



A Subsidiary of Garland Industries

# CS Insulation

## DESCRIPTION

CS Insulation stands for Crawl Space Insulation. This commercial quality product is brought to you by GMX, Inc. barriers primarily for use in the construction of closed crawlspaces. CS Insulation is faster and easier to install than other insulation board products and provides superior performance inside the crawlspace. Use CS Insulation to insulate and cut down on mechanical noise inside the crawlspace, give a clean finished look, cut down on installation time, get more system flexibility due to the flame retardancy rating, and cut down on material costs.

## USES

CS Insulation's primary function is as insulation for the construction of closed crawlspaces (sealed crawlspaces, conditioned crawlspaces). CS Insulation is used where board stiffness properties are required and also functions as an exterior insulation when covered with a weather barrier. CS Insulation is used in exterior curtain walls, interior walls, floor/ceiling assemblies and as an exterior insulation on HVAC ducts and plenums or in constructions where framing is not present. It is also used as thermal insulation on tanks and vessels.

## MATERIALS

The product is composed of glass fibers bonded together with a thermoset binder with a reinforced skim face.

## INSTALLATION

**Exterior Walls** – Install a vapor barrier towards the interior side of the structure, except in warm and humid areas where local code regulations may require a vapor retarder to face toward the exterior.

**Curtain Walls** – CS Insulation is applied to spandrel and precast concrete panels with approved adhesives or mechanical fasteners. Boards may also be installed using hat channels or Z-studs. Where a vapor retarder is required, all joints, seams and penetrations shall be sealed. Exterior applications require the insulation to be covered with appropriate weather barrier finish. Choice of finish depends on mechanical abuse, weather exposure, and appearance requirements.

**HVAC/Mechanical** – All fabrication, application and installation steps should be in accordance with the requirements of the National Commercial and Industrial Installation Standards (current edition) published by the Midwest Insulation Contractors Association (MICA).

These installation recommendations are general in nature. Other methods are acceptable. Please consult your contractor or GMX, Inc. barriers for recommendations best suited to the applications.

## MAINTENANCE

An inspection and preventative maintenance program for the insulation and vapor retarder system is recommended to ensure optimum performance.

## APPLICABLE STANDARDS

### Model Building Codes:

- (BOCA, ICBO, SBCCI, CABO, ICC)
- New York City MEA 35-79-M
- California Quality Standards. Reg. No. CA-T024 (PA)
- City of Los Angeles, RR 8148

### Material Standards:

- (ASTM C 553) CB 150, Type I, II & III
- (ASTM C 612) CB 150 & CB 225, Type IA
- CB 300 & CB 600, Types IA & IB
- (CAN/CGSB-51.10-92) CB 150 & CB 225, Type II, Class II
- CB 300 & CB 600, Types I, Class II

## FIRE RESISTANCE

### Fire Hazard Classification:

- (ASTM E 84, UL 723, NFPA 255)
- (CAN/ULC-S102-M88) Max. Flame Spread Index; 25
- Max Smoke Developed Index; 50

### Limited Combustible:

- (NFPA 259) 3,500 Btu/lb

## PHYSICAL/CHEMICAL PROPERTIES

### Thermal Performance:

- (ASTM C 177 or ASTM C 518) See available size table

### Acoustical Performance:

- (ASTM C 423) See table on reverse

### Operating Limits:

- Temperature: (ASTM C 411) Max. 250°F (121°C) (Faced)
- Max. 450°F (232°C) (Unfaced)

### Water Vapor Permeance:

- (ASTM E 96, Dessicant Method) Max. 0.02 perms (1.15 x 10<sup>-9</sup> g/Pa-s-m<sup>2</sup>) (ASJ & FSK Facing)

### Water Vapor Sorption:

- (ASTM C 1104) 3% by weight

### Corrosiveness:

- (ASTM C 665) – Pass

### Fungi Resistance:

- (ASTM C 1338) – Pass

### Odor Emission:

- (ASTM C 1304) – Pass

## TECHNICAL DATA

Fiberglass Tech Data									
Fiberglass Properties		Thermal Resistance	Sound Absorption Coefficients @ Frequency (Hz)						
Thickness	Density	R-Value	125	250	500	1000	2000	4000	NRC
2.5 in	1.66	11	0.13	0.77	1.12	1.09	1.04	1.04	1

## SCRIM TECHNICAL DATA

Facing Composition	Description	Values
White Film	Polypropylene	0.0015 inch
Adhesive	Flame Resistant	
Reinforcing Film	Tri-directional fiberglass	4/inch (MD), 4/inch (XD)
Film	Metalized Polyester	0.0005 inch
Physical Properties	Test Method	Values
Basis Weight	Scale	14 lbs./1000 ft. <sup>2</sup>
Permeance (WVTR)	ASTM E 96 Procedure A	0.02 perm (grains/hr ft. <sup>2</sup> in Hg)
Bursting Strength	ASTM D 774	100 psi
Tensile Strength	ASTM C 1136	35 lbs/inch width (MD) 35 lbs/inch width (XD)
Caliper/Thickness	Micrometer	0.007 inch



## QUALITY ASSURANCE

CS Insulation is manufactured according to ISO 9000 standards

The information and recommendations discussed in this publication are believed to be correct. The ASTM testing is conducted by an independent accredited laboratory. No statement should be construed as a recommendation for any use, which would violate any patent rights. This document is not a guarantee of a warranty, if approved by GMX, Inc., a performance warranty may be granted.