

## TECHNICAL DATA SHEET

Agribalance® is a two component, open cell, spray applied, semi-rigid polyurethane foam system that contains more than 20% renewable agricultural based materials (refined vegetable oils). This product is a fully water blown foam system having a low in-place density with excellent adhesion to various substrates and to itself. Agribalance incorporates the single phase solution technology developed by Demilec for excellent shelf life and consistent processing. Agribalance complies with the intent of the International Code Council's residential and commercial building codes for spray polyurethane foam plastic insulation. Agribalance meets the USDA guidelines for incidental food contact.

PHYSICAL PROPERTIES			
ASTM D 1622	Density	0.6 - 0.8 lb/ft <sup>3</sup>	9.6 - 12.8 kg/m <sup>3</sup>
ASTM C 518	Aged Thermal Resistance (R-value @ 1 inch)	4.45 ft <sup>2</sup> h <sup>2</sup> °F/BTU	0.78 Km <sup>2</sup> /W
ASTM E 283	Air Permeance @ 75 Pa @ 3.5" (75 Pa = 25 mph wind)	< 0.02 L/sm <sup>2</sup>	
	Air Permeance @ 500 Pa @ 3.5"	0.003 L/sm <sup>2</sup>	
	Air Permeance @ 1000 Pa @ 3.5"	0.006 L/sm <sup>2</sup>	
	Air Permeance @ 1500 Pa @ 3.5"	0.011 L/sm <sup>2</sup>	
ASTM E 96	Water Vapor Permeance @ 5"	4.95 perms	283 ng/Pa•s•m <sup>2</sup>
ASTM D 2126	Dimensional Stability @ 158°F (70°C) 97% R.H. (28 days)	3.16 (% volume change)	
ASTM D 1621	Compressive Strength	1.86 psi	12.82 kPa
ASTM D 1623	Tensile Strength	3.87 psi	26.68 kPa

FIRE TEST RESULTS		
ASTM E 84	Surface Burning Characteristics, 5.5" thick Flame Spread Index Smoke Developed	Class I 15 - 20 400
NFPA 286	Ignition Barrier - Compliant with 2006, 2009 & 2012 IBC and IRC, and ICC-ES AC-377 Appendix X, for use in attics and crawl spaces with: Blazelok™ IB4 at 5 mils dry film thickness, 9 mils wet film thickness, or No Burn Plus XD at 6 mils dry film thickness, 10 mils wet film thickness, or Heatlok Soy at 2" thick	Pass
NFPA 286	Thermal Barrier - Compliant with the 2006, 2009 & 2012 IBC and IRC, as an interior finish without a 15 minute thermal barrier with Blazelok™ TBX at 15 mils dry film thickness.	Pass
ASTM D 1929	Ignition Properties (spontaneous ignition temperature)	968°F (520°C)

LIQUID COMPONENT PROPERTIES*		
PROPERTY	A-PMDI ISOCYANATE	AGRIBALANCE RESIN
Color	Brown	Amber
Viscosity @ 77°F (25°C)	180 - 220 cps	250 - 450 cps
Specific Gravity	1.24	1.08 - 1.12
Shelf Life of unopened drum properly stored	12 months	12 months
Storage Temperature	50 - 100°F (10 - 38°C)	50 - 100°F (10 - 38°C)
Mixing Ratio (volume)	1:1	1:1

\*See SDS for more information.

REACTIVITY PROFILE			
Cream Time	Gel Time	Tack Free Time	End of Rise
1 - 2 seconds	3 - 4 seconds	6 - 7 seconds	6 - 7 seconds

## RECOMMENDED PROCESSING CONDITIONS\*

Initial Recirculating Setpoint Temperature	80 – 85°F	27 – 30°C
Initial Primary Heater Setpoint Temperature	120°F	49°C
Initial Hose Heat Setpoint Temperature	120°F	49°C
Initial Processing Setpoint Pressure	1300 psi	8963 kPa
Substrate & Ambient Temperature	> 50°F	> 10°C
Moisture Content of Substrate	≤ 19%	≤ 19%
Moisture Content of Concrete	Concrete must be cured, dry and free of dust and form release agents.	

\*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion and general foam quality. It is the sole responsibility of the applicator to process and apply Agribalance within specification.

**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.

Agribalance 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. Agribalance must be sprayed at a minimum thickness of 3" 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). Agribalance should not be used in contact with bulk water, below grade or 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.

