Method Statement

STARSEAL PS PG/PS GG

(Two Component, Polysulfide Based Elastomeric, Fuel Resistance Trafficable Joint Sealant Pourable & Gun Grade)

Rev.: A, Date: 25.06.2025

Method Statement

STARSEAL PS PG/PS GG

Section A: General Considerations

Tools & Equipment

It is suggested that the following list of equipment is adopted as a minimum requirement.

Equipment Type	Equipment Description
Protective clothing	• Protective overalls • Chemical-resistant gloves (nitrile/neoprene) • Safety goggles / eye protection • Respiratory protective equipment (if required)
Mixing equipment	• Clean mixing containers • Mechanical mixer (low-speed drill with paddle) • Measuring containers (if required for ratio control)
Surface Preparation Equipment	• Wire brush • Grinding / abrasive tools (if required) Proprietary blasting equipment • Steam cleaning equipment • Industrial vacuum • Clean lint-free cloths
Application Equipment	• Manual or pneumatic sealant gun (for GG grade) • Pouring cans / containers (for PG grade) • Bond breaker tape • PE joint filler / PE backing rod

High temperature working

It is suggested that, for temperatures above 35˚C, the following guidelines are adopted as good working practice:

1. Store materials in a cool, shaded environment and protect from direct sunlight prior to application.
2. Substrate temperature shall be checked prior to application and should not exceed recommended limits. Surfaces must be clean, dry, and free from moisture.
3. Avoid application during peak temperature hours. Application should preferably be carried out during early morning or late afternoon. Temporary shading shall be provided where necessary.
4. Due to reduced pot life at higher temperatures, mixed material shall be used immediately. Do not mix large quantities at one time.
5. Ensure continuous and controlled application to avoid premature curing, poor adhesion, or surface defects.
6. For pour grade (PG), ensure proper joint design and avoid application where material flow or sagging may occur due to high temperature.
7. Follow manufacturer recommendations for application temperature limits and curing conditions.

Application - points of note

STAR operates a policy to encourage the use, where possible, of approved or licensed applicators. This ensures that applications are completed satisfactorily so that the long term performance of the materials is assured.

For contractors who wish to apply the materials themselves STAR is also able to offer technical assistance and training. Either on-site or at its Training Centre in the Kingdom of Saudi Arabia.

Method Statement

STARSEAL PS PG/PS GG

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Section B: Application Instructions

1. Surface Preparation

A. Pour Grade (PG):

1.1 All joint surfaces shall be clean, dry, sound and free from dust, oil, grease, laitance, curing compounds and any contaminants that may affect adhesion.

1.2 Surface preparation shall be carried out by mechanical methods such as grit blasting, grinding or wire brushing, followed by vacuum cleaning or air blowing to remove loose particles.

1.3 Where biological growth (moss, algae, etc.) is present, the area shall be treated with a suitable biocide prior to cleaning.

1.4 Damaged, spalled or weak substrate shall be removed and repaired using approved repair materials.

1.5 Joint edges shall be sound and properly defined to ensure uniform sealant application.

1.6 A closed-cell polyethylene backing rod shall be installed to the required depth to control sealant thickness and prevent three-sided adhesion.

1.7 The backing rod shall be properly seated, continuous and free from gaps or voids.

1.8 Ensure joints are completely dry before application. No moisture or standing water shall be present.

B. Gun Grade (GG):

1.9 All joint surfaces shall be clean, dry, sound and free from dust, oil, grease, laitance, curing compounds and any contaminants.

1.10 Mechanical cleaning such as wire brushing, grinding or grit blasting shall be carried out, followed by vacuum cleaning.

1.11 Biological contamination such as moss or algae shall be removed using a suitable biocide.

1.12 Any loose, damaged or deteriorated substrate shall be removed and repaired.

1.13 Joint edges shall be properly prepared to achieve good adhesion and neat finish.

1.14 A bond breaker system shall be provided to prevent three-sided adhesion:

- Closed-cell polyethylene backing rod (preferred), or
- Bond breaker tape where backing rod is not feasible

1.15 The backing rod shall be properly sized, firmly installed and continuous without gaps.

1.16 Ensure joints are dry prior to application. Moisture shall be avoided.

1.17 Primer shall be applied where required as per manufacturer's recommendation.

1.18 Masking tape shall be applied along joint edges where necessary to achieve clean and uniform sealant lines.

Method Statement

STARSEAL PS PG/PS GG

2. Priming

2.1. Priming shall be carried out where required to improve adhesion of the sealant to the substrate, particularly on porous, dusty, or weak concrete surfaces.
2.2. For sound, dense and non-porous substrates, priming may not be required. However, adhesion tests shall be carried out to confirm suitability.
2.3. For porous or absorbent substrates such as concrete, apply approved primer (e.g. STARBOND EPP 100SF) in accordance with manufacturer's recommendations.
2.4. Primer shall be applied uniformly using a clean brush or roller to the joint sides only. Avoid application on the joint base or backing rod.
2.5. Allow primer to dry to a tack-free condition prior to sealant application. Sealant shall be applied within the specified open time of the primer.
2.6. Do not apply primer on wet surfaces. Substrate must be clean, dry and free from contaminants before priming.
2.7. Excess primer shall be avoided. Pooling or over-application may adversely affect sealant performance.
2.8. For metal or special substrates, use specific primers as recommended by the manufacturer.
2.9. Trial adhesion tests shall be carried out where substrate conditions are uncertain.

3. Application

A. Pour Grade (PG):

3.1 Prior to application, ensure all surface preparation, backing rod installation and priming (if required) are completed.
3.2 Mix Base (Part A) and Hardener (Part B) in the specified ratio using a slow-speed mechanical mixer until a uniform colour and consistency is achieved.
3.3 Avoid air entrapment during mixing. Do not mix excessive quantities that cannot be applied within the pot life.
3.4 Immediately after mixing, pour the sealant into the joint using suitable pouring equipment.
3.5 Ensure continuous and uniform filling of the joint. Avoid air pockets or voids.
3.6 Fill the joint slightly above the surface level to allow for settlement.
3.7 Allow the sealant to self-level. Do not disturb the surface after pouring.
3.8 Protect the applied sealant from dust, moisture and mechanical damage until initial curing is achieved.

B. Gun Grade (GG):

3.9 Ensure all surface preparation, backing rod installation and priming (if required) are completed.
3.10 Mix Base (Part A) and Hardener (Part B) thoroughly using a mechanical mixer until a uniform colour is obtained.
3.11 Transfer the mixed material into a suitable sealant gun or apply directly using appropriate application tools.
3.12 Extrude the sealant into the joint ensuring full contact with joint sides and complete filling without voids.

Method Statement

STARSEAL PS PG/PS GG

3.13 Apply the sealant in a continuous operation to avoid air entrapment.
3.14 Tool the sealant immediately after application using a suitable spatula or tooling device to achieve a smooth, uniform finish and proper adhesion to joint edges.
3.15 Masking tape may be used along joint edges for neat finish and shall be removed immediately after tooling.
3.16 Tooling shall be completed within the working time (pot life) of the material.
3.17 Protect the sealant from dust, water and mechanical damage until cured.

4. Cleaning

4.1. All tools and application equipment shall be cleaned immediately after use using an approved solvent such as Star Solvent.
4.2. Uncured sealant can be removed from tools, equipment and adjacent surfaces using solvent and clean cloths.
4.3. Cured sealant can only be removed mechanically using scraping or cutting tools.
4.4. Care shall be taken to avoid contamination of surrounding areas during cleaning operations.
4.5. Waste materials, contaminated cloths and empty containers shall be collected and disposed of in accordance with local environmental regulations.
4.6. Do not discharge cleaning solvents or waste materials into drains, sewers or watercourses.
4.7. Hands and exposed skin shall be cleaned using soap and water. Do not use solvents directly on skin.

Section C: Approval and Variations

This method statement is offered by STAR Technology as a ‘standard proposal’ for the application of STARSEAL PS PG/PS GG. It remains the responsibility of the Engineer to determine the correct method for any given application.
Where alternative methods are to be used, these must be submitted to STAR Technology for approval, in writing, prior to commencement of any work. STAR Technology will not accept responsibility or liability for variations to the above method statement under any other condition