

07 21 00
Guide Specification

FOAMED-IN-PLACE INSULATION

Preferred Solutions, Inc.
7819 Broadview Road
Cleveland, OH 44131
800-522-4522

SPEC NOTE: This guide specification is intended for use when specifying the Staycell ONE STEP™ 255 spray-applied polyurethane foam insulation for projects located in the United States.

DISCLAIMER: The manufacturer has reviewed the product information contained in this guide specification. The information is organized and presented to assist the specification writer working on a construction project to select the appropriate products and to save time in writing the project Section. The specification writer is responsible for product selection as well as the use and application of this information and should contact the manufacturer to ensure that all options are available and that the associated specification information is valid and correct.

SECTION 07 21 00

FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Staycell ONE STEP™ 255 spray polyurethane foam insulation

1.02 REFERENCES

- A. ASTM C 518-04 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter
- B. ASTM D 1621-04a Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- C. ASTM D 1622-03 Standard Test Method for Apparent Density of Rigid Cellular Plastics
- D. ASTM D 1623-03 Standard Test Method for Tensile and Tensile Adhesion Properties for Rigid Cellular Plastics
- E. ASTM D 2126-04 Standard Test Method for Response for Rigid Cellular Plastics to Thermal and Humid Aging
- F. ASTM D 6226-05 Standard Test Method for Open Cell Content of Rigid Cellular Plastics
- G. ASTM E 84-08 Standard Test Method for Surface Burning Characteristics of Building Materials
- H. ASTM E96/E96M-05 Standard Test Methods for Water Vapor Transmission of Materials
- I. UL 1715 Fire Test of Interior Finish Material

1.03 SUBMITTALS

A. Informational Submittals

1. Manufacturer's published data sheet.
2. Shop drawings on sheet metal, accessories, or other fabricated items, if required.
3. Two samples 4 inch by 4 inch of each product.
4. Applicator certification from Preferred Solutions, Inc.
5. Manufacturer's installation instructions.
6. Field quality control procedures to be utilized by Applicator to assure proper installation of the products.
7. Material Safety Data Sheets (MSDS).

B. Closeout Submittals

1. Maintenance and repair instructions.
2. Executed warranty documents.

1.04 QUALITY ASSURANCE

Authorized Applicator of Manufacturer: Contractor shall be a designated Authorized Applicator of Preferred Solutions, Inc., Cleveland, Ohio. Such designation certified in writing by Preferred Solutions, Inc. shall be submitted by the contractor.

1.05 MATERIALS DELIVERY AND STORAGE

- A. Materials shall be delivered in the manufacturer's original, tightly sealed containers or unopened packages, all clearly labeled with the manufacturer's name, product identification, safety information, and batch or lot numbers where appropriate.
- B. Containers shall be stored out of the weather, direct sun and in compliance with manufacturer's recommendations.

1.06 FIELD CONDITIONS

A. Ambient Conditions

1. Do not apply the products if the ambient air or substrate is below 40° F or when substrate has surface moisture.

PART 2 PRODUCTS

2.01 MATERIALS

A. Polyurethane foam insulation having the following properties:

1. Insulation Value (ASTM C-518): R-5.5
2. Compressive Strength (ASTM D-1621): 32 psi

3. Core Density (ASTM D-1622): 2.3 pcf minimum
4. Tensile Strength (ASTM D-1623): 69 psi
5. Closed Cell Content (ASTM D-6226): >90%
6. Air Leakage @ 75 Pa (ASTM E-283): 0.007L/s/M² (.0014 cfm/sf)
8. Fire Ratings

ASTM E-84 (tested at 4")*

- a. Flame spread: 25
- b. Smoke development 300

UL 1715: Product complies with all acceptance criteria including no fire propagation when installed at eight inches or less thickness on underside of roofs and ceilings or four inches or less thickness on walls.

*Numerical flame spread ratings and all other data presented are not intended to Reflect potential hazards presented by this product under all actual fire conditions.

9. Product and Manufacturer: Staycell ONE STEP™ 255 spray polyurethane foam insulation by Preferred Solutions, Inc.

Part 3 EXECUTION

3.01 EXAMINATION

- A. Inspect existing conditions to ensure they are suitable for work to begin. Do not proceed until unacceptable conditions are corrected.
- B. Ensure items such as hangars for piping and ductwork are installed before beginning work.

3.02 PREPARATION

- A. All substrates shall be free from surface moisture prior to the application of the foam insulation.
- B. Loose paint and other surface materials which are easily removable shall be removed by broom brushing, vacuuming, air blowing or similar procedures.

3.03 APPLICATION

- A. Polyurethane foam insulation:
 1. The foam components (A) and (B) shall be applied in accordance with the manufacturer's instructions.
 2. The foam shall be sprayed within the manufacturer's guidelines for temperature, humidity and other atmospheric conditions.

3. The foam shall be sprayed at an average ____ inch thickness where shown on the applicable drawings. The full thickness of foam applied on any given surface shall be completed in one day.
4. Any damage or defects to the foam shall be repaired prior to applying the thermal barrier coating.

3.04 QUALITY ASSURANCE

- A. Daily records: The applicator shall keep daily records as to the square feet of surface sprayed each day, quantities of all materials used and thickness tests performed. One thickness test shall be conducted on every 500 square feet of covered surface. Such records shall be provided upon request.
- B. Installed product evaluation: In addition to verifying the thickness of all installed product, the following characteristics shall also be provided:
 1. The cellular structure shall be uniform and not be soft or spongy.
 2. The foam shall not have areas with hard or brittle sections or improperly proportioned materials.

3.05 SAFETY REQUIREMENTS

- A. Applicator shall comply with all provisions of MSDS Sheets for the product.
- B. Ventilation, if necessary, shall be provided to assure fresh air is brought into the area being sprayed. Such air shall be exhausted to the outside of the building by utilizing existing fans or by supplemental ventilation.
- C. Proper disposal of waste materials and containers must be done in compliance with the manufacturer's guidelines and federal, state and local regulations.

3.06 CLEAN-UP

- A. At the completion of the project, applicator shall clean up and remove from the site all material containers, waste materials and debris.

END OF SECTION