Shieldseal PS300

Two-component, Polysulphide, Joint Sealant

MICSHIELD®

TECHNICAL DATA SHEET

Description

Shieldseal PS300 is a high-performance, two-component, polysulfide sealant, formulated to deliver elastic and durable seal. **Shieldseal PS300** is designed for dynamic joints providing strong adhesion and long-lasting performance. Available in pourable and gun-grade.

Uses

- Expansion and construction joints in walls, facades, cladding ,tunnels, bridges, parking areas, roads, concrete pavements and large horizontal construction joints subject to rapid/high movements.
- Suitable for reservoirs, water tanks, potable-water structures, fuel and chemical storage tanks, and sewage facilities.
- Airport aprons and runways.
- Metal, aluminum, and curtain-wall joints.
- Used for sealing around openings and penetrations such as pipes, ducts, and sleeves.
- Industrial applications.
- Suitable for non-trafficable (NT) and trafficable (T) areas.

Characteristics / Advantages

- Multi-component system, forms a high-strength elastomeric seal.
- Excellent adhesion to most substrates such as concrete, masonry, stone, metal, steel, and glass
- Excellent weathering and UV resistance.
- Long-term durability and aging-resistant.
- High movement capability.
- Excellent chemical and fuel resistance.
- Non-toxic after curing.
- Water resistant.
- Forms a permanent, watertight seal.

Packaging

Shieldseal PS300 is supplied in 2.5 L packs for Gun-grade and 4 L packs for Pouring-grade.

Typical Properties

Color	Grey
Curing	Chemical Cure
Solids Content	100%
Mixed Density Pourable-grade Gun-grade	 1.5 ± 0.1 g/cm³ 1.7 ± 0.1 g/cm³
Pot Life @25°C	1 – 2 hours
Setting time @25°C	15 – 20 hours
Full Cure	7 days
Movement Accommodation Factor (ASTM C719)	25%
Shore A Hardness (@7days)	20 ± 5

Shelf Life and Storage

Shieldseal PS300 has a shelf life of 12 months when stored in its original unopened packaging in cool and dry conditions, protected from direct sunlight, heat, and moisture. Shelf life may be reduced if the recommended storage conditions are not followed.

Application Instructions

1. Surface Preparation

The joints must be clean, dry, and free from dust, surface contamination, and materials that may reduce bond or prevent adhesion. To remove dust, use oil-free compressed air. Concrete surfaces must be clean and dry. Metal surfaces must be free from rust; use grit blasting to remove corrosion.

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2. Joint Design

The joint width should range from 5 to 50 mm, with a width-to-depth ratio of 2:1. The minimum sealant depth should be as follows:
10 mm for porous surfaces.
20 mm for joints exposed to traffic or hydrostatic pressure.
5 mm for impervious surfaces (e.g., metal, glass).

Apply masking tape to areas adjacent to joints. Install backing (closed-cell or open-cell polyethylene foam backer rod), spacers, or joint filler to ensure the correct width-to-depth ratio. The application/substrate temperature should be between +5 and +50 °C.

3. Priming

Apply **Shieldprime PS100** to clean, dry surfaces before installing the backing rod or bond breaker tape.

Shieldseal PS300 The sealant should be applied while the primer is still wet or tacky. For gun-grade, it should be applied when the primer becomes tacky, ideally within 15–20 minutes after priming. If this time is exceeded, another layer of the **Shieldprime PS100** should be reapplied.

4. Mixing

The components should be mixed using a low-speed mixing drill (300 – 500 rpm) for 5 minutes while reaching the walls and bottom of the container until a homogeneous and consistent material is obtained. Scrape the sides and bottom of the container, then continue mixing for an additional 2 minutes. Once mixed, the material should be used within its specific working time.

5. Application

It is recommended to use masking tape on both sides of the joint. For vertical joints, start application from the bottom up to ensure the gaps are filled. **For Gun-grade**: the sealant should be loaded into the gun using a steel follower plate and firmly applied into the joint to ensure full contact with the joint faces. It should then be tooled to press it against the sides. **For Pourable-grade**: the sealant should be poured and firmly applied into the joint to ensure full contact with the joint faces. It should then be tooled to press it against the sides.

Tool the freshly applied polysulfide sealant to a smooth finish using a lightly lubricated spatula (such as diluted detergent solution), remove any excess, and allow it to cure undisturbed. Remove the masking tape immediately after tooling.

6. Cleaning

Uncured sealant may be removed from tools, equipment, and non-porous surfaces with solvents. For porous substrates, allow the sealant to cure before removal by peeling or other mechanical means. Cured sealant can only be removed mechanically by abrasion.

Usage Rate

Length of joint (in meters) that can be filled with 1 liter of **Shieldseal PS300 .**

Depth (mm)	Width (mm)				
	10	**15**	**20**	**25**	**30**
10	10	6.7	5	4	3.3
15	6.7	4.4	3.3	2.6	2.2
20	5	3.3	2.5	2	1.67
25	4	2.6	2	1.6	1.3

Safety Instructions

Shieldprime PS100 is flammable, use in well-ventilated area. Direct contact of uncured sealant may irritate eyes and skin. Over exposure to vapor may irritate eyes, nose, and throat. Do not handle contact lenses with sealant on hands. In case of eye contact, flush eyes with water for 15 minutes. Obtain medical attention. In case of skin contact, remove from skin and flush with water.

Technical Support

Refer to technical information, method statement, or contact technical support team for any inquiry.

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