

# ULTRALOK™ / 28

**Product Use and Design**

Huntsman Building Solutions Ultralok™ 2.8 Roofing Spray Foam is a closed-cell, polyurethane foam, which was developed using an EPA approved fourth generation blowing agent, specifically designed to provide a high performance, fully adhered roofing system providing insulation and waterproofing over a variety of roof deck substrates and configurations. This product contains PET recycled plastic bottles and an HFO blowing agent, making it the most environmentally conscious insulation, with a zero-ozone depletion potential (ODP) and a global warming potential (GWP) of 1, which is 99.9% lower than current HFC blown products.

Ultralok 2.8 locks in every portion of the roof creating a seamless membrane thus eliminating the need for mechanical fasteners — the number one cause of conventional roof leaks. Ultralok 2.8 spray foam roofing can also be applied to vertical surfaces making the seamless coverage self-flashing. In addition to roofing applications, Ultralok 2.8 is also recommended for tank insulation applications.

**Product Advantages**

- Offers a high R-value per inch
- Reduces installation time and costs
- Enhances resistance to wind uplift and hail damage
- Decreases energy expenses compared to alternative solutions

Reactivity Selection		
Processing Designation	Regular	Summer
Substrate	50°F +	85°F +
Ambient Temperature	50°F +	85°F +

Heated trailers, hotboxes, or heated tank storage may be necessary. Material temperature should be confirmed with a thermometer.

**Processing Parameters**

Optimum pressure, preheat and hose temperature will vary from machine to machine. The performance of the foam system being applied will also be affected by the ambient and substrate temperatures as well as wind. It is the responsibility of the applicator to determine the optimum processing requirements of his machinery as these will change over the course of the day. The guidelines shown below should be used to determine a starting point for this optimization process.

Dynamic Pressure	Preheat Temperature	Hose Heat Temperature
1,000 - 1,400 psi	120 - 130°F (49 - 54° C)	120 - 130°F (49 - 54° C)
Drum Temperature: In Use	Surface Temperature	Drum Temperature: Storage
65 - 85°F (18 - 30° C)	60°F +	50 - 75°F (10 - 24° C)

*Note: A-side processing temperature should be about 10°F cooler than the B-side*

2:1 transfer pumps are recommended for material transfer from container to the proportioner.

CAUTION: Extreme care must be taken when removing and reinstalling drum transfer pumps so as NOT to reverse the “A” and “B” components.

Do not recirculate or mix other suppliers’ “A” or “B” component into Ultralok 2.8 containers.

The plural component proportioner must be capable of supplying each component within ± 2% of the desired 1:1 mixing ratio by volume.

Ultralok 2.8 should be applied in lifts or passes of no less than 1 inch and no more than 2.0 inches thickness per pass or lift. Minimal passes or reduced thickness will result in elevated density and may not cure properly, reducing the physical performance properties of the system. Applications of greater than 2.0 inches will result in reduced density and physical properties and may also create scorching of the foam as a result of the exothermic reaction, both of which will reduce the physical performance characteristics of the foam.

## Physical Properties

Properties	Test Method/Requirements	Value
Aged "R" Value	ASTM C 518	6.2 per inch
Compressive Strength	ASTM D 1621 (40 min.)	40-45 psi
Core Density	ASTM D 1622	2.7-2.9 lbs./ft <sup>3</sup>
Closed Cell Content (% Volume)	ASTM D 2856 (90 min.)	>92%
Tensile Strength	ASTM D 1623 (60 min.)	>70 psi
Water Absorption	ASTM D 2842 (1.0 max per volume)	Less than 1% volume
Water Vapor Permeability @ 74°F, perm inch	ASTM E 96 (2.5 max)	1.1 perms @ 1"
Dimensional Stability 28 days at 158°F, 98%RH	ASTM D 2126	≤1% change in volume
Shelf Life	6 months when stored within recommended temperature range	
Coating Recommendation	Thermo-Flex Series Acrylic or High Solid Silicone	
Recyclable Content	11.8 %	

### Certifications

UL (Meets UL 790)  
Miami Dade  
ASTM C1029

### Limitations of Use

Ultralok 2.8 is a combustible material with a maximum continuous service temperature of 180°F (82°C). Ultralok 2.8 should not be used in direct contact with chimneys, flues, steam pipes, recessed lighting or heat emitting devices. Consult the listing or label of such materials for clearance to combustibles. A minimum clearance of 3" should be maintained when applying around recessed lighting, and it's important to avoid spraying inside electric outlets or junction boxes. Properly prep and secure any material or surface that should not get insulated. If in doubt about the substrate temperature or surface conditions, a trial application should be conducted to check foam quality and spray performance. Water on the surface from rain, fog, condensation, etc. will react chemically with the isocyanate, adversely affecting the foam and physical properties, particularly adhesion. For further product and application knowledge reference this product's application guide and consult with a member of the Huntsman Building Solutions team.

### General Requirements

Equipment must be capable of delivering the proper ratio (1:1 by volume) of polymeric isocyanate (PMDI) and polyol blend at adequate temperatures and spray pressures. Substrate must be at least 5 degrees above dew point, with best processing results when ambient humidity is below 80%. Substrate must also be free of moisture (dew or frost), grease, oil, solvents and other materials that would adversely affect adhesion of the polyurethane foam. Ultralok 2.8 must be separated from the interior of the building by an approved thermal barrier or an approved finish material equivalent to a thermal barrier in accordance with applicable codes. Ultralok 2.8 must be sprayed at a minimum thickness of 1" per pass. This product must not be used when the continuous service temperature of the substrate or foam is below -60°F (-51°C) or above 180°F (82°C). Ultralok 2.8 should not be used to cover flexible ductwork.

### Disclaimer

The information herein is to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The foam product is combustible and must be protected in accordance with applicable codes. Protect from direct flame and spark contact, around hot work for example. The exclusive remedy for all proven claims is replacement of our materials.



ALSO CLASSIFIED IN ACCORDANCE WITH ASTM C1029 REQ.