



Product Data Sheet:

Gaco OnePass™ Low GWP F1880

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**GACO ONEPASS™ LOW GWP F1880
CLOSED CELL SPRAY FOAM INSULATION**

DESCRIPTION:

GacoOnePass Low GWP F1880 is a two component low GWP (Global Warming Potential) liquid spray system that cures to a medium-density rigid cellular polyurethane insulation material. It contains polyols derived from naturally renewable oils, post-consumer recycled plastics, and pre-consumer recycled materials.

GacoOnePass Low GWP F1880 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. It is a Type II foam in accordance with ASTM C1029. GacoOnePass Low GWP F1880 is designed to be installed in up to 5½" (14 cm) passes when applications 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. Unprotected trade workers can safely reenter sprayed work areas one hour following application of GacoOnePass Low GWP F1880 formulations – given adequate ventilation.

USAGE:

GacoOnePass Low GWP F1880 will provide excellent performance in a wide range of residential, commercial and industrial applications where in service temperatures are between -40°F and 200°F including:

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

TYPICAL 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.

PROPERTY	ASTEM TEST	VALUE	UNIT
Core Density	D1622	2.2± 10%	lb/ft ³
Aged R-Value**	C518	R 7.1 at 1" (2.54 cm)***	h·ft ² ·°F/Btu
		R 30 at 4" (10.16 cm)***	
Compressive Strength (Parallel to Rise):	D1621	30.7	psi
Tensile Strength	D1623	65	psi
Water Vapor Permeance	E96–Method A	1.7	perm-in
Dimensional Stability @ 158 °F (70 °C) and 97% RH	D2126	L:-2.6%, W:-3.0%, T:5.4%	% linear change
Closed Cell Content	D2856	>90	%
Air Permeance @ 75Pa (Infiltration/Exfiltration)	E2178	0.001 at 1" (2.54 cm)	L/s·m ²
Water Absorption (96 hrs, 2" head, 70-74 °F (21-23 °C))	D2842	0.29	% by volume
Water Absorption	C1763	1.63	% by volume
Fungi Resistance	C1338	Pass	no growth
Hot Surface Performance	C411	Pass	No flaming, charring, or smoldering
Potential Heat	NPFA 259	11.141	btu/lb
VOC Emissions	UL GREENGUARD	Pass	No harmful effects
	UL GREENGUARD GOLD		

*** 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 (24 °C) 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" (2.54 cm) and 3.5" (9 cm) can be determined through linear interpolation or,
- B. 3.5" (9 cm) and greater can be calculated based on R 7.38/inch

Gaco requires uniform ventilation of the immediate and adjacent work areas at minimum of 10 air exchanges per hour. Once spraying is completed and for 1 hour following, ventilation should continue at this minimum (10 ACH) rate. It is then recommended ensuring passive ventilation (overnight) by opening a window on each level of the structure in the vicinity of the spray installations.

SURFACE BURNING CHARACTERISTICS:

The following physical property tests were conducted by independent certified laboratories with traceablGacoOnePass Low GWP F1880 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). GacoOnePass Low GWP F1880 was also tested in accordance with ASTM E2768 for an extended time of 30 minutes and met the requirements of NFPA 13 Section 8.15.1.2.10.e samples in accordance ICC-ES AC377 and ASTM C1029 for Type II foam.

SYSTEM	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
Gaco F1880 ¹	≤ 25	≤ 450

¹ Sample tested at 4" (10.2 cm) thickness. May be installed at unlimited thicknesses when covered with ½" (1.27 cm) gypsum board.

LARGE SCALE FIRE TESTING:

TEST	PERFORMANCE	LOCATION	FOAM THICKNESS / COATING
AC377	Ignition Barrier	Vertical surfaces	Up to 8" (20.3 cm) / No Coating Required
		Horizontal or sloped surfaces	Up to 12" (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

GacoOnePass Low GWP F1880 meets or exceeds the IBC requirements for exterior wall in Type I, II, III, IV, and V construction through testing for vertical and lateral fire propagation to NFPA 285 and NPFA 259 and evaluation and Intertek listings (GWL/FIP 30-02, GWL/FIP 30-01).

VAPOR RETARDER:

GacoOnePass Low GWP F1880 meets the requirement of 1 perms or less for a Class II vapor retarder per the International Code Council and ASHRAE when installed at 1.7" (4.3 cm) in depth. Water vapor permeability as described below:

Thickness	WVP	Thickness	WVP
1.7" (4.3 cm)	1.00 perms	3" (7.6 cm)	0.57 perms
1" (2.54 cm)	1.70 perms	4" (10.2 cm)	0.43 perms
2" (5.2 cm)	0.85 perms		

CHEMICAL PROPERTIES:

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

PROPERTY	TEST TEMPERATURE	ASTM TEST	VALUE	UNIT
Viscosity – "A" Component	77 °F (25 °C)	D2196	200 ± 50	cps
Viscosity – "B" Component			1000 ± 200	cps
Specific Gravity – "A" Component	77 °F (25 °C)	D1638	1.24	S.G.
Specific Gravity – "B" Component			1.23	S.G.
Weight/Gallon – "A" Component	77 °F (25 °C)		10.3	lb/gal
Weight/Gallon – "B" Component			10.3	lb/gal
Mixing Ratio – "A" & "B" Component			1:1	by volume
Stability When Stored at 50 °F to 77 °F (10°C to 25°C)			A Component – 6 B Component – 5	months months

AIR BARRIER PERFORMANCE:

GacoOnePass Low GWP F1880 is an air impermeable insulation and an air barrier material based on testing in accordance with ASTM E2178 at 1" (2.54 cm) depth or more.

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" (14 cm) per pass for F1880 and 3 1/2" (9 cm) per pass for F1880W. 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%. Follow applicable spray guides and GW 6-2 Gaco General Application Guide.

MATERIAL	SUBSTRATE TEMPERATURE
Gaco F1880	50 °F to 120 °F (10 °C to 49 °C)
Gaco F1880W	20 °F to 75 °F (-7 °C to 24 °C)

EQUIPMENT SETTINGS		REACTIVITY TIME	
Pre-Heaters - Iso (A)	105 °F to 135 °F (41 °C to 57 °C)	Cream Time	1 second
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

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For specific Safety and Health information, please refer to Safety Data Sheet.