



Product Data Sheet

ASMACO PU 90

Single Component Polyurethane Sealant

Description: ASMACO PU 90 is a high-performance, single-component polyurethane sealant that cures upon exposure to atmospheric humidity. Engineered for flexible and durable sealing, it is suitable for both indoor and outdoor applications, providing dependable joint sealing and weatherproofing against harsh environmental factors. The formulation includes antifungal properties, making it resistant to mold and mildew growth in damp or humid environments. Additionally, ASMACO PU 90 forms an acoustically efficient barrier, reducing sound transmission through sealed joints, making it ideal for use in noise-sensitive environments.



STANDARDS

ASMACO PU 90 complies with the requirements of:
ISO 11600 F 25 LM,
ASTM C-920,
ASTM C 719 - Type S, Grade NS Class 25 Use NT, M.A
ASTM C 919-12
ASTM E 90 -2004/ASTM E 413-2004
ASTM G21-21

AREAS OF APPLICATION

- **Construction Joints:** Suitable for sealing expansion and movement joints in construction, concrete, and masonry.
- **Facade Sealing:** Ideal for sealing curtain walls, window frames, and doors.
- **Roofing Applications:** Effective for sealing roof joints, gutters, and roof parapets.
- **Sanitary Sealing:** Can be used for sealing in kitchens, bathrooms, and other wet areas due to its water-resistant properties.
- **Industrial and Commercial Applications:** Appropriate for sealing joints in floors, walls, and warehouses.
- **Acoustic Sealing:** Perfect for soundproofing spaces like office partitions, studios, theaters, and residential areas.
- **Carpentry and Metalwork:** Bonds and seals metals, wood, and other construction materials in interior and exterior works.
- **Concealing GRC (Glass Reinforced Concrete) & GRP (Glass Reinforced Plastic) lining joints**

▪ Precast Concrete

All type of construction and expansion joints in precast pannels, It covers ensuring proper alignment, joint detailing, sealing, and finishing to maintain structural integrity, durability, and watertight performance of the precast concrete panels.

KEY PERFORMANCE PROPERTIES

- **Antifungal:** Resists mold and mildew growth, making it ideal for humid or moisture-prone environments.
- **Forms a tough,** flexible, elastomeric, weatherproof, and watertight seal.
- **Durability:** Long-lasting performance, highly resistant to weather, UV radiation, and aging.
- **Elasticity:** Provides flexibility to accommodate joint movement without cracking or breaking.
- **Waterproofing:** Excellent water resistance, preventing water ingress in joints.
- **Weatherproofing:** Protects against harsh environmental factors, including temperature variations, rain, and wind.
- **Acoustic Insulation:** Creates an efficient sound barrier, reducing noise transmission through sealed joints.
- **Adhesion:** Adheres well to a wide range of materials including concrete, metal, wood, glass, and plastic.
- **Non-corrosive:** Will not corrode metals or other construction materials.
- **Paintable:** Can be painted over once fully cured to match the surrounding surfaces.

METHOD OF APPLICATION

Joint Preparation:

To ensure strong adhesion and optimal performance of the sealant, follow these detailed steps for joint preparation:

Masking:

Apply masking tape along both sides of the joint to protect adjacent surfaces. This helps achieve clean edges. Apply the sealant evenly and remove the tape while the sealant is still tacky for a smooth finish.

Joint Configuration:

Maintain a width-to-depth ratio of 2:1 for proper flexibility and performance. This ensures that the sealant accommodates joint movement without cracking.



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Backer Rod:

Insert a high-density polyethylene backer rod into the joint to regulate the width and depth. This prevents the sealant from adhering to the bottom of the joint (3-point adhesion), ensuring it bonds only to the sides, which is crucial for accommodating joint movement.

Adhesion:

Ensure that the sealant adheres to only two surfaces (the sides of the joint). This allows for thermal expansion and contraction without stress on the sealant, extending its lifespan.

Application Instructions:

Preparation:

Use a sealant gun fitted with a conical nozzle. Cut the nozzle at an angle to match the joint width. Ensure the joint surfaces are clean and primed if necessary.

Sealant Application:

Gun the sealant into the joint using even pressure. For deep joints, apply the sealant in layers to avoid trapping air. Clean the nozzle regularly to prevent contamination. In **vertical joints**, start at the bottom and work upwards to ensure continuous support for the sealant.

Masking Removal:

Remove the masking tape immediately after applying the sealant, while it is still tacky, to achieve smooth and clean edges.

Finishing:

After applying the sealant, smooth the surface with a rounded spatula or similar tool to ensure proper adhesion and remove air bubbles. Shape the sealant to a slightly concave profile for better durability. Avoid using fingers, as this can compromise the finish and adhesion quality.

STORAGE, SHELF LIFE & HANDLING

ASMACO PU 90 is temperature-sensitive and should be stored in a cool, dry, and covered area, protected from direct sunlight, heat sources, and excessive ambient temperatures. Prolonged exposure to elevated temperatures, including storage in shaded but excessively hot areas, may accelerate product ageing, reduce the stated shelf life, and adversely affect application and performance characteristics.

In hot climatic conditions, ASMACO PU 90 must be stored at temperatures below 30°C. Avoid prolonged exposure to extreme temperature fluctuations during storage and transportation.

When stored in its original, unopened packaging under the recommended temperature conditions, the product has a shelf life of up to 12 months from the date of manufacture.

Stock should be managed and consumed on a **First-In, First-Out (FIFO)** basis to ensure optimum shelf life and consistent product performance.

PACKAGING / SUPPLYING

ASMACO PU 90 is available in 600 ml /Sausage
20 Sausages per Carton.

COVERAGE RATE

The approximate sealant consumption per linear meter can be calculated based on the joint width and depth using the following formula: Sealant Consumption

$$(L/m) = \frac{W \times D}{1000}$$

Where: W = Joint Width (mm) and D = Joint Depth (mm).

For optimum performance in movement joints subject to expansion and contraction, the recommended joint width-to-depth ratio and joint configuration must be strictly followed as stated below in the table. Correct joint geometry allows the sealant to accommodate movement effectively and helps minimize excessive stress, cohesive failure, or loss of adhesion.

Recommended JOINT CONFIGURATIONS

(Contraction & Expansion)

Joint Size in mm	Liters / meter Run	600 ml / Sausage meter run
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

Caulking

For caulking, gap filling, or sealing applications where joint movement is not expected, the recommended bead- size / consumption chart may be followed to determine the appropriate bead dimension and approximate coverage.

Bead Size (mm)	Approximate Consumption (ml/m)	Coverage per 280 ml Cartridge (Running Meter)
3 mm	7.1	39.6 m
4 mm	12.6	22.3 m
5 mm	19.6	14.3 m
6 mm	28.3	9.9 m
7 mm	38.5	7.3 m
8 mm	50.3	5.6 m
9 mm	63.6	4.4 m
10 mm	78.5	3.6 m
11 mm	95.0	2.9 m
12 mm	113.1	2.5 m

QUALITY & CARE

All products originating from **ANCHOR ALLIED FACTORY LLC** Sharjah, UAE. facility is manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 1400, ISO 45001 and ISO 50001



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CLEAN UP

Clean equipment immediately with **ANCHOR CLEANER 1** after usage.

HEALTH & SAFETY

Protective clothing such as gloves and goggles should be worn while applying **ASMACO PU 90**. In case the material splashes to the skin or eyes wash the same with fresh water immediately.
In critical cases seek medical assistance.

CERTIFICATIONS



TECHNICAL SPECIFICATIONS

PROPERTIES	TYPICAL VALUES	TEST STANDARDS
Color	Beige, Grey, White	—
Consistency	Smooth Paste	—
Solid Content	93 % ±1	—
Curing rate	> 2 mm/day (23°C and 50% R.H)	—
Service Temperature	- 20°C — +80°C	—
Application Temperature	+5°C — +40°C	—
Skin Over Time	15 — 30 min (23°C and 50% R.H)	—
Flow Rate	100 – 250 gms@25°C ± 2°C	—
Paint Ability	Yes	—
Weathering UV Resistance	250 hours	—
VOC	31 g/L	USEPA - 24
TVOC	< 0.01 mg/m ³	CDPH
SCAQMD	~ 31 g/L	SCAQMD Rule 1168
Density, g/m ³	1.50 ±0.02	ASTM D 1475
Tack Free Time	60 min (+23° C 50% (R.H)	ASTM C 920 -18 / ASTM C 679 - 15
MAF	± 25%	ASTM C 719
Hardness Shore A	35 — 40	ASTM D 2240
Elongation at Break	≥ 250 %	ASTM D 412
E 100 Modulus	~ 0.40 N/mm ²	ASTM D 412
Tensile Strength	≥1.00 N/mm ²	ASTM D 412
Fungal Resistance	ZERO, No Growth	ASTM G21-21

Listed are based on laboratory-controlled tests. All values given are subject to 5-10% tolerance.

Regional Compliance Notice

Please note that regulatory requirements may vary from one region to another. As a result, product information and recommended applications may differ between countries. For accurate and up-to-date details on product specifications and approved uses, and for any technical guidance, please contact Technical Department of ANCHOR ALLIED FACTORY L.L.C. SHARJAH, UAE.

Disclaimer

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