPE 5 'T S2')
Tensile Adhesion at Dry Condition, after 28 days	$\geq 3.0 \text{ N/mm}^2$
Tensile Adhesion at Wet condition	$\geq 2.0 \text{ N/mm}^2$
Shear Adhesion at Dry Condition	$\geq 7.0 \text{ N/mm}^2$
Shear Adhesion at Wet Condition	$\geq 6.0 \text{ N/mm}^2$
Shear Adhesion at Heat Ageing	$\geq 6.0 \text{ N/mm}^2$
Deformability (S2)	$\geq 30 \text{ mm}$

## PRECAUTIONS

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs. Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Reseal containers after use. Use in well ventilated areas and avoid inhalation.



## DISCLAIMER

The above information and details herein are based on the tests conducted & experience on application and usage. The user is advised to carry out the test and take trials to satisfy on the suitability of the products and meeting his requirement considering the prevailing conditions prior to apply/ using it on larger area. As the conditions under which the products are used or transported are beyond our control. We would not hold ourselves responsible on its consequential nonperformance.



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