



# AMBI-SEAL 5.0

OPEN CELL SPF SYSTEM

AMBI-SEAL 5.0 Product Data Sheet  
Issued 12/12/2022

## DESCRIPTION

**AMBI-SEAL 5.0** is an open cell polyurethane spray foam insulation. The improved heat stability of the resin allows for easy control and application robustness over a wide temperature range.

**AMBI-SEAL 5.0** shows excellent adhesion to a wide range of substrates typically found in building construction, as well as air seals and insulates in one step.

**AMBI-SEAL 5.0** meets the intent of the building codes for residential and commercial construction.

## PHYSICAL PROPERTIES

PROPERTY	TEST METHOD	PRELIMINARY VALUE
Density	ASTM D1622	0.45 - 0.54 lbs.ft <sup>3</sup>
Thermal Resistance	ASTM C518	3.63 ft <sup>2</sup> h°F/BTU
Air Permeance	ASTM 2178	<0.02 L/sm <sup>2</sup>
Tensile Strength	ASTM 1623	5.5 psi
Open Cell Content	ASTM 6226	>90%
Dimensional Stability (Aging 7 days)	ASTM 2126	<10%
Water Vapor Permeance	ASTM E96 Procedure A	4.93 perms @ 3.5" 3.17 perms @ 5.5" Class III Vapor Retarder @ <9 perms

## LIQUID COMPONENT PROPERTIES

PROPERTY	AMBIT PMDI-ISO ISOCYANATE (A-COMPONENT)	AMBI-SEAL 5.0 RESIN (B-COMPONENT)
Color	Dark Brown	Transparent Yellow
Viscosity @ 75 °F	150 - 250 cps	150 - 250 cps
Specific Gravity	1.22 - 1.24	1.08 - 1.10
Storage Temperature	65 - 110 °F	65 - 110 °F
Shelf Life	One year (12 months)	One year (12 months)
Volumetric Mixing Ratio	100:100	100:100

## REACTION-TO-FIRE

PROPERTY	TEST METHOD	PRELIMINARY VALUE
<b>Surface Burning Characteristics</b>	ASTM E84	<b>Class I Flame Spread 15-20 Smoke Developed 350</b>
<b>Ignition Barrier</b> <i>Compliant 2009, 2012, 2015 IBS &amp; IRC, and ICC AC 377 Appendix X for Attics &amp; Crawl Spaces.</i>	NFPA 286	DC 315 @4 mils WFT (3 mils dry film thickness): <b>PASS</b>  Flame-Seal IB @5 mils WFT (3 mils dry film thickness): <b>PASS</b>
<b>Thermal Barrier</b> <i>Compliant 2009, 2012, 2015 IBS &amp; IRC as an interior finish without a 15 minutes thermal barrier.</i>	NFPA 286	DC315 @ 18 mils WFT (12 mils dry film thickness): <b>PASS</b>
<b>Unvented Attic Assembly by Design</b>	NFPA 286 Modified (Code Compliance Report)	See CCRR 0393. Foam thickness 16" maximum & 3.5" minimum. (No ignition or thermal barrier in the assembly): <b>PASS</b>
<b>Critical Radiant Flux</b> of Exposed Attic Floor Insulation	ASTM E970	@ 14" thick <b>&gt;0.12 w/cm<sup>2</sup></b>
<b>Fire Characteristics of Exterior Wall Assembly</b> Containing Combustible Component. <i>Compliant 2015 and 2018 for exterior walls of Type I, II, III, and IV of any height.</i>	ASTM 285	<b>PASS</b>

The flammability rating stated in this document is not intended to reflect hazards under actual fire conditions. These ratings are used solely to measure and describe the product's response to heat and flame under controlled laboratory conditions.

## RECOMMENDED PROCESSING PARAMETERS

	SUMMER	WINTER
Recirculating Temperature	75 - 80 °F	75 - 80 °F
Primary A-Side Heater	120 - 130°F	110 - 130°F
Primary B-Side Heater	120 - 130°F	110 - 130°F
Hose Temperature	120 - 130°F	110 - 130°F
Processing Pressure	900 – 1200 psi	900 – 1200 psi
Minimum Application Temperature	>20°F	>20°F
Ambient Humidity	<85%	<85%
Maximum Moisture of Wood Substrate	19%	19%

This product should only be applied by trained applicators using 1:1 by volume proportioning equipment capable of maintaining the pressures and temperatures as recommended by AMBIT Polyurethane. Like all isocyanate based foams, the chemical reaction varies significantly due to the equipment, environmental conditions, and applicator technique. Applicators should monitor the chemical temperature, pressures and the rate of rising foam to obtain the best yield for optimum performance.

Prior to spraying, maintain the chemical temperature inside the drums at 70 - 100 °F. Sometimes it may be necessary to raise the chemical temperature inside the drums by recirculating through the hoses and primary heaters. Gently mix the resin while spraying to further improve the performance. Air or mechanical purge guns can be used with this chemical system.

- Do not use in areas where this product may come into contact with water or in below grade applications.
- Protect from sunlight.
- Substrate should be free from oils, grease, frost, water or materials which could affect the adhesion.

## FIRE SAFETY

**AMBI-SEAL 5.0** should not be used near open flames or sparks. For more information follow API Fire Safety Guidelines for Use of Rigid Polyurethane and Polyisocyanurate Foam Insulation in Building Construction (AX230). Warning signs should be installed whenever Hot Work is done, such as welding, cutting with torches, or soldering. All Hot Work should be performed no less than 35 feet from any exposed spray foam. If Hot Work must be performed, all spray foam should be covered with an appropriate welders or fire blanket. In addition, a fire watch should be provided.

## RESPIRATORY PROTECTION

AMBIT Polyurethane requires a full-face mask with supplied air be used during the application of our spray foam systems. A copy of the Model Respiratory Protection Program developed by CPI can be obtained from AMBIT or by visiting [www.polyurethane.org](http://www.polyurethane.org). Read the Safety Data Sheet (SDS) for additional information on safe use and handling.

## SPILLS AND LEAKS

- Ventilate area to remove vapors and use personal protective equipment.
- Contain and cover spilled material with absorbent materials.
- Report spills more than 5,000 lbs. to environmental agencies.
- Wash the contaminated areas thoroughly.



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