

Masonry Insulation Info Sheet



R-Value per Inch: 5.0/inch \pm 10% @ 25°F
4.6/inch \pm 10% @ 75°F
Flame Spread: 0-25 per ASTM E-84 @ 4" (Nominal)
Smoke Developed: 0-450 per ASTM E-84 @ 4" (Nominal)
Fire Classification: Class A/Class 1 per NFPA 101 Life Safety Code



3-Web Blocks

Insulating the hollow cores of Concrete Masonry Units (CMU or Concrete Block) is a preferred application for cfiFOAM's injection foam products. Injection foam serves two primary purposes for use in CMU walls:

- Thermal Insulation—saves energy by increasing the R-value of the wall assembly
- Acoustical Insulation—reduces sound transmission by internally sealing the CMU

Two techniques are commonly used for installing injection foam in CMU.



Top-Fill
in Open-Top CMU Walls



Drill-n-Fill or Pressure-Fill
Where Foam is Injected via Small Holes
in the Mortar Joints or CMU Face

Unlike pour-in insulations such as perlite or vermiculite, injected foam insulation remains in place for the life of the structure because it will not flow out of the wall through holes or wall penetrations.

cfiFOAM's foam products are made from high-quality plastic resins and custom-manufactured foaming catalysts. The resins are available in two forms, premix liquids and dry powders. In either case, the resin is produced to high quality standards as a liquid and then spray-dried into powder form. This process assures the resin has:

- Ultra-low VOC content
- Consistent reactivity every time

The spray-drying process differentiates cfiFOAM's products from old-technology premix liquid resins where excess formaldehyde can be used to enhance shelf-life and where foam consistency can vary widely based on the limited shelf-life of the resin. Powdered resins are higher quality, which is why cfiFOAM supplies them.

cfiFOAM's foaming catalysts are uniquely formulated to be compatible with virtually all potable water sources. Unlike competitors who require installers to chemically adjust the catalyst based on changes in water chemistry, cfiFOAM's catalysts do not require continual tweaking. Plus, cfiFOAM guarantees that its catalysts contain no resorcinol, a reddish-brown chemical cross-linker that sometimes causes unwanted brown-staining of CMU surfaces.

With respect to Fire Resistance Ratings, masonry foam insulation contributes little or nothing to fire-resistance ratings, evidenced by:

- Testing conducted over the last 30 years for a wide range of foam and wall configurations
- Information contained in the International Building Code
- Heat of Combustion Data per NFPA 259

Many architects mistakenly specify foam insulation as a fire-ratings enhancer. Independent testing verifies that injection foam insulation cannot increase 2-hour CMU wall fire ratings to 4-hours. Competitor(s) who claim this often use incomplete test reports that may not fully disclose wall designs constructed with:

- High Performance CMU made with 100% expanded shale aggregate
- CMU that are no longer available—the CMU molds are obsolete
- Proprietary foam laced with fire retardant not found in “standard” masonry foam formulation
- Over 57% of the core cells grouted

Generic CMU STC Ratings:

	Cells Empty Wall Unpainted	Cells Foam-Filled Wall Unpainted	Cells Foam-Filled & Wall Painted One-Side ¹
8" CMU Walls	44-50 dB	50-56 dB	54-60 dB
12" CMU Walls	48-51 dB	54-57 dB	58-61 dB

ASTM E90 test results have shown that STC ratings improve by 4 dB when one (1) side of Concrete Masonry Walls receives two (2) coats acrylic-latex paint.¹

¹Sound Transmission Loss Through Concrete and Concrete Masonry Walls, Portland Cement Association, 1978.

Wythe Cavity Fill: Many double wythe masonry structures are successfully insulated by completely filling the wythe cavity with amino-plast foamed-in-place insulation. We suggest adding a mineral fiber weep hole protection strip to ensure drainage at the cavity's base.

cfiFOAM Foam Insulation Advantages

- Products available to install in states that restrict UF-resin foams
- Superior high speed installation technology
- Low to no formaldehyde – Below detectable limits in cured foam
- Exceptional thermal performance
- Costs less to install than rigid foam insulation board
- Installed by factory trained, experienced personnel
- Low shrinkage – < 0.5% in closed CMU cells; < 2.0% in open cavities
- Improves STC ratings in masonry walls
- Does not support mold growth



**cfiFOAM's Masonry Insulations
Meet or Exceed All Building
Code Requirements**

cfiFOAM products, including Core Foam Masonry Foam Insulation, are not associated with and are a different product from the Core Fill-500™ products manufactured by Tailored Chemical Products, Inc.



Core Foam Masonry Foam Insulation Factory Mix

- ◆ No Mixing Required
- ◆ Excellent Product Consistency
- ◆ Delivered to Your Location Pre-Mixed on a Ready-to-Use Basis
- ◆ Professionally Blended By The Technical Staff at cfiFOAM, Inc.
- ◆ Mixed with a Consistent Water Source
- ◆ Reduced Foam Variability as Compared to Products Mixed on Construction Sites
- ◆ Available in Bulk Truckloads, Totes or Drumsets
- ◆ Excellent Product Yield
 - ◆ 1500, 8" CMU per Drumset
 - ◆ 1000, 12" CMU per Drumset

cfiFOAM, Inc.

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