OPTIMA® Fiberglass Loose-Fill Insulation for Sidewall Reinsulation

OPTIMA® Fiberglass Loose-Fill Insulation can be pneumatically installed into existing sidewalls and floored attics. OPTIMA can be used in residential and/or commercial construction as a thermal and acoustical insulation.

Features & Benefits

This product is noncombustible, noncorrosive and odor free. In addition, OPTIMA won't settle, contains no chemicals to cause mildew and fungus growth, contains no formaldehyde, provides no sustenance for vermin, contains no asbestos, won't rot or decay and won't retain moisture.

Composition & Materials

OPTIMA is unbonded, white, virgin fiberglass insulation designed for pneumatic application.

Limitations

The product is designed for use at ambient temperatures in interior (weather protected) locations. Pneumatic equipment must have an effective shredding section, a uniform control feed system and adequate material/air capabilities. Product should be kept dry during shipping, storage and installation. Not to be used for open blow applications.

Thermal/Acoustical Properties

Thermal Performance: Based on 31 lb. bag weight, the following thermal performance is achieved, at a design density of 2.3 PCF, at the weights and coverages specified in the table on the other side. To compensate for framing, the net coverage per bag should be increased by 14% when framing is 16" O.C. or 11% when framing is 24" O.C. for opaque insulatable wall areas.

Thermal Resistance: In accordance with ASTM C687, the stated R-Values in the table are achieved at weights and coverages specified when insulation is installed with pneumatic equipment in accordance with CertainTeed recommendations.

Sound Transmission Loss Ratings: The same STC ratings obtained with fiberglass blanket insulation can be estimated for OPTIMA. Refer to CertainTeed's Sound Control Brochure.

Quality Assurance

CertainTeed's commitment to quality and environmental management has ensured the registration of the Athens, Chowchilla and Kansas City plants to ISO 9001:2008 and ISO 14001:2004 standards.

APPLICABLE STANDARDS, CODE COMPLIANCE

Model Building Codes:

- ICC

California Quality Standards

ASTM C764, Type I

Material Standards:

- ASTM C764, Mineral Fiber Loose-Fill Thermal Insulation Type 1 – Pneumatic Application Properties
- GREENGUARD® Gold Certified

FIRE RESISTANCE

Fire Hazard Classification:

- ASTM E84
  Max. Flame Spread Index: 25
  Max. Smoke Developed Index: 50

Non-Combustible:

- ASTM E136 / Meets requirements

PHYSICAL/CHEMICAL PROPERTIES

PROPERTY (UNIT)	TEST	VALUE
Thermal Resistance:	ASTM C518 and C687	
Critical Radiant Flux:	ASTM E970	
Combustion Characteristics:	ASTM C136	
Water Vapor Sorption:	ASTM C1104	
Odor Emission:	ASTM 1304	Pass
Corrosiveness:	ASTM C764	Pass
Fungi Resistance:	ASTM C1338	Pass

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Installation

Installation procedures and techniques must be as recommended by CertainTeed LLC, using blowing machines approved for fiberglass insulation.

Preparatory Work:

- Check structural soundness of wall facings. Facings can be damaged by blowing pressure if they are weak or loosely attached.
- Check for symptoms of moisture problems such as blistering paint, mildew, staining, odor, etc., on interior or exterior wall surfaces. Any such problem should be brought to the owner's attention.
- Check for fire stops. If present, they will be at mid-height and holes must be drilled above and below these obstructions.
- Note and mark all areas that must not be drilled (location of wall ducts, vents, recessed cabinets, service panels, etc.).
- Make certain all wall openings through which insulation could enter the house are sealed.

Method(s): Two basic methods are recommended for insulating sidewalls with OPTIMA: the directional nozzle method and the insert tube method.

Method 1 – Directional Nozzle:

- Drill two 1-1/2″ or 1-3/4″ diameter holes into each stud cavity, one hole 3′ up from the base of the wall and one hole 2′ down from the top plates. Don't blow more than 3′ down or 2′ up from any hole.
- Drill holes into cavities below windows and into cavities above windows when there is no solid header.
- Use 200′ of internally corrugated hose stepped down in diameter to a 1-1/4″ to 1-1/2″ I.D. nozzle (50′ of 3″ to 100′ of 2-1/2″ to 50′ of 2″ hose). (The nozzle can be fabricated from a metal electrical conduit elbow.)
- Insert nozzle in lower hole first and blow downward, filling cavity up to the level of the hole. Insert nozzle in upper hole and blow downward and then upward until the cavity is completely filled.

In both methods, air pressure must be reduced substantially compared to the open blow technique to ensure that no damage is done to the sidewall. The blowing machine should be equipped with an air relief valve.

The actual setting of the equipment will vary depending on the type of hose, equipment limitations and job conditions. When properly filled, wall cavities should have a nominal density of 2.3 lbs. per cubic foot.

Method 2 – Insert Tube:

- Drill a single 2″ hole in each stud cavity at mid-height.
- Drill holes into cavities below windows and into cavities above windows when there is no solid header.
- Use 200′ of internally corrugated hose (50′ of 3″ to 100′ of 2-1/2″ to 50′ of 2″ hose). The 2″ hose is connected to a reducer and then to a 4′ length of 1-1/4″ to 1-1/2″ I.D. semi-rigid insert tube.
- Push the insert tube downward through the access hole until the length of tube remaining indicates that the end of the tube is a few inches from the bottom of the cavity.
- Begin blowing OPTIMA, gradually withdrawing the insert tube when an increase in back pressure is felt in the tube. Fill the cavity to the level of the hole.
- Push the insert tube upward through the access hole and continue blowing and withdrawing the tube as above.

  Alternate: Drill a single hole approximately 6″ below the top plates in each cavity and use an 8′ length of 1-1/4″ to 1-1/2″ I.D. insert tube.

OPTIMA DENSE PACK COVERAGE CHART						31 LB. BAG
CONSTRUCTION TYPE	CAVITY DEPTH	R-VALUE	DENSITY - INSTALLED (MINIMUM)	COVERAGE - NET (MAXIMUM)	WEIGHT PER UNIT AREA (MINIMUM)	PACKAGES PER 1,000 SQ. FT. (MINIMUM)
2x4	3.5	15	2.3	46.2	0.671	21.6
2x4	4	18	2.3	40.4	0.767	24.7
2x6	5.5	25	2.3	29.4	1.054	34.0
2x8	7.25	32	2.3	22.3	1.390	44.8
2x10	9.25	41	2.3	17.5	1.773	57.2

For dense packing walls to an air permeance of 3.5 cfm/ft² at 50 pascals pressure differential, use a minimum density of at least 2.3 pcf.
For more information please see our Dense Packing Sell Sheet.

TECHNICAL SERVICES

Technical assistance can be obtained either from your local CertainTeed sales representative, or by calling CertainTeed Sales Support Group at 800-233-8990.

MAINTENANCE

No maintenance required.

AVAILABILITY & COST

For availability and cost, contact your local contractor or distributor, or call Customer Experience team at 800-233-8990.

WARRANTY

Refer to CertainTeed's Limited Warranty. Full warranty information can be found at certainteed.com/warranty.

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