

# New Technology for Concrete Masonry Unit Block Fill Applications

ENERGY-EFFICIENT.

STRONG.

HEALTHY.

RESPONSIBLE.

QUIET.

THE IDEAL  
**BLOCK FILL**  
SOLUTION

**GacoProFill**<sup>®</sup>  
POLYURETHANE FOAM INSULATION

## CONTRACTOR / APPLICATOR BENEFITS

**NO SPECIAL EQUIPMENT.** Use your existing polyurethane spray foam equipment to install.

**FAST AND EASY INSTALLATION.** Reduces project completion and clean up time.

**QUICK VERIFICATION.** Results can be viewed immediately with a thermal imaging camera.

**COST COMPETITIVE.** Stands up against old core foams.

## HOMEOWNER / BUILDING-OWNER BENEFITS

**ENERGY EFFICIENT.** High R-value and a seamless air barrier reduce air leakage and lower energy costs.

**LONG TERM VALUE.** Will not shrink, settle or sag; provides a seamless insulation barrier year after year.

**HEALTHY.** Reduces condensation, moisture and mold, improving occupant comfort, health and safety.

**QUIET.** Acts as a sound barrier to help block airborne noise and absorb sound.



**GacoProFill — Your Insulation Solution  
for Concrete Masonry Units**

## Polyurethane Foam Insulation for Concrete Masonry Unit Block Fill Projects

**GacoProFill is a better solution for filling hollow concrete block cores and is a reliable alternative to the old aminoplast foams which can shrink and deteriorate over time.**

### What is GacoProFill?

GacoProFill is a two-component open cell polyurethane foam designed specifically for injection into a variety of empty cavities and hollow cores in both residential and commercial applications. The two components leave the gun as a liquid and react inside the cavity or core to create foam that expands on contact and easily spreads into cores, edge openings and other hard to reach areas to insulate and seal gaps.

GacoProFill provides the same benefits as all Gaco spray foam insulation products – high R-value (3.93 per inch) and seamless air barrier – to help reduce energy costs by up to 40%, eliminate drafts for increased comfort and create a quieter interior environment by blocking and absorbing airborne noise.

### Why is GacoProFill the best solution?

How GacoProFill is different is the key. While other injection foam insulations can leave voids and deteriorate if not protected by an air barrier, GacoProFill is both insulation AND air barrier in one – and because it won't shrink, settle or sag, it will continue to provide seamless insulation, energy savings and comfort year after year.

It is also much easier to install than other injection foams. No special equipment is required; install GacoProFill using the same equipment you use for Gaco's other spray foam insulation products.

## Application Instructions

### STEP ONE

Using a 3/8" to 1/2" drive drill with a 3/8" or 7/16" masonry bit, begin drilling holes 4 courses off of the floor into the 3/8" mortar joint centering over the core of each half block. Holes should be drilled every 4 to 5 courses.

### STEP TWO

With pour cap and tube installed on gun, place tube into cavity working from the bottom of the wall up, taking care to fill each and every cavity.





## STEP THREE

As the cores are filled, a tapered wooden dowel pin should be inserted into the fill hole once the tubing is removed to keep the foam from spilling out of the fill hole as the applicator moves down the wall.



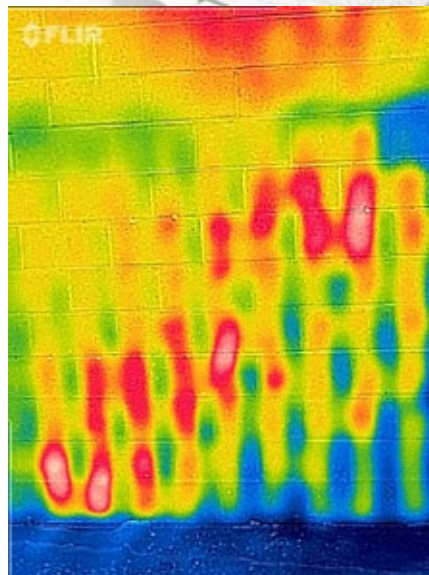
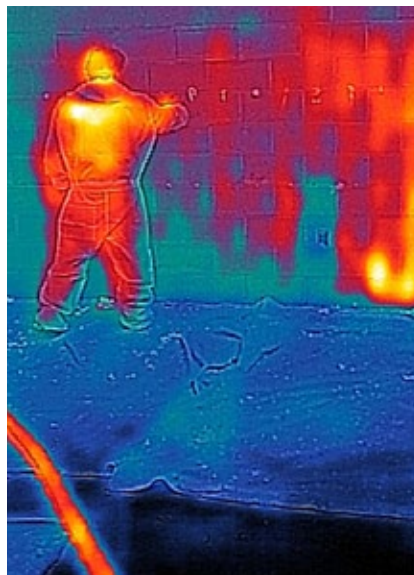
## STEP FOUR

Clean the fill holes with a drill/wire brush attachment to ensure a clean hole before patching. GacoProFill foam is very easy to clean and remove from concrete block.

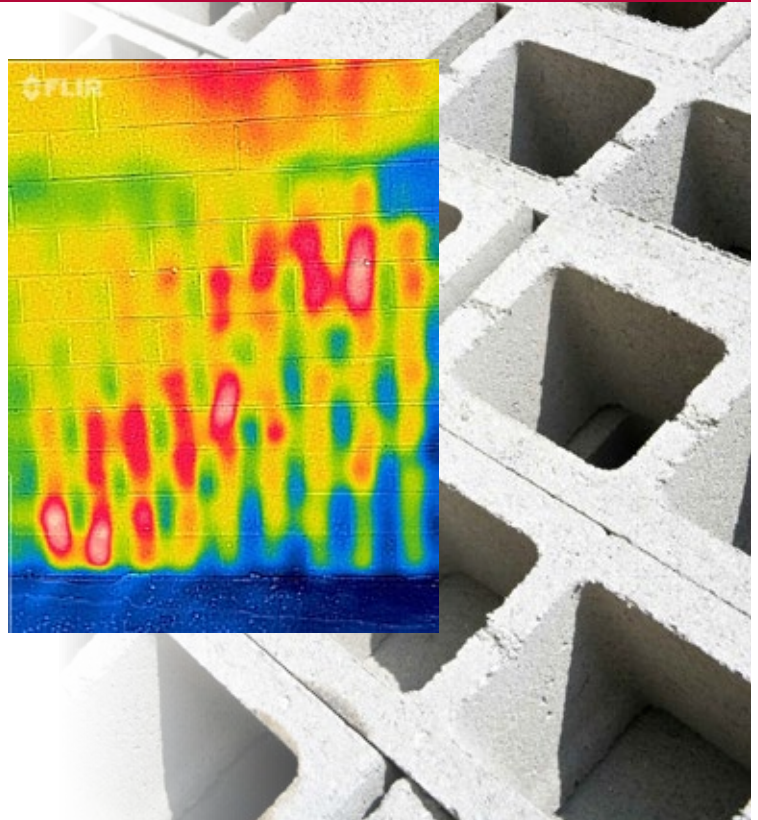
*For more information and detailed instructions, please refer to the GacoProFill Concrete Masonry Unit (CMU) Block Fill Installation and Estimating Guide, available at [gaco.com](http://gaco.com).*

## Results can be verified immediately.

A check with a thermal imaging camera helps ensure every core cavity is being filled. A record of the thermal images can also be recorded for the building owner as proof of performance for the project.



**GacoProFill provides solutions to help you improve market share and your bottom line.**



## GacoProFill Polyurethane Foam Insulation Data Sheet | September 2015

GacoProFill FR6500R is a two-component polyurethane foam that cures to a low-density cellular insulation material. It is recommended for use in a variety of empty cavities in retrofit applications in residential and commercial buildings and as part of the GacoProFill SYSTEM for use in new construction.

### PHYSICAL PROPERTIES

PROPERTY	ASTM TEST	VALUE	UNIT
Core Density	D1622	0.55 ± 10%	lbs/ft <sup>3</sup>
Aged R-Value*	C518	4.04 at 1" 13.8 at 3.5" (3.93/in at > 3.5")	h · ft <sup>2</sup> · °F/Btu
Tensile Strength	ASTM D1623	3.1	psi
Water Vapor Transmission	ASTM E96 - Method A	14	perm-in
Dimensional Stability (7 Days)	ASTM D2126	6%	Max linear change
Open Cell Content	ASTM D2856	92	%
Air Permeance @ 75 Pa	ASTM E283	0.012 at 3.5"	L/s · M <sup>2</sup>
Bio-Based Content	ASTM D6866	8.9	%
Fungi Resistance	ASTM C1338	Pass	No growth
VOC Emissions	UL GREENGUARD UL GREENGUARD Gold	Pass Pass	No harmful effects No harmful effects
Critical Radiant Heat Flux	NFPA 970	Pass	>0.12 W/cm <sup>2</sup>
Hot Surface Performance of High Temperature Thermal Insulation	ASTM C411	Pass	Did not flame, glow, smolder or smoke
Sound Transmission Class	ASTM E90	Wall 1 – STC 42    Wall 3 – STC 48 Wall 2 – STC 46    Wall 4 – STC 54	
Noise Reduction Coefficient	ASTM C423	NRC 0.65	

\*NOTE: 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.

### SURFACE BURNING CHARACTERISTICS

Class A (Class I) when tested per ASTM E84 (Also known as ANSI 2.5, NFPA 255, UBC 8-1 (42-1) and UL 723)

SYSTEM	THICKNESS	FLAME SPREAD INDEX	SMOKE DEVELOPED INDEX
GacoProFill FR6500R	4.5" (11.4 cm)	25	400

### TYPICAL LIQUID 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: Viscosity – "B" Component:	77°F (25°C)	D2196	200 ± 50 100 ± 20	cps
Lbs/gal and S.G. – "A" Component: Lbs/gal and S.G. – "B" Component:	77°F (25°C)	D1638	10.3 / 1.23 9.77 / 1.17	lbs/gal and S.G.
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: 6 months	Months

### EQUIPMENT SETTINGS\*

SETTING	VALUE
Pre-Heat: Iso (A)	105°F - 135°F (41°C - 57°C)
Pre-Heat: Poly (B)	105°F - 135°F (41°C - 57°C)
Hose Heat	105°F - 135°F (41°C - 57°C)
Recommended Spray Pressure	800 - 1,200 psi (dynamic)

\*At 70°F ambient temperature, recommended start settings are 115°F and 1,000 psi.

### PRODUCT CHARACTERISTICS

CHARACTERISTIC	VALUE
Cream Time	2 - 4 sec
Tack Free Time	8 - 12 sec
Cure Time	4 hours