

### Part #

Part A ISO A-D

Part B PFS2.5H-D

**DESCRIPTION:** PFS2.5H is a closed-celled, water-blown spray polyurethane foam (SPF) system designed for slab lifting and geotechnical applications that require high compressive strength and low exothermic reaction temperatures. PFS2.5H is applied as a liquid and then expands in seconds. PFS2.5H exhibits low exothermic reaction temperature and therefore can be applied in a single continuous lift without danger of charring or ignition. PFS2.5H utilizes advanced, proprietary chemistry that lowers the exothermic reaction temperature of the product during installation and allows the foam to build up on itself during a continuous-lift installation without excessive pooling or blow back.

### FEATURES & BENEFITS:

- No ozone depleting substances, HFCs, PBDEs
- Low odor during application and produces no toxic vapors after application
- Hydrophobic

### TYPICAL USES

- Soil stabilization
- Geotechnical applications
- Slab lifting

| CHEMICAL PROPERTIES                 | Standard Test | Isocyanate (A) | Resin (B) |
|-------------------------------------|---------------|----------------|-----------|
| Specific Gravity (grams/cc)         | ASTM D-1475   | 1.23           | 1.10      |
| Viscosity, (cps)                    | ASTM D-2196   | 200 - 250      | 600 - 800 |
| Mix Ratio, Parts per Volume         |               | 1              | 1         |
| Cream Time (seconds) @ 100°F (38°C) |               | 4 - 6          |           |
| Rise Time (seconds) @ 100°F (38°C)  |               | 12 - 16        |           |
| Shelf Life - Unopened Containers    |               | 6 months       | 6 months  |

| TYPICAL PHYSICAL PROPERTIES | Test        | Result         |
|-----------------------------|-------------|----------------|
| Density (nominal):          | ASTM D-1622 | 2.3 - 2.7 pcf  |
| Tensile Strength (psi)      | ASTM D-1623 | 71 ± 7         |
| Compressive Strength (psi)  | ASTM D-1621 | 40 ± 3         |
| Closed-Cell Content (%)     | ASTM D-2856 | > 90           |
| Dimensional Stability (%)   | ASTM D-2126 | < 2Δ estimated |

**PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS:** PFS2.5H must be spray-applied using approved equipment. The system settings required to achieve quality spray foam application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum foam quality.

### PROCESSING TEMPERATURES

| ISO (A) & Resin (B) Components | Processing Pressure        | Ambient Temperature        |
|--------------------------------|----------------------------|----------------------------|
| 90 - 120°F (32.2 - 48.9°C)     | 900 - 1500 psi             | 20 - 105°F (-6.7 - 40.6°C) |
| Substrate Temperature          | Substrate Moisture Content |                            |
| > 35°F (1.7°C)                 | < 19%                      |                            |

## PFS2.5H (continued):

**PREPARATION OF SUBSTRATES:** Providing the proper substrate is the responsibility of the owner, the owner's appointed representative, the contractor, and/or the inspector. It is recommended to remove dust, dirt, oil, paint, and alternative polymers from all surfaces prior to application. **See SPFA guidelines for further details on substrate preparation.**

### PRECONDITIONING

1. The contents will not be under pressure. PFS2.5H is a closed-celled, water-blown spray polyurethane.
2. It is recommended to storage precondition material between (50-90°F) prior to application. Material may thicken at lower temperatures which can cavitate pumps. PFS2.5H resin (B) does not require agitation. If necessary, pre-heat and/or recirculate resin (B) up to 100°F (40°C) without any degradation or loss of blowing agent.

### MIXING

3. **Does not require agitation.**
4. **Can recirculate.**

The system settings required to achieve quality spray foam application will vary depending on environmental and substrate conditions.

### PRESSURE SETTINGS

5. Product should be sprayed with a high pressure plural-component proportioner capable of a minimum of 1000 psi dynamic pressure.
6. Static pressure should be set between 900-1500 psi.
7. Dynamic pressure typically operates at a minimum of 1000 psi.

### TEMPERATURE SETTINGS

8. Primary heaters and hose heaters are typically set between (115 - 150°F).
9. Proper application temperature setting is the responsibility of the end user. Equipment temperature varies and can be dependent on equipment, hose length, elevation, ambient temperature, substrate temperature, humidity, and other factors.

### APPLICATION

1. Clean surfaces according to "Preparation of Substrates" section.
2. If priming, follow manufacturer recommendations. Ensure primer is adequately cured prior to application.
3. Substrate temperatures should be > 35°F (1.7°C)
4. Flush an adequate amount of material through the lines/gun prior to spraying desired surface when changing between systems. Flush amount will be dependent on prior system used.
5. It can be applied in a single continuous application without danger of charring or ignition.
6. Inspect applied material intermittently to ensure no problems exist. If problems are detected, discontinue application and inspect all substrates, equipment, gun, and liquid material for problem source(s).

**SUBSTRATES:** PFS2.5H is chemically and physically compatible with all common building materials including electrical wiring, wood, metal, concrete, plastic (PVC), copper, vinyl, and glass.

**CLEANING AND MAINTENANCE** Spray equipment must be maintained in proper operating condition. Failure to adequately maintain spray equipment may result in poor product performance. Refer to your equipment manufacturer's maintenance procedures for more details.

**HOW SUPPLIED:** PFS2.5H net weight per set is 965 pounds (453.6 kg). A set of PFS2.5H consists of one (1) 55-gallon (208 L) drum of (A) component and one (1) 55-gallon (208 L) drum of (B) component.

**STORAGE:** PFS2.5H should be stored between 50 – 90°F (10 – 32.2°C) out of direct sunlight. Do not allow material to freeze.

**Contact Polyfoam Supply Technical Services for long-term equipment storage recommendations.**

## PFS2.5H (continued):

**SAFETY PRECAUTIONS** Health Considerations: Consult the Polyfoam Supply Safety Data Sheet (SDS).

This chemical system requires the use of proper safety equipment and procedures. Please follow the Polyfoam Supply product SDS for detailed information and handling guidelines.

**For Your Protection:** The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage, and handling are only the opinion of Polyfoam Supply. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Polyfoam Supply will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to end users and processors.

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**Contact Polyfoam Supply Technical Support at (816) 215-1777 for additional questions.**

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