

BioSeal™ 2.0 Gray – Part # BSL20-G SET

**DESCRIPTION:** BioSeal 2.0 is a 245fa-blown, two component, spray applied, closed cell polyurethane foam having a nominal density of 2.0 p.c.f. (32 kg/m<sup>3</sup>). BioSeal 2.0 is ideal for use in agricultural and industrial applications.

When installed by an approved contractor, BioSeal expands to fill voids, crevices, and cavities, thereby reducing air and moisture flow. This high density polyurethane foam resists the harsh environments typically seen in industrial/agricultural applications.

**TYPICAL USES:**

- Sealants for use in agricultural or industrial buildings
- Exterior and below-grade applications
- Tanks/silos
- Industrial duct work
- Soil stabilization

**FEATURES & BENEFITS:**

- Low VOC
- Adheres to and seals practically any sound surface
- Immediate bond
- Acts as a vapor retarder and air barrier
- Reduces condensation potential

<b>CHEMICAL PROPERTIES:</b>	<b>Standard Test</b>	<b>Isocyanate (A)</b>	<b>Resin (B)</b>
Specific Gravity (grams/cc)	ASTM D-792	1.2	1.18
Viscosity, CPS at 77°F (25°C)		100 ± 50	400 – 600
Volatile Organic Compounds		0 lbs/gal	0 lbs/gal
Mix Ratio, Parts per Volume		1	1
Cream Time, Seconds at 77°F (25°C)		2 – 4	
Gel Time, Seconds at 77°F (25°C)		12 – 15	
Tack-free, Seconds		45 – 60	
Shelf Life - Unopened Containers		6 months	3 months
Base Color		amber to light brown	amber

<b>TYPICAL PHYSICAL PROPERTIES:</b>	<b>Test</b>	<b>Result</b>
Density	ASTM D-1622	2.0 ± 0.2 (32 kg/m <sup>3</sup> )
Tensile Strength [psi]	ASTM D-1623	22
Compressive Strength [psi]	ASTM D-1621	20
Closed-Cell Content [%]	ASTM D-2856	>90
Water Vapor Permeability* [perm] 1.5" (38 mm)	ASTM E-96	<1
Air Permeability** [L/s/m <sup>2</sup> @ 75 Pa]	ASTM E-283	< 0.002
Dimensional Stability [%]	ASTM D-2126	<15
Finished Foam Bio-Content	ASTM D-6866	3%
Finished Foam Pre-Consumer Recycled Content	ASTM D-5663	3%
R-Value: Aged 90 days @ 140° F (60° C) ft <sup>2</sup> x °F x h/Btu (m <sup>2</sup> x K/W)		
1" (25 mm)	ASTM C-518	R-6.3 (RSI – 1.11)
2" (51 mm)	†	R-13 (RSI – 2.23)

**PROCESS TEMPERATURE AND ENVIRONMENT CONDITIONS:** The system settings required to achieve quality spray sealant application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum sealant quality.

Iso (A) & Resin (B) Components	Hose	Static Pressure
120 – 140° F (49 – 60° C)	120 – 140° F (49 – 60° C)	1000 – 1400 psi (82.7 to 110 bar)

Substrate Surface	Substrate Moisture	Maximum Service Temperature
50 – 120° F (10 – 49° C)	Substrate must be dry, < 12% WMC	< 180° F (< 82.2° C)

**PREPARATION:** Do not agitate or re-circulate 'B' side drums. Do not heat above 85° F (29° C).

**Depth per pass of BioSeal 2.0** should be between ½" (12.7 mm) and 1½" (38 mm).

Thin passes (¼" [6.35 mm] or less) should be avoided and may result in reduced yield. Allow a 4 to 6 second time interval between passes to allow foam to cure and reduce the likelihood of blowing the reacting material away from the substrate. *It is important that applicators review and understand the training manual prior to use or application of BioSeal 2.0.*

**APPLICATION INSTRUCTIONS:** BioSeal 2.0 must be installed by approved contractors who have successfully completed an approved training program or Rhino Linings approved field certification program which covers proper application techniques, environmental health and safety.

**Enovate® 245fa blown foams followed by water blown foam:** When using water blown foams after an Enovate 245fa blown spray polyurethane foam it is necessary to flush the B-side lines with a non-water based solvent in order to achieve maximum foam quality and yield.

**Water blown foams followed by 245fa blown foams:** Flushing the system with Rhino™ Pro Flush solvent may not be necessary when switching from one water blown foam system to the next, but it is imperative that any remaining product from the previous application is completely removed or flushed from applicator guns, B-side lines and pumping system by a through-put of BioSeal 2.0 product until test sprays indicate that no mixed foam is present in the system.

When flushing or purging lines, never spray polyurethane foam into large, thick piles as the heat generated during the curing process can cause spontaneous combustion. Before adding additional foam, ensure that the core temperature is less than 150° F (66° C).

**NOT RECOMMENDED FOR:** This product is not intended for use in residential or commercial structures.

**SUBSTRATES:** Bonds to virtually all clean and dry substrate of any dimension

**HOW SUPPLIED:** Net weight per set is 960 pounds (435 kg). A set of BioSeal 2.0 consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component.

**COLOR OPTIONS:** Standard color is gray.

**STORAGE:** BioSeal 2.0 should be stored between 65 – 85° F (18 – 29° C) out of direct sunlight.

**SAFETY PRECAUTIONS: Health Considerations - Consult the Rhino Linings® Safety Data Sheets (SDS)**

This chemical system requires the use of proper safety equipment and procedures. Please follow the Rhino Linings® product SDS and Safety Manual for detailed information and handling guidelines.

**For Your Protection:** The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Rhino Linings Corporation. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products made by Rhino Linings Corporation will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.

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\* ASHRAE defines a Class II vapor retarder as a material having between .1 and 1 perms.

\*\* The International Residential Code defines air impermeable as having less than 0.02 L/m-s at 75 Pa.

† Calculated Per ICC AC-377 and FTC Guidelines base on the K-Value at 3.5" (89.9 mm)

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