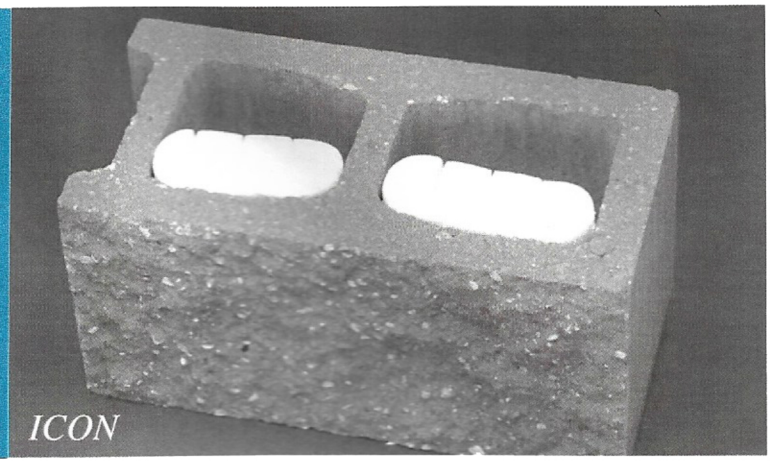
CBIS Korfil®

Protection is a concrete idea.

ICON®

CBIS/Korfil manufactures their line of Expandable Polystyrene Inserts in Central Massachusetts. Inserts are sold only to Concrete Block Manufacturers. Our products are tested and have been authorized for use in grouted reinforced Masonry construction. Our company is quality and customer focused to assure conformance to mandated Energy Codes.

You're invited to learn more at:
www.cbisinc.com



ICON® Universal Inserts for Concrete Masonry Units

Description

Basic Use: ICON Inserts are molded from expandable polystyrene. The design of the insert allows it to compress so it will fit the cores of all masonry units with just one size. Inserts are placed in the cores of the block at the block plant. By placing inserts in blocks, there is a significant improvement in the thermal efficiency of masonry walls.

Product Advantages: ICON Insulated Blocks:

- Eliminate the need for on-site labor to insulate masonry walls.
- Insulation R-value does not deteriorate with moisture or aging.
- Allow space within the cores for the escape of moisture. This space also allows for easy installation of utilities within the wall.
- Can be handled by masons just as easily as uninsulated blocks.
- Are cost-competitive when compared to the various other methods used to insulate concrete blocks.
- Have no effect on the fire rating of conventional concrete block walls.
- Improve both the dewpoint and sound transmission resistance of ordinary concrete blocks.

Limitations: Expanded polystyrene products of any type should not be exposed to temperatures in excess of 184°F.

ICON Inserts are manufactured from flame-retardant treated expandable polystyrene within normal manufacturing tolerances. Like all foamed plastics, good fire procedures must be followed during storage and installation. Inserts give off no toxins or combustion, except carbon monoxide and carbon dioxide, concentrations of which are far less than those given off by equal volumes of wood products and also contains no fluorocarbons or formaldehyde.

Composition and Materials: ICON Inserts are individually molded from expandable polystyrene in a minimum density of 1.05 lbs per cu. ft. Inserts are packaged at the point of manufacture in heat-sealed, clear polyethylene bags.

Applicable References:

- ASTM C-578 Specification for Rigid Cellular Polystyrene Thermal Insulation
- ASTM C 90 Standard Specification for Loadbearing Concrete Masonry Units.

Technical Data: The Thermal Properties tables show the thermal resistance (R_t), including inside and outside air surface resistances of .68 and .17 hr-ft²-°F/BTU, respectively, and the U-factors for various densities of concrete masonry units. See Thermal Properties charts.

Physical Characteristics: See Physical Properties chart below.

PHYSICAL PROPERTIES

Property	Value
Typical Density (lbs./cu.ft.) Minimum	1.05
Thermal Resistance (R) per inch	5.00
Water Vapor Permeance	1.10
Water Absorption % Volume	<1.00
Flame Spread Rating*	<5.00

*This numerical flame spread is not intended to reflect hazards presented by this or any other material under actual conditions

Installation

Preparatory Work: None required. Inserts are placed in blocks prior to delivery to the job site. Inserts do not affect the handling of blocks so no added labor is involved.

Precautions: During storage and installation, good fire safety procedures should be followed. Care should be taken to make certain all broken or damaged inserts are replaced.

Thermal Properties:*

Standard 2 Core Masonry Units Insulated with ICON Universal Inserts. U-factors are based on conventional 3/8" Mortar Joint Construction, U-factor units are Btu/ h•ft²•°F.

6 Inch — 2 Core Masonry Unit

DENSITY OF BLOCK—LBS/FT³	CORES EMPTY R_t	CORES EMPTY U	CORES INSULATED R_t	CORES INSULATED U
80	2.64	.38	6.45	.16
95	2.42	.41	5.39	.19
105	2.29	.44	4.76	.21
115	2.17	.46	4.21	.24
125	2.05	.49	3.69	.27
135	1.95	.51	3.25	.31

8 Inch — 2 Core Masonry Unit

DENSITY OF BLOCK—LBS/FT³	CORES EMPTY R_t	CORES EMPTY U	CORES INSULATED R_t	CORES INSULATED U
80	2.86	.35	7.74	.13
95	2.61	.38	6.55	.15
105	2.46	.41	5.83	.17
115	2.33	.43	5.17	.19
125	2.21	.45	4.56	.22
135	2.10	.48	4.01	.25

10 Inch — 2 Core Masonry Unit

DENSITY OF BLOCK—LBS/FT³	CORES EMPTY R_t	CORES EMPTY U	CORES INSULATED R_t	CORES INSULATED U
80	3.00	.33	8.52	.12
95	2.73	.37	7.25	.14
105	2.57	.39	6.48	.15
115	2.43	.41	5.76	.17
125	2.31	.43	5.09	.20
135	2.19	.46	4.48	.22

12 Inch — 2 Core Masonry Unit

DENSITY OF BLOCK—LBS/FT³	CORES EMPTY R_t	CORES EMPTY U	CORES INSULATED R_t	CORES INSULATED U
80	3.12	.32	9.38	.11
95	2.83	.35	8.09	.12
105	2.66	.38	7.27	.14
115	2.52	.40	6.51	.15
125	2.38	.42	5.78	.17
135	2.26	.44	5.11	.20

12 Inch Cavity Wall, 4 Inch Outer Wythe, ¾ Air Space, 8 Inch 2 Core Block

DENSITY OF BLOCK—LBS/FT³	CORES EMPTY R_t	CORES EMPTY U	CORES INSULATED R_t	CORES INSULATED U
80	4.26	.23	9.14	.11
95	4.01	.25	7.95	.13
105	3.86	.26	7.23	.14
115	3.73	.27	6.57	.15
125	3.61	.28	5.96	.17
135	3.50	.29	5.41	.18

* The R- and U-factors presented are based upon the ASHRAE Series-Parallel Isothermal Planes method as detailed in the ASHRAE Handbook of Fundamentals, 1993 Edition, Chapter 22, page 22.4. Physical block dimensions were obtained from ASTM C 90. Additional information was obtained from NCMA Technical Publication TEK 6-2A, 1996. A complete Engineering Report covering the values listed is available upon request. (U—factor units are Btu/ h•ft²•°F.). Based on zero slumped concrete and not slumped concrete.

Availability and Cost

Availability: ICON Universal Inserts are manufactured under protection of a United States Patent. They are sold only to concrete block manufacturers. Contact a CBIS/KORFIL representative for order and delivery information. **ICON** Inserts are nonproprietary.

Cost: Specific price information is available only through local block manufacturers.

Warranty: ICON Inserts are warranted to meet published specifications at the time of delivery. For further information, contact a CBIS/KORFIL representative.

Maintenance: No maintenance is necessary.

Technical Services: Support is provided by full-time, technically-trained CBIS/KORFIL sales representatives and technical service personnel, backed by a central research and development department and technical service staff.

For further information, contact **CBIS/KORFIL, Inc.**

ICON is a registered trademark of CONCRETE BLOCK INSULATING SYSTEMS, INC.

We hope the information given here will be helpful. It is based on data and knowledge considered to be true and accurate and is offered for the user's consideration, investigation and verification. Nothing contained herein constitutes a representation but we do not warrant the results to be obtained. Please read all statements, recommendations or suggestions in conjunction with our Conditions of Sale which apply to all goods supplied by us. No statement, recommendation or suggestion is intended for any use which would infringe any patent or copyright.

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