



**Product Data Sheet (PDS):**

**Gaco™ 052N**  
Revised: 11/2022

**GACO™ 052N  
OPEN-CELL SPRAY FOAM INSULATION**

**A. PRODUCT DESCRIPTION:**

NOTE: Also listed as GacoGreen 052 and 052N.

Gaco 052N is a two-component water-blown (zero ozone-depleting) liquid spray system that cures to a low-density cellular polyurethane insulation material. This open cell foam is designed to provide: good thermal performance; air impermeable insulation; and an integral part of an air barrier assembly.

Gaco 052N is a Class A (Class 1) fire rated foam that meets the requirements of ICC-ES AC377 *Acceptance Criteria for Foam Plastic Insulation*. See ICC-ES ESR-2478 for code compliant application information.

**B. RECOMMENDED USE:**

Gaco 052N will provide good performance in a wide range of residential, commercial and industrial applications where in service temperatures are between -40 °F and 200 °F (-40 °C and 93 °C). Acceptable uses for this product include: walls, ceilings, floors, attics and crawlspaces.

**C. PHYSICAL PROPERTIES\*:**

The following physical property tests were conducted by independent certified laboratories with traceable samples in accordance ICC-ES AC377.

PROPERTY	ASTM TEST	VALUE	UNIT
CORE DENSITY	D1622	0.50 ± 10%	lb/ft3
AGED R-VALUE **	C518	R 4.2 at 1 in (25.4 mm)***	h·ft <sup>2</sup> ·°F/Btu
	C518	R 16 at 4 in (101.6 mm)***	h·ft <sup>2</sup> ·°F/Btu
TENSILE STRENGTH	D1623	4.4	psi
WATER VAPOR PERMEANCE	E96 – Method A	13	perm-in
DIMENSIONAL STABILITY (7 DAYS)	D2126	2.7	% volume change
OPEN CELL CONTENT	D2856	99.4	%
AIR PERMEANCE @ 75PA	E283	0.009 at 3.5"	L/s·M2
FUNGI RESISTANCE	G21	Pass	no growth

\* 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 in (25.4 mm) and 4 in (101.6 mm) can be determined through linear interpolation; or,
- b. greater than 4 in (101.6 mm) can be calculated based on R 3.91/in

**D. SURFACE BURNING CHARACTERISTICS:**

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).

SYSTEM	THICKNESS	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
GACO 052N	6 in (152.4 mm)	25	250

**E. LARGE SCALE FIRE TESTING:**

Gaco 052N meets the IBC Chapter 26 requirements for use in Type I, II, III, IV construction types through evaluation to NFPA 285 (Project 10318C). This evaluation is limited to installation in the cells of concrete masonry units and within light-gauge metal framing sheathed with 5/8" (15.9 mm) Type X gypsum.

TEST	PERFORMANCE	LOCATION	FOAM THICKNESS / COATING
AC377, APPENDIX X	Ignition Barrier	Attic floors, walls and roof Crawlspace walls and ceiling	Up to 11.25" (28.6 cm) / DC315 - 4 mils wet
AC377, APPENDIX X	Ignition Barrier	Attic and Crawlspace Vertical surfaces Horizontal or sloped surfaces	Up to 11.5" (29.2 cm) / TPR <sup>2</sup> FireShell - 14 mils wet
NFPA 286	Thermal Barrier	Any	Up to 11.25" (28.6 cm) / DC315 - 20 mil wet
NFPA 286	Thermal Barrier	Vertical surfaces Horizontal or sloped surfaces	Up to 5.25" (13.3 cm) / TPR <sup>2</sup> FireShell - 14 mils wet Up to 9.25" (23.5 cm) / TPR <sup>2</sup> FireShell - 14 mils wet

**F. LEED INFORMATION:**

Gaco 052N has a minimum of 0.5% bio content based on weight. Gaco 052N raw materials are blended in Waukesha, WI. Actual polyurethane foam end product production is done on-site by the applicator.

**G. 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	UNIT
VISCOSITY – "A" COMPONENT: VISCOSITY – "B" COMPONENT:	77 °F (25 °C)	D2196	200 ± 50 300 ± 50	cps cps
WEIGHT/GALLON – "A" COMPONENT: WEIGHT/GALLON – "B" COMPONENT:	77 °F (25 °C)	---	10.34 9.5	lb/gal lb/gal
MIXING RATIO – "A" & "B" COMPONENT	---	---	1:1	by volume
STABILITY WHEN STORED AT 50 °F TO 100 °F (10 °C TO 38 °C)	---	---	A Component – 6 B Component – 9	months months

**H. APPLICATION:**

To ensure optimum performance, a minimum pass thickness of 1 in (2.54 cm) is recommended with no limit to maximum pass thickness. 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 %.

<b>MATERIAL</b>	<b>SUBSTRATE TEMPERATURE</b>
<b>GACO 052N</b>	40 °F to 120 °F (4 °C to 49 °C)

<b>EQUIPMENT SETTINGS</b>		<b>REACTIVITY TIME</b>	
<b>PRE-HEATERS - ISO (A):</b>	110 °F to 150 °F (43 °C to 66 °C)	CREAM TIME:	1 second
<b>PRE-HEATERS - POLY (B):</b>	110 °F to 150 °F (43 °C to 66 °C)	RISE TIME:	3 - 4 seconds
<b>HOSE HEAT:</b>	110 °F to 150 °F (43 °C to 66 °C)	TACK FREE TIME:	5 seconds
<b>RECOMMENDED SPRAY PRESSURE:</b>	1,200 to 1,400 psi (dynamic)	CURE TIME:	4 hours

\* For specific Safety and Health information please refer to the appropriate Safety Data Sheet that is associated with this product & published on Gaco.com.