

Gaco Wall Foam

SPRAY POLYURETHANE FOAM INSULATION
by Gaco Western®

ENERGY-EFFICIENT.

STRONG.

HEALTHY.

RESPONSIBLE.

QUIET.

SMART
FROM THE START.

Gaco ONE Pass
CLOSED CELL FOAM

CONTRACTOR / APPLICATOR BENEFITS

5 1/2" PASSES. Installs quickly in up to 5 1/2" passes; saves time and reduces labor costs.

EXCEPTIONAL SPRAYABILITY. Superior formulation provides consistent, forgiving, user friendly foam with predictable yields and less gun clogging.

LESS VISCOUS. Reduces wear and tear on equipment.

LOWER ODOR. Improves work environment.

EXCELLENT ADHESION. Ideal for use on all types of substrates.

OWNER / SPECIFIER BENEFITS

ENERGY EFFICIENT. Higher R-values than conventional insulation and a seamless air barrier reduce uncontrolled air leakage resulting in lower energy costs. ABAA evaluated and approved for use in air barrier systems.

DESIGN FLEXIBILITY AND STRENGTH. Adheres to the substrate, allowing for easy monolithic installation for greater structural strength and stability, and enhances resistance to water damage; expands to fill even irregularly shaped and hard to reach areas.

SUSTAINABLE AND HEALTHY. Reduces condensation, moisture and mold, provides a sound barrier to help block airborne noise, contains no ozone-depleting chemicals and may contribute up to 20 LEED credits.

LOWER CONSTRUCTION COSTS/VALUE ENGINEERING. Achieve insulation, air barrier, vapor retarder and thermal break all in one for reduced material costs; energy efficiency results in smaller HVAC system requirements.

LONG TERM VALUE. Customers today are concerned about their building's integrity; spray foam helps a building withstand the tests of the elements and time.



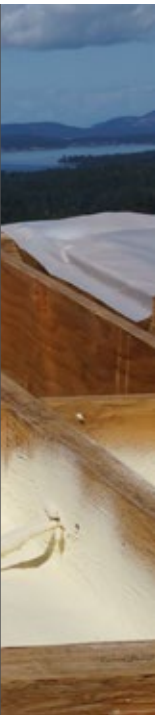
Tested. Proven. Performance.

GacoOnePass Closed Cell Foam performs well under the toughest of tests.



In this day of increased regulation in consideration of optimum health for humans and our environment, rigid testing is the only way to verify the expected future performance and long-term environmental effects of any given product.

Not only does GacoOnePass offer the exceptional ease of application that spray foam applicators demand, it can be installed in 5 1/2" passes, saving time and reducing labor costs. GacoOnePass is proven to perform in demanding environments without creating a negative impact on the air around it. Architects and specifiers will appreciate its design flexibility and sustainable contribution to healthy building interiors, along with the energy efficiency and occupant comfort that owners desire.



Flotation Performance

GacoOnePass meets the US Coast Guard requirement for flotation materials for both bilge and engine room applications. In order to fulfill these specifications, GacoOnePass was tested and proven to maintain its buoyant force following immersion in oil, a solution of trisodium phosphate in water, and a fully saturated gasoline vapor atmosphere at controlled temperatures.

Indoor Air Quality

An air barrier system stops the uncontrolled flow of air into and out of the building envelope, thereby reducing moisture problems, building heating and cooling costs, and greenhouse gas production; it improves indoor air quality, acoustical isolation and the indoor environment; overall, an air barrier system results in sustainable, durable buildings.

As an ABAA Evaluated Material as part of an ABAA Evaluated Assembly, GacoOnePass Closed Cell Foam is approved for use in air barrier systems.

GacoOnePass is GREENGUARD Gold Certified, signifying that it has been tested and certified to be in compliance with stringent chemical emissions guidelines set by UL Environment, and that it meets some of the world's most rigorous, third-party chemical emissions standards.



Recommended Uses Include:

- Walls
- Ceilings
- Floors
- Attics
- Crawlspace
- Foundations
- Concrete Slabs
- Residential Ducts
- Plenums
- Cold Storage
- Freezers
- Piping
- Storage Tanks
- Flotation
- Industrial Applications

TESTED and APPROVED

GacoOnePass is tested and approved for use in Construction Types I, II, III, IV and V (all construction types applicable to residential, commercial and industrial construction).

CLASS A (CLASS 1)
FIRE RATING

AC377 APPENDIX X
APPROVED

MEETS PERFORMANCE
REQUIREMENTS OF NFPA 286

CLASS II VAPOR
RETARDER

ICC-ES AC71 WATER
RESISTIVE BARRIER

FEMA CLASS 5

GacoOnePass F1850 Closed Cell Foam Product Data Sheet | June 2017

GacoOnePass is a two component HFC-blown (zero ozone-depleting) liquid spray system that cures to a medium-density rigid cellular polyurethane insulation material. GacoOnePass contains polyols derived from naturally renewable oils, post-consumer recycled plastics, and pre-consumer recycled materials.

GacoOnePass is a Class A (Class 1) fire rated foam that meets or exceeds the requirements of ICC-ES AC377 *Acceptance Criteria for Foam Plastic Insulation*.

See Intertek *Code Compliance Research Report CCRR-1043* for code compliant application information. GacoOnePass is a Type II foam in accordance with ASTM C1029.

GacoOnePass is designed to be installed in up to five and one half inch (5 1/2") passes when insulation instructions are followed.

This closed cell foam is designed to provide: excellent thermal performance; air impermeable insulation; and, an integral part of an air barrier assembly.

PHYSICAL PROPERTIES

The following physical property tests were conducted by independent certified laboratories with traceable samples in accordance ICC-ES AC377 and ASTM C1029 for Type II foam and ABAA D-115-010 for Air Barrier Materials and Assemblies.

PROPERTY*	ASTM TEST	VALUE
Core Density	D1622	2.1 lbs/ft ³ ± 10%
Aged R-Value **	C518	R 6.5 at 1" ***
	C518	R 25 at 3.5" ***
Compressive Strength (Parallel to Rise):	D1621	28.5 psi
Tensile Strength	D1623	39.7 psi
Water Vapor Permeance	E96 – Method A	0.44 perm-in
Dimensional Stability (% linear change)	D2126	At 158°F (70°C) and 97% RH
		At 176°F (80°C) and ambient RH
		At -20°F (-29°C) and ambient RH
Open Cell Content	D6226	4.4%
Air Permeance @ 75Pa (Infiltration/Exfiltration)	E2178	0.00 L/s-M ² at 1"
Air Barrier Assembly @ 75Pa (Infiltration/Exfiltration)	E2357	0.007 L/s-M ² at 1"
Crack Bridging @ -15°F (-26°C)	C1305	Pass (No-Cracking)
Water Absorption (96 hours, 2" head, 70-74°F (21-23°C))	D2842	2.76% by volume
Water Absorption	C1763	0.21% by volume
Water Resistive Barrier	ICC-ES AC71, AATCC Method 127	Pass
UV Weathering	AC71	Pass (No blistering or delamination)
Accelerated Aging	AC71	Pass (No blistering or delamination)
Hydrostatic Pressure – 55 cm (21.6") water column	AATCC Method 127	Pass (No water leakage)
Adhesion		
DensDeck	D4541	39 psi
Concrete	D4541	48 psi
OSB	D4541	43 psi
Fungi Resistance	C1338	Pass (No Growth)
Hot Surface Performance	C411	Pass (No flaming, charring or smoldering)
VOC Emissions	UL GREENGUARD	Pass (No harmful effects)
	UL GREENGUARD Gold	Pass (No harmful effects)

*These items are provided for general information.

**Federal Trade Commission regulations published in the Federal Register 16 CFR Part 460 require that R value testing of polyurethane foam insulation must be conducted on aged samples at a 75°F mean test temperature. Failure to comply can result in substantial fines by the FTC.

***To determine R values for thickness not listed: a. between 1 inch and 3.5 inch can be determined through linear interpolation; or, b. greater than 3.5 inches can be calculated based on R 7.2/inch.

VAPOR RETARDER

GacoOnePass meets the requirement of one perm or less for a Class II vapor retarder per the International Code Council and ASHRAE when installed at 0.44 inches in depth. However, minimum installed thickness recommended by Gaco Western is 0.75 inches. Water vapor permeability at various thicknesses is provided below:

THICKNESS	WVP	THICKNESS	WVP
0.44"	1.00 perms	3"	0.15 perms
1.0"	0.44 perms	4"	0.11 perms
2"	0.22 perms		

GacoOnePass F1850 Closed Cell Foam Product Data Sheet | June 2017 *cont.*

SURFACE BURNING CHARACTERISTICS

GacoOnePass meets Class A (Class 1) requirements when tested in accordance with ASTM E84 (UL 723) as defined in NFPA 101 and Section 803 of the International Building Code (2009, 2012, 2015).

SYSTEM	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
GacoOnePass ¹	5	350

¹ Sample tested at 4" (10.2 cm) thickness. May be installed at unlimited thicknesses when covered with 1/2" gypsum board.

LARGE SCALE FIRE TESTING

TEST	PERFORMANCE	LOCATION	FOAM THICKNESS / COATING
AC377	Ignition Barrier	Vertical surfaces	Up to 8.0" (20.3 cm) / No Coating Required
		Horizontal or sloped surfaces	Up to 10.0" (25.4 cm) / No Coating Required
NFPA 286	Thermal Barrier	Vertical surfaces	Up to 7.5" (19.1 cm) / DC315 - 18 mil wet
		Horizontal or sloped surfaces	Up to 9.5" (24.1 cm) / DC315 - 18 mil wet
NFPA 286	Thermal Barrier	Vertical surfaces	Up to 7.5" (19.1 cm) / TPR ² Fireshell F10E/TB - 18 mil wet
		Horizontal or sloped surfaces	Up to 11.25" (24.1 cm) / TPR ² Fireshell F10E/TB - 18 mil wet

GacoOnePass meets or exceeds the IBC requirements for exterior walls in type I, II, III, IV and V construction. This includes NFPA 285 and NFPA 259 testing with Intertek Listings (GWL/FIP 30-02, GWL/FIP 30-01).

AIR BARRIER PERFORMANCE

GacoOnePass is an air impermeable insulation and an air barrier material based on testing in accordance with ASTM E2178 at one-inch depth or more and has passed air barrier assembly testing in accordance with ASTM E2357 and the Air Barrier Association of America ABAA D-115-010.

FLOTATION PERFORMANCE

GacoOnePass meets the requirements of US Coast Guard requirement for flotation materials for both bilge and engine room applications in accordance with Code of US Regulations, Navigation and Navigable Waters Article §183.114 by testing from an independent laboratory.

LEED INFORMATION

GacoOnePass has a minimum of 9.7% recycled content based on weight, including 1.8% pre-consumer material and 7.9% post-consumer material. It contains 8.5% rapidly renewable content. GacoOnePass raw materials are blended in Waukesha, WI. Actual polyurethane foam end product production is done on-site by the applicator.

TYPICAL LIQUID CHEMICAL PROPERTIES

"A" Component contains polymeric isocyanate. "B" Component contains polyol, catalysts, fire retardants, surfactants and blowing agents.

PROPERTY	TEST TEMPERATURE	ASTM TEST	VALUE
Viscosity – "A" Component: Viscosity – "B" Component:	77°F (25°C)	D2196	200 cps ± 50 1080 cps ± 100
Specific Gravity – "A" Component: Specific Gravity – "B" Component:	77°F (25°C)	D1638	1.24 1.235
Weight/Gallon – "A" Component: Weight/Gallon – "B" Component:	77°F (25°C)		10.34 lbs/gal 10.3 lbs/gal
Mixing Ratio – "A" & "B" Component:			1:1 By volume
Stability When Stored at 50°F to 70°F (10°C to 21°C)			A Component: 12 Months B Component: 5 Months

APPLICATION

To ensure optimum performance, a minimum pass thickness of 3/4" (1.9 cm) is recommended with the maximum not to exceed 5 1/2" (13.97 cm) per pass. To obtain optimum results substrate temperature should be within the ranges as stated below. All substrates must be dry at the time of application. Do not apply to wood surfaces with a moisture content of above 18%.

MATERIAL	SUBSTRATE TEMPERATURE	EQUIPMENT SETTINGS		REACTIVITY TIME	
GacoOnePass F1850R	30°F to 120°F (-1°C to 49°C)	Pre-Heaters – Iso (A):	105°F to 135°F (41°C to 57°C)	Cream Time:	1 second
GacoOnePass F1850W	20°F to 80°F (-7°C to 27°C)	Pre-Heaters – Poly (B):	105°F to 135°F (41°C to 57°C)	Rise Time:	3 - 6 seconds
		Hose Heat:	105°F to 135°F (41°C to 57°C)	Tack Free Time:	4 - 8 seconds
		Recommended Spray Pressure:	1,000 to 1,200 psi (dynamic)	Cure Time:	24 hours

Gaco Western
SINCE 1955

Contact us today for solutions to your spray foam project needs.

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