

ShaliSeal® PU GG

Single Component Polyurethane Joint Sealant



STP Limited

Description

ShaliSeal® PU GG is an elastomeric, gun grade, moisture cured, multipurpose polyurethane gun sealant suitable for roads, airport runways & taxiways, expansion joints, precast element joints, general building façade, external walls and cladding, curtain walls, panel walls, parapets, window and door frame sealing, etc.

Approvals / Standards

BS 5212:1990 Part 1, ASTM C 920, EN 14187-5, Type S, Grade NS, Class 25, Use NT, G, M & A.

Product Information

Colour	Grey smooth thixotropic paste
Handling & Storage	The product should be protected from frost, away from direct sunlight and sources of heat. Store product in a covered, well-ventilated warehouse and avoid excessive heat conditions. Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging.
Packaging	Available in 600 ml sausage.
Shelf Life	12 months from manufacturing date, stored in a dry and cool rooms in their sealed and original sausages. Storage temperature: +10°C to +30°C. Storage in high heat, high humidity conditions may reduce shelf life by up to 30%.
Handling 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 immediate medical attention. Keep away from children and animals.

Technical Characteristics at 27°C, 55% RH

Property	Test Method	Result
Appearance		Pasty Polyurethane Elastomer
Application Temperature, °C		10 to 40
Consistency		Non-sag smooth Thixotropic paste
Temperature Resistance, °C		-30 to +80
Solid Content, % by mass		93 ± 2
Tack free time, minutes	ASTM C 679	45 - 60
Skin formation time, hours		2 - 3
Curing rate **		3 mm / 24 hours
Density, gm / cc		1.30 ± 0.05
Elongation, %, 28 days	ASTM D 412	450 - 600
Shore A Hardness, 28 days	ASTM D 2240	20 ± 5
Elastic Recovery, %	ASTM D 926	70 - 80
Modulus of elasticity at 100%, MPa	ASTM D 412	0.3 - 0.4
Movement accommodation factor, %	ASTM C 719	± 25
Effects of Accelerated weathering	ASTM C 793	No cracking
Compatibility with paints		Water based

All values given are subject to 5-10% tolerance

** At low temperatures curing would be much slower

Coverage Estimate

To estimate the theoretical amount of **ShaliSeal® PU GG** in kg / running meter to seal the joint can be very easily estimated by using the following formula,

$$780 / (W \times D) = L = \text{Running Meter} / \text{Kg}$$

L = Length of joint in running meter, W = Width of the joint (mm), D = Depth of the joint (mm).

Actual material consumption at site will vary depending on the wastage consideration of 5 - 20 %.

Field of Application

- Roads
- Airport runway & taxiways
- Vertical and horizontal expansion joints
- Pre-cast and tilt up construction
- Building façade
- Aluminium curtain walls and store front
- External wall joint sealant in metal structures, in cladding
- Door and window frames (metal, wood, aluminum, PVC)
- Expansion joints in concrete structures
- Curtain walls, panel walls & parapets

Advantages

- UV resistance
- Resistance to dilute acids, fuels and alkalis
- Good adhesion to most building materials like concrete, glass, wood, stone and anodized aluminum
- Excellent weather resistance
- Paintable after tack-free
- Excellent chemical resistance, suitable for sealing joints in swimming pools and chemically treated water

Application Information

- ✓ **Substrate Temperature** - +10°C Min / +40°C Max
- ✓ **Ambient Temperature** - +10°C Min / +40°C Max
- ✓ **Substrate Moisture Content** - < 0.05%

Application Methodology

➤ Surface Preparation

- Surfaces to be sealed or bonded should be clean and dry. Surfaces should be free from grease, mold release, oil, water/condensation, frost, and other contaminants that may affect the adhesion of the sealant.
- Use of polyethylene closed cell backer rod is recommended to ensure proper joint depth and prevent three-sided adhesion. Masking tape may be fixed along the length of the joint to obtain neat lines. Ensure to remove the masking tape when the sealant is still soft.

➤ Priming

- Primer should be applied to a clean, dry surface prior to the installation of backer rod or bond breaking tape. **ShaliPrime® S / ShaliPrime® PUM** is recommended to be applied on porous substrates.
- **ShaliPrime® S** shall be applied at 7 - 9 m² / L or **ShaliPrime® PUM** at 4 - 7 m² / L by a brush in a thin coat application and shall be allowed to become tack free prior to the application of the sealant.
- The joint edges shall be re-primed if the sealant installation is not carried out within 3 to 4 hours of application of the primer.

➤ Application of Material

- Make a 1" slit close to the crimp on one end of the sausage pack. Load the sausage pack of **ShaliSeal® PU GG** into the applicator barrel (slit side out) / conventional application gun.
- After primer is surface dry and noticeable surface tack is generated, apply **ShaliSeal® PU GG** by placing the nozzle of the gun at the bottom of the joint and fill the entire joint. Continue with a steady flow of sealant to avoid air entrapment.
- Dispense product with the nozzle tip in contact with the substrate to insure good gap filling.
- The sealant surface should be tooled smooth using a spatula dipped in soap water to create a concave surface.
- Bonding must occur within the first 50% of published skin time.

Precautions

- Do not apply **ShaliSeal® PU GG** on frozen or wet surfaces.
- Apply **ShaliSeal® PU GG** neither over silicone nor in the presence of curing silicone nor hybrid products.
- Avoid contact with alcohol and solvents during curing.
- Do not apply at a temperature under +5°C.
- In cold weather, store the packaging at about 20 - 25°C before use.
- This product should be used within 24 hours of opening the sausage; otherwise, the sealant could harden inside.

Value base of product data

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control and different test methods.

Health & Safety

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent **Material Safety Data Sheet**.

- **This product contains Isocyanate.** Avoid contact with eyes and skin.
- Wear suitable protective clothing such as overalls, goggles, dust mask and gloves. Ensure that there is adequate ventilation in the area where the product is being applied.
- Do not breathe in vapour or spray mist.
- Keep away from sources of ignition.
- Eye protection during application is recommended.
- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- In case of skin contact, wash with soap and plenty of water. Get medical attention if irritation develops or persists.
- Tightly seal containers when not in use, store them away from heat and carefully dispose empty ones.

Cleaning & Maintenance

Clean all tools immediately after use with STP Thinner only. Do not allow the material to harden. Any hardened material will need to be removed mechanically.



STP Limited
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Product Range

- Waterproofing and Insulation ■ Road Surfacing
- Sealants and Additives ■ Pipeline Coating
- Protective / Anti-Corrosive Coating ■ Epoxy Flooring
- Grouts / Admixtures ■ RestoFix- Repair / Rehabilitation
- Other Construction Chemicals



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