



## TECHNICAL DATA SHEET

### Staycell ONE STEP<sup>®</sup> 255 Spray Foam Insulation (MONOLITHIC System)

#### Product Description

Staycell ONE STEP<sup>®</sup> 255 Spray Foam Insulation (MONOLITHIC System) is a two-part, closed-cell polyurethane foam insulation system used to insulate roof decks, ceilings, walls, siding, structural steel or tanks and provides an integral air barrier / insulation / vapor retarder for building envelope assemblies. It can be installed in occupied and unoccupied spaces and is code-compliant without thermal barriers, ignition barriers or other types of fire protective surfaces when installed in accordance with Quality Auditing Institute Listing No. B1020.

#### Benefits:

- Superior insulation performance compared to fiberglass or cellulose
- Controls air and moisture infiltration
- Strengthens roofs and walls
- Environmentally friendly. Utilizes EPA approved, zero-ozone depleting blowing agents

#### Physical Properties

TYPICAL PHYSICAL PROPERTIES*		
	ASTM Method	
Nominal Density	D 1622	2.2 pcf
Compressive Strength	D 1621	22 psi
Tensile Strength	D 1623	28 psi
Closed Cell Content	D 6226	90%
R-Value @ 1.0 inch	C 518	5.5
Water Vapor Permeance (perms) @ 2.4 inches	E 96	.99
Air Leakage @ 1.0 inch	E 2178	.007 L/s/m <sup>2</sup> @ 75 Pa

\* These physical properties are typical for this material as applied at manufacturing facility under controlled conditions. Performance and actual properties will vary with differences in application (i.e. ambient conditions, process equipment and settings etc). As a result, these published properties should be used as guidelines solely for the purpose of evaluation.

#### Building Code Compliance

The Staycell ONE STEP<sup>®</sup> 255 product is listed and labeled by Quality Auditing Institute as complying with the 2003, 2006 and 2009 editions of the International Building Code and International Residential Code when installed exposed based on compliance with ASTM E-84, UL 723 and NFPA 255 ratings for flame spread and smoke development and UL1715 for acceptable, large-scale fire performance.

## Fire Performance and Ratings



Preferred Solutions, Inc.  
7819 Broadview Road  
Cleveland, Ohio 44131

Listing No. B1020

### Staycell ONE STEP® 255 Spray Foam Insulation (MONOLITHIC System)

#### **Fire performance in accordance with ASTM E-84, UL 723 and NFPA 255\*:**

Staycell ONE STEP® 255 Spray Foam Insulation (MONOLITHIC System):

Tested thickness: 4 inches Class: A Flame spread index: 25 Smoke developed index: 300

#### **Fire performance in accordance with UL1715 large-scale, room fire test:**

Walls only: Installed at 4 inch or less thickness

Roofs/Ceilings only: Installed at 8 inch or less thickness

Walls & Roofs/Ceilings: Not tested

\* These tests are designed for sample thickness up to four inches. UL1715 is a building code recognized test for greater thickness applications.

QAI is accredited by International Accreditation Services, Inc. of the International Code Council for fire testing and quality control inspections of manufacturing facilities. IAS Registration Nos. AA-723 and TL-220.

## Equipment Information

The proportioning equipment shall be manufactured specifically for heating, mixing and spray application of polyurethane foam and be able to maintain 1:1 metering by volume with  $\pm 2\%$  variance. All proportioners shall have adequate main heating capacity to deliver heated and pressurized materials up to 130° F. Heated hose shall be able to maintain pre-set temperatures for the full length of the hose. 2:1 ratio feeder pumps and 3/4 inch supply hoses are recommended to transfer material from container to the proportioner.

Recommended equipment (contact PSI for more details):

- Graco Reactor proportioners or equivalent set at 1:1 volume ratio. Contact PSI for specific models.
- Graco GAP or Fusion AP spray gun with #2 mixing chamber.
- Graco T2 2:1 transfer pumps.

## Application Information

For detailed application information, please refer to the Staycell ONE STEP® 255 Application Guide.

## **Handling & Storage**

Both components should be stored in their original containers and away from excessive heat and moisture, especially after the seals have been broken or some materials used. Workers must be wearing full safety gear before opening container. Lids on containers should be opened only after pressure buildup has first been relieved by loosening bung cap/cover carefully to allow any pressure buildup to be vented safely. Excessive venting of the “B” component may result in higher density and reduced yield. Materials stored at temperatures below 50°F will increase viscosity and some application equipment may not reach adequate spray temperature set points. Supply pumps and hoses must be sized to provide adequate supply when materials are cold and at a higher viscosity. Keep containers tightly sealed and stored at 50° to 75°F for maximum shelf life. Storage temperatures must not exceed 85°F. Do not store in direct sunlight. Keep drums tightly sealed when not in use to avoid contamination. Water, solvents or oil in the liquid components will degrade foam quality. Protect from heat, sparks and open flame. Do not cut or weld near this container. Do not smoke near container. Do not store near food or feed.

## **Shelf Life**

Staycell ONE STEP® 255 has a shelf life of approximately three (3) months from the date of manufacture when stored in original, unopened containers between 50° to 75°F. As with all industrial chemicals, this material should be stored in a covered, secure location and never in sunlight or direct sources of heat. Storage temperatures above the recommended range will shorten shelf life and may also result in elevated headspace pressure within packages.

## **Limited Warranty Information**

The information herein is to provide assistance in determining the suitability of our products for specific applications. Our products are only intended for sale to PSI Authorized Applicators. Customers of our products assume full responsibility for quality control, testing and determination of suitability of products for their intended application or use. We warrant that our products meet our written liquid component specifications. We make no other warranty of any kind, either express or implied, by fact or law, including any warranty of merchantability or fitness for a particular purpose. Our total liability and customers' exclusive remedy for all proven claims is to receive replacement of nonconforming products and in no event shall PSI be liable for any other damages. PSI's technical literature is updated on a regular basis; it is the user's responsibility to obtain and to confirm the most recent version. Information contained in this data sheet may change without notice.

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