

## MANTA SPRAY FOAM SYSTEM InstaShield #250 2.8 lb. PDS

**DESCRIPTION:**

InstaShield #250 is a two component, HFO blown spray polyurethane foam system designed for use as a self-adhering, seamless, high insulating, spray applied rigid polyurethane foam roofing system. InstaShield #250 is available in multiple speeds for use in varying temperature conditions. InstaShield #250 complies with ASTM D7425 and has been formulated to spray at a 2.8-pound density.

**DISTINGUISHING CHARACTERISTICS:**

- Excellent Cure and Overlap Adhesion
- High Yields
- High Closed Cell Content
- Good Dimensional Stability
- Class II Vapor Retarder @ 1"

**APPROVALS:**

This system is classified per UL Standards.



For specific roof assembly approvals refer to the Manta Application Information or contact Manta for additional details. The building code and listed guides provide additional information:

- International Building Code (IBC) Section 2603
- International Building Code (IBC) Section 1507.13
- *CPI Fire Safety Guidelines for Use of Rigid Polyurethanes and Polyisocyanurate Foam Insulation in Building Construction*
- *CPI Bulletin AX 151: Guidelines for the Responsible disposal of Waste and Containers from Polyurethane Processing*
- *CPI Bulletin AX 205: Guidance for Working with MDI and Polymeric MDI: Things You Should Know*

TYPICAL PHYSICAL PROPERTIES*:		
Core Density	ASTM D1622	2.8 pcf
Compressive Strength	ASTM D1621	58 psi
Tensile Strength	ASTM D1623	77 psi
Closed Cell Content	ASTM D2856	>90%
Maximum Service Temperature		180°F
Flame Spread @ 4"	ASTM E84	<75
Sheer Strength	ASTM C273	43 psi
R- Value @ 1"	ASTM C518 @180 days	6.7
*Note: The above values are average values obtained from a laboratory and should serve only as a guide.		

R-Values*		ASTM C518	ASTM E96
Thickness (inches)	R-Value (°F·hr·ft <sup>2</sup> / Btu)		Vapor Perm (perm)
1	6.7		0.87
1 ½	10		0.58
2	13		0.44
4	27		0.22
6	40		Pg 1 of 2 0.15 <sup>120722</sup>
8	54		0.11
10	67		0.09
12	80		0.07
*Note: As with all insulating materials, the R-value will vary with age and use conditions.			

The information on our data sheets is to assist customers in determining whether our products are suitable for their applications. The customers must satisfy themselves as to the suitability for specific cases. MRP warrants only that the material shall meet its specifications. This warranty is in lieu of all other written or unwritten, expressed or implied warranties, and MRP expressly disclaims any warranty of merchantability, fitness for a particular purpose, or freedom from patent infringement. Accordingly, buyer assumes all risks whatsoever as to the use of the material. Buyer's exclusive remedy as to any breach of warranty, negligence or other claim shall be limited to the purchase price of the material. Failure to adhere strictly to any recommended procedures shall relieve MRP of all liability with respect to the material or the use thereof.

**MANTA SPRAY FOAM SYSTEM InstaShield #250 2.8 lb. PDS**  
**InstaShield #250 APPLICATION INFORMATION**

**APPLICATION GUIDELINE:**

InstaShield #250 is only designed for application on the exterior of a roof.

**STORAGE AND USE OF CHEMICALS:**

Keep the temperature of the chemicals above 70°F for several days before use. Cold chemicals can cause poor mixing, pump cavitation or other process problems due to higher viscosity at lower temperatures. The storage temperature should not exceed 85°F. Do not store in direct sunlight. Keep drums tightly closed when not in use. The B-InstaShield 250 2.8 drum must be kept under dry air or nitrogen pressure of 2-3 psi after opening and during use. The shelf life of unopened A-InstaShield 250 ISO is 24 months and the B-InstaShield 250 2.8 REG is six months.

**SAFE HANDLING OF LIQUID COMPONENTS:**

Use caution in removing bungs from the container. Partially loosen the small bung first allowing any built up gas pressure to escape before completely removing it. Avoid prolonged breathing of vapors. In case of chemical contact with eyes, flush with water for at least 15 minutes and get medical attention. For further information refer to [www.spraypolyurethanes.org](http://www.spraypolyurethanes.org) Health and Safety Product Stewardship Workbook for High-Pressure Application of SPF.

**EQUIPMENT AND COMPONENT RATIOS:**

The InstaShield #250system, consisting of the A-InstaShield and ISO B-InstaShield 250 2.8 components, is formulated for spraying with a two component pump specifically designed for spray polyurethane foam systems. The B-drum is connected to the resin pump and the A-drum is connected to the isocyanate pumps. The proportioning pump ratio is 1:1. The dispensing temperature should be set at 130°F and adjusted accordingly to give a good spray pattern. For additional assistance contact MRP.

**PROPER TEMPERATURE AND OPTIMUM FOAM REACTIVITY:**

Below are the recommended ambient air temperatures for the different speeds of

InstaShield #250.

InstaShield #250Systems	Temperature Range Guideline
SLOW	75°F & above
REG	60°-80°F
FAST	40°-60°F

Care in selecting the proper speed of InstaShield #250 is needed for the combination of adequate curing on the overlap edges and an acceptable texture of the foam surface. For temperatures below 40°F contact MRP for specific recommendations.

**PREPARATION OF SURFACE TO BE SPRAYED:**

All surfaces to be sprayed should be clean, dry, and free of dew or frost. All metal to which foam is to be applied must be free of oil, grease, etc. Primers should be used where necessary MantaPrime Multipurpose primer 235.

**PROPER TEMPERATURE FOR OPTIMUM ADHESION:**

When the surface temperature will have a service temperature between 120°F and 180°F (#6 oil and resin tanks), the surface to be sprayed should be 120°F or above at the time of spraying. For temperatures over 180°F, please contact MRP for specific recommendations.

**VAPOR BARRIER PROTECTION ON COLD STORAGE WORK:**

When sprayed polyurethane foam is used on exterior roofs of freezer or cooler buildings, the exterior coating on the foam should be a vapor barrier. This is because of severe vapor drive from the warm exterior to the cold interior.

**WEATHER PROTECTION OF FINISHED FOAM:**

The finished surface of sprayed polyurethane foam should be protected from adverse effects of ultraviolet rays of direct sunlight, which can cause dusting and discoloration. Protective coatings designed for use with polyurethane foam are available.

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