



MEGASEAL PU 90 SP

One Component Polyurethane Sealant

Product Description

MEGASEAL PU 90 SP stands as a top-tier, high-performance sealant, boasting advanced polyurethane technology. This premium-grade, moisture-cured, 1-component formulation is characterized by exceptional elasticity and durability. With its non-sag property, it allows easy application on vertical surfaces while maintaining robust sealing capabilities. Versatile across a range of applications, this elastomeric sealant sets a superior standard for reliable and enduring sealing solutions. Notably, it cures upon exposure to atmospheric humidity, enhancing its convenience and effectiveness in various environmental conditions.

Standards

MEGASEAL PU 90 SP complies with the requirements of:
Federal Specification TT-S-00230C, Type II, Class A.
ASTM C920, Type S, Grade NS, Class 35, Use T, NT, O, M, A, I

Areas of Application

MEGASEAL PU 90 SP demonstrates its versatility across a wide range of applications, including:

- Joints between prefabricated construction materials. Sealing and bonding of ventilation ducts, gutters, and spouts.
- Excellent material for sealing joints between pre-cast concrete panels.
- Concealing GRC (Glass Reinforced Concrete) & GRP (Glass Reinforced Plastic) lining joints.
- Expansion joints between various construction materials. Movement and construction joints in floors.
- Indoor and outdoor applications for pedestrian and light traffic areas.

This expansive list showcases the adaptability of MEGASEAL PU 90 SP, making it a reliable choice for diverse construction and sealing needs.

Method Of Application

Joint Preparation:

To ensure optimum adhesion the joint faces must be sound, clean dry and free from any loosely adherent materials which could prevent adequate bond to the substrate. Sealant shall be applied as per the following general method of application:

Apply masking tape on both side of the joint surface, apply sealant evenly, remove the tape while the sealant is still tacky.

Joint Configuration: width : depth ratio should be 2:1

Backer Rod: Use a high density polyethylene backer rod as a backup material always to adjust the joint width – depth ratio.

Key Performance Properties

- Forms a tough, flexible, elastomeric, weatherproof, and watertight seal.
- Excellent resistance to deterioration due to weathering, ozone, U.V. light, and high climatic and in-use temperatures.
- Provides durable water and weatherproof sealing even in joints with high levels of deformation (M.A.F. $\pm 25\%$) or repeated cyclic movement of compression and extension over a wide temperature range.
- Demonstrates excellent adhesion to concrete, brickwork, metal, tiling, masonry, stone, steel, and glass (check the need for primer).
- Primer-free on dry concrete in non-submerged conditions. Single-component, easy-to-apply formulation.
- Non-shrink, non-sag, gun grade for vertical use.
- Ensures a durable, resilient seal.
- Can be over-painted after curing when applied on concrete or block work substrates.
- Forms a smooth, blister-free surface when applied onto dry substrates.
- Exhibits good resistance to dilute acids and alkalis.
- Available in different colors to suit aesthetic preferences.

Adherent: Sealants should adhere to only two surfaces of the joint to take care of thermal expansion and contraction of the joint.

For horizontal trafficable joints, it is recommended to apply the sealant to a level at least 1.5 – 3.0 mm below the adjoining surfaces to avoid the wheels of the vehicles picking the sealant.

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Joint depth:

For non-immersed expansion joints, subject to cyclic movement, and greater than 20mm wide, it is important that the depth should not exceed half the width to optimize the elastomeric properties of the joint sealant. When using filler boards in expansion joints to achieve the correct depth, it is essential to use a backer rod or insert a bond breaking tape into the joint in order to prevent 3-point adhesion.

Applications:

MEGASEAL PU 90 SP is formulated to be applied using a sealant. Sealant guns are fitted with conical nozzles which can be cut to suit the joint width. Apply masking tape on both side of the joint surface. The sealant should be gunned into the joint using an even trigger pressure, cleaning the nozzle

occasionally to avoid contamination. Deep joints should be filled in two or more runs, to prevent air entrapment. When applying the sealant to a vertical joint, start application at the bottom of the joint so as to continuously support the sealant. Remove the tape while the sealant is still tacky.

Finishing

In order to displace any air bubbles present in the sealant. It is advisable, immediately after the MEGASEAL PU 90 SP has been applied, to finish by tooling with a rounded spatula or similar object. The outermost surface of the sealant should be finished with a slightly concave profile.

On no account must moistened fingers be used.

Cleanup

Clean equipment immediately with a suitable Cleaner after usage.

Quality & Care

The product is manufactured in a UAE facility under a management system independently certified to confirm the requirements of the quality, environmental, and occupational health & safety standards ISO 9001, and ISO 14001.

* Properties listed are based on laboratory-controlled tests.

Packaging / Supplying

MEGASEAL PU 90 SP is available in 600 ml Sausage

Coverage Rate

The approximate linear meter sealant consumption per liter can be estimated from the following formula:

$$W \times D$$

$$1000$$

= Sealant Consumption per linear meter per liter. Where:

W = Joint Width (mm), D = Joint Depth (mm)

Joint Size in mm	Liters/meter Run	600 ml / Sausage meter run
4 x 4	0.016	37.5
6 x 6	0.036	16.60
12 x 10	0.120	5.00
20 x 10	0.200	3.00
25 x 12	0.300	2.00
30 x 15	0.450	1.33
35 x 15	0.525	1.14

Storage & Shelf Life

MEGASEAL PU 90 SP Store in cool place under cover, out of direct sunlight and protect from extreme temperatures. In tropical climate the product must be stored in air – conditioned environment (<25° C). The shelf life is up to 12 months in unopened conditions if stored as per guidelines.

Health & Safety

Protective clothing such as gloves and goggles should be worn while applying MEGASEAL PU 90 SP. In case the material splashes to the skin or eyes wash the same with fresh water immediately.

In critical cases seek medical assistance.

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Technical Specification

PROPERTIES	TYPICAL VALUES	TEST STANDARDS
<u>BEFORE CURING</u>		
Color	White – Grey – Beige	—
Base	Polyurethane	—
consistency	Thixotropic	—
Curing Mechanism	Moisture Curing	—
Density, g/ml	1.26 ±0.02	—
Tack free Time	30 — 60 min (23°C and 50% R.H)	—
Curing rate	> 2.0mm/day (23°C and 50% R.H)	—
Sagging	0mm	EN ISO 7390
Service Temperature	-20°C — +80°C	—
Application Temperature	+5°C — +45°C	—
<u>AFTER CURING</u>		
Hardness Shore A	28-36	After 7 days (ASTM C661)
Paint Ability	Yes*	—
Effects of accelerated Weathering. UV Resistant	No Cracking & loss of adhesion 250 hours UV	ASTM C 793
MAF (Movement Capability)	±25%	ASTM C 719
Tear Strength	>7.00 N/mm	ASTM D 412
Elastic Recovery	≥70%	ISO 7389
*Considering the diversity of paint base and quality, compatibility tests should be done before application.		
<u>GLASS</u>		
Elongation at Break	Min 200%	ISO 8339
E100 Modulus (23°C)	0.35-0.40 N/mm ²	ISO 8339
E100 Modulus (-20°C)	≤0.60 N/mm ²	ISO 8339
<u>DUMBLE TEST</u>		
Elongation at Break	≥600 %	ASTM D 412
Tensile Strength	1.5 – 2.0 N/mm ²	ASTM D 412

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