CertainTeed

Residential Insulation

Product Overview

CertainTeed

Quality made certain. Satisfaction guaranteed.™

Energy efficiency and acoustical performance are just the beginning.

CERTAINTEED HAS YOU COVERED.

We recognize that you have numerous options when it comes to insulation. So what makes CertainTeed any different from the rest? And why should you consider our products over anyone else's?

Simply put, we consider ourselves more than just a supplier and the feeling is mutual with our customers. Whether it involves Building Science, technical support, or delivery requirements, we partner with you to understand your business' unique needs—to deliver the best overall insulation partnership possible.

THE PROFESSIONAL'S CHOICE.

Our name says it all. Building professionals trust CertainTeed for quality made *certain*, satisfaction guaran*teed*. From our premium blowing wool and fiber glass batts to our MemBrain,™ smart vapor retarder technology, you can turn to us for products and solutions your customers can count on. Project after project. Year after year. It's no wonder that CertainTeed ranks as the #1 building products brand among professional builders.

GET SMART ABOUT BUILDING SCIENCE.

Building Science continues to gain attention and grow in importance in residential construction. A number of factors—from code requirements to increased media coverage—have brought this issue to the forefront. CertainTeed understands the role insulation plays in the overall integrity of a building system. We have a dedicated Building Science department that works regularly with building professionals to solve critical building envelope issues and provide solutions that have a positive and lasting effect on the industry. If your customers have questions about Building Science, we encourage you to tap into this unique resource.

SOLUTIONS THAT SUPPORT AND SELL—AND MAKE YOUR JOB EASIER.

Our goal is to make working with CertainTeed as hassle-free as possible. We work to fully understand your business to help you optimize your results and provide value to your customers. Our delivery schedules are designed to fit your needs. Our sales materials provide you with relevant and timely information to use with your customers. And our Customer Bill of Rights demonstrates our commitment across all aspects of your business. In fact, if we don't deliver as promised, you can receive a 3% credit on that order.

PUTTING THE "SERVICE" BACK IN CUSTOMER SERVICE.

At CertainTeed we take service seriously. That's why our phone system is seamlessly integrated with our customer database, so the complete history of your relationship with CertainTeed is instantly available to the Order Management Associate who handles your call. And there's a pretty good chance you'll talk with someone you've spoken with before—which means a better understanding of your business and better service for you.

THE RIGHT CHOICE.

With everything we have to offer, it's easy to see why CertainTeed is the right insulation partner for your business.

CertainTeed

Quality made certain. Satisfaction guaranteed.™

Contents


30
Attics • Ceilings
-38
CertainTeed
OPTIMA
R-13
CertainTeed
Glass Insulation
Floors • Walls
CertaSpray
A
CertaSpray
B
Open

Building Insulation

DESCRIPTION

A high-quality fiber glass batt or roll used in residential construction for thermal and acoustical insulation of walls, ceilings and floors.

Unfaced insulation is manufactured in increased widths to permit friction-fit installation in wall cavities. This insulation is used with a separate vapor retarder, such as CertainTeed's MemBrain™, The Smart Vapor Retarder, or where a vapor retarder is not required.

Kraft Faced insulation is manufactured with an integral vapor retarder. The kraft facing includes attachment flanges at the edges that are used for either face or inset stapling. The kraft facing, applied with asphalt to the fiber glass insulation, has a vapor transmission (permeance) rating of one perm or less.

UNFACED BATTS**

R-VALUE		THICKNESS		WIDTH	
R	RSI	in.	mm	in.	mm
11	1.9	3½	89	11¼, 15, 15¼, 19, 23, 23¼, 44, 48, 84	286, 381, 387, 483, 584, 591, 1118, 1219, 2134
13	2.3	3½	89	15¼, 16, 23¼, 24, 32	387, 406, 591, 610, 813
15	2.6	3½	89	15¼, 23¼	387, 591
19	3.3	6¼	159	11, 11¼, 15, 15¼, 16, 19, 23, 23¼, 24, 48	279, 286, 381, 387, 406, 483, 584, 591, 610, 1219
21	3.7	5½	140	15¼, 23¼, 24	387, 591, 610
25	4.4	8	203	15, 16, 19, 23, 24, 32, 46½	381, 406, 483, 584, 610, 813, 1181
30	5.3	10	254	16, 19, 24, 48	406, 483, 610, 1219
30C*	5.3	8¼	210	15¼, 23¼	387, 591
38	6.7	12	305	16, 24	406, 610
38C*	6.7	10¼	260	15¼, 23¼	387, 591

KRAFT FACED BATTS**

R-VALUE		THICKNESS		WIDTH	
R	RSI	in.	mm	in.	mm
11	1.9	3½	89	11, 15, 16, 23, 24	279, 381, 406, 584, 610
13	2.3	3½	89	11, 13½, 15, 16, 19, 23, 24	279, 343, 381, 406, 483, 584, 610
15	2.6	3½	89	15, 23	381, 584
19	3.3	6¼	159	11, 15, 16, 19, 23, 24	279, 381, 406, 483, 584, 610
21	3.7	5½	140	15, 23	381, 584
22	3.9	6½	165	15, 19, 23	381, 483, 584
25	4.4	8	203	15, 23	381, 584
26	4.6	8⅜	213	16, 24	406, 610
30	5.3	10	254	11, 12, 15, 16, 19, 19¼, 24	279, 305, 381, 406, 483, 489, 610
30C*	5.3	8¼	210	15, 23	381, 584
38	6.7	12	305	16, 24	406, 610
38C*	6.7	10¼	260	15, 23	381, 584

*Cathedral Ceiling Batts
**Not all sizes available in all locations. Please contact your CertainTeed representative.

PRODUCT BENEFITS

- Thermally efficient to help fight rising utility bills
- Lightweight and flexible for easy installation
- Good sound absorption; reduces noise level wherever applied
- Inorganic glass fiber is noncorrosive; it will not rot or mildew or otherwise deteriorate
- Does not absorb moisture
- Noncombustible per ASTM E 136 (unfaced only)
- GREENGUARD® Children and Schools Certified

COMPLIANCES

CertainTeed building insulation complies with ASTM C 665 and other specifications as listed on page 26.

NOTE: Standard kraft facings are flammable and should not be left exposed. Where a flame spread rating of 25 is required, insulation must be unfaced or have flame-resistant foil facing (FSK 25).

SpeedyR™ Tabless Batts

DESCRIPTION

This product is intended for use in residential or commercial construction as thermal insulation in walls. These batts are designed for use in standard width wood framed construction where a vapor retarder is needed. The batts have a kraft facing without flanges and can be friction-fit between wall studs for non-exposed applications.

SPEEDY R BATTS

R-VALUE		THICKNESS		WIDTH/LENGTH	
R	RSI	in.	mm	in.	mm
13	2.3	3½	89	15¼ x 93	387 x 2362
13	2.3	3½	89	15¼ x 105	387 x 2667
19	3.3	6¼	159	15¼ x 93	387 x 2362
19	3.3	6¼	159	15¼ x 105	387 x 2667
21	3.7	5½	140	15¼ x 93	387 x 2362
21	3.7	5½	140	15¼ x 105	387 x 2667

PRODUCT BENEFITS

Installing this product will save time and improve productivity by reducing field labor. Stapling is not required because the fiber glass fills the entire cavity. In addition to its thermal properties, this product also provides excellent acoustical performance.

INSTALLATION

SpeedyR tabless batts friction-fit between wood studs and do not require stapling.

For most areas, vapor retarders should be installed on the warm-in-the-winter side of the insulation (toward the interior). A vapor retarder is any material that limits or restricts the transmission of water vapor.

Common vapor retarders include kraft or foil facings adhered directly to fiber glass insulation and nylon or polyethylene films applied over insulation filled building cavities.

For some warm and humid areas, vapor retarders—if used—should be installed outside the heating or building envelope. It is not appropriate to install kraft faced fiber glass with the facing toward the exterior. Check local practice and/or building codes before installation.

MemBrain™—The Smart Vapor Retarder

DESCRIPTION

MemBrain is a polyamide film that changes its permeability with the ambient humidity condition. It is capable of changing its permeability, from low permeability in conditions of low relative humidity to higher permeability during conditions of high relative humidity. It is intended for use with unfaced fiber glass insulation in wall and ceiling cavities.

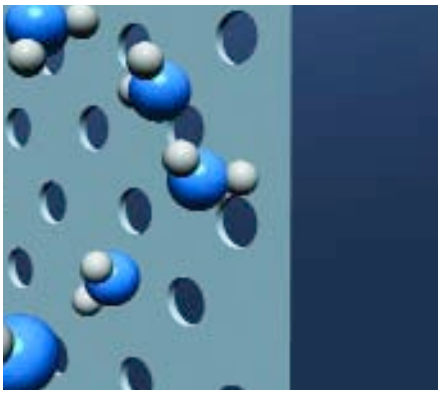
PRODUCT BENEFITS

MemBrain allows closed building envelope systems to increase their drying potential with seasonal climatic changes.

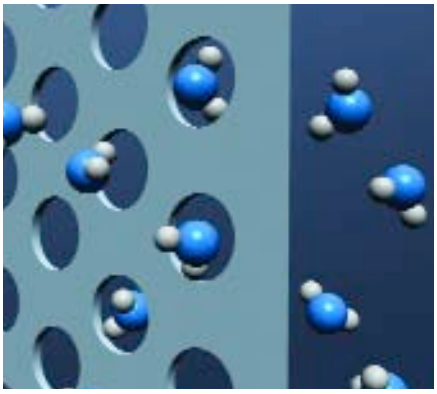
This product can be used in place of traditional vapor retarders with unfaced fiber glass insulation to provide an insulation system that is ideal in some of the more severe temperature and humidity climate condition areas.

INSTALLATION

MemBrain should be installed in all insulated walls and ceilings, including cathedral ceilings. For most areas, vapor retarders should be installed on the warm-in-the-winter side of the insulation (toward the interior). For some warm and humid areas, vapor retarders, if used, should be installed outside the heating or building envelope. MemBrain is not intended to be used as an exterior vapor retarder. Check local practice and/or building codes before installation.



MemBrain Protects: When the relative humidity in insulated cavities is low, molecular-scale pores close and work as a vapor retarder.



MemBrain Breathes: When the relative humidity in insulated cavities is high, molecular-scale pores open to increase the system's drying potential.

MEMBRAIN

NOMINAL PRODUCT SIZE		NOMINAL ROLL WIDTH		ACTUAL ROLL WIDTH		COVERAGE		BOX LENGTH		ROLL WEIGHT*		ROLLS PER PALLET	WEIGHT PER PALLET	
ft.	m	in.	mm	in.	mm	sq.ft.	m	in.	mm	lbs.	kg	**	lbs.	kg
8	2.44	96	2438	100	2540	800	74.3	28.3	718	11.1	5.0	45	545	247
9	2.74	108	2743	112	2845	900	83.6	31.5	800	12.5	5.6	45	608	276
10	3.05	120	3048	124	3150	1000	92.9	34.5	876	13.7	6.2	40	593	269
12	3.66	144	3658	148	3759	1200	111.5	41.0	1041	17.0	7.7	30	555	252

*With box and core
**48" (1219 mm) maximum pallet height

Protected by one or more of the following U.S. and foreign patents:
U.S. Pat. Nos. 6,808,772; 6,878,455; 6,890,666; and 7,008,800
Can. Pat. No. 2215502
Other U.S. and foreign patents pending.

DryRight™ Fiber Glass Insulation

DESCRIPTION

DryRight insulation is intended for use in residential construction as a thermal and acoustical insulation in wall and ceiling cavities. The products are faced with MemBrain,™ The Smart Vapor Retarder, which is adhered to the insulation.

PRODUCT BENEFITS

When installed properly, DryRight helps prevent mold and mildew growth by reducing the potential for moisture accumulation. Installing DryRight insulation is an easy, cost-effective method to help conserve energy. It also offers thermal properties and excellent acoustical performance. The product is also GREENGUARD® Children and Schools Certified which means it is regularly tested for low emissions of formaldehyde, VOCs, respirable particles and other pollutants using the strongest environmental protocols.

INSTALLATION

DryRight is designed to be installed on the warm-in-winter side of the insulation (toward the interior). Fiber glass insulation is noncombustible. However, the facing should not be left exposed. Special care should be taken when working close to the facing with an open flame. Special flame resistant facings are available for exposed applications.

Studs

DryRight insulation friction-fits between wood studs. No stapling required.

Ceiling Joists

DryRight insulation is placed between the joists with the vapor retarder facing down. Only unfaced insulation is installed over existing insulation.

Floor Joists

DryRight insulation is installed with the vapor retarder facing up and in contact with the floor. All insulation must be supported between joists with wire supports, by lacing wire across joists or other approved methods. Check with CertainTeed for more details before installation.

Cathedral Ceilings

Install DryRight insulation with vapor retarder facing down. A 1" vented air space is recommended between insulation and roof sheathing.

COMPLIANCES

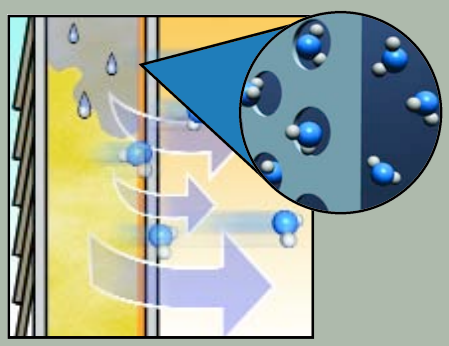
- Model Building Codes:
  - (BOCA, ICBO, SBCCI and ICC)
  - New York—NYSUFPBC Article 15
  - California and Minnesota Quality Standards
- Material Standards:
  - ASTM C 665 Section 7.4, Water-Vapor Permeance
  - ASTM E 96

Fire Resistance:

- Not intended for exposed applications
- DryRight batts have a Class A or I rating

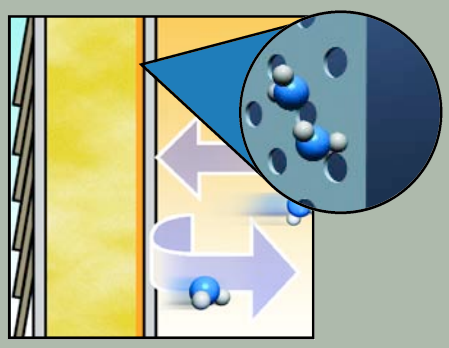
Physical/Chemical Properties:

- Thermal Performance:
  - (ASTM C 518 R-Values for insulation only, as stated in table on previous page
- Water Vapor Sorption:
  - (ASTM C 1104) < – 5%
- Water Vapor Permeance:
  - < – 1.0 perm (57ng/Pa•s•m^2) (ASTM E 96, Desiccant method) Dry Cup Mean Relative Humidity=75%
- Fungi Resistance:
  - No growth (ASTM C 1330)



LETS MOISTURE OUT.

During the cooling season when the relative humidity in insulated cavities is high, DryRight's unique facing changes its permeance to increase the closed building envelope system's drying potential. How? The facing's molecular-scale pores open under moist conditions, allowing water vapor to exit the wall cavity.

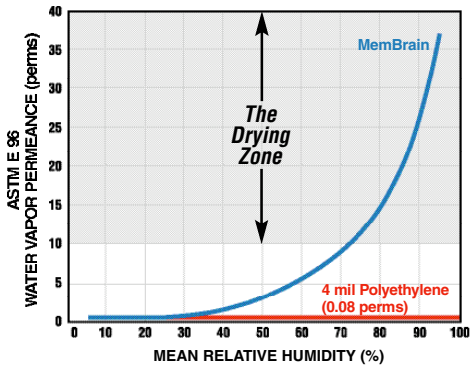


KEEPS MOISTURE OUT.

During the heating season, when the relative humidity in insulated cavities is low, DryRight's facing works as a vapor b a rrier. How? The facing's molecular-scale pores close under dry conditions, blocking vapor transmission and keeping moisture out of the wall cavity.

THE DRYING ADVANTAGE.

With MemBrain technology, DryRight's permeance is 1 perm or less and increases to greater than 10 perms when the humidity changes (ASTM E 96).



DRYRIGHT PRODUCTS

R-VALUE		THICKNESS		WIDTH/LENGTH	
R	RSI	in.	mm	in.	mm
13	2.3	3½	89	15¼ x 93	387.3 x 2362
13	2.3	3½	89	15¼ x 105	387.3 x 2667
13	2.3	3½	89	15¼ x 384	387.3 x 9754
13	2.3	3½	89	16 x 96	406.4 x 2438.4
13	2.3	3½	89	24 x 96	609.6 x 2438.4
15	2.6	3½	89	15¼ x 93	387.4 x 2362.2
19	3.3	6¼	159	15¼ x 93	387.3 x 2362
19	3.3	6¼	159	15¼ x 105	387.3 x 2667
19	3.3	6¼	159	16 x 96	406.4 x 2438.4
19	3.3	6¼	159	24 x 96	609.6 x 2438.4
21	3.7	5½	140	15¼ x 93	387.3 x 2362
21	3.7	5½	140	23¼ x 93	591.0 x 2362
30	5.3	10	254	24 x 48	609.6 x 1219.2
38	6.7	12	305	24 x 48	609.6 x 1219.2

*DryRight roll available in 32' length.

Protected by one or more of the following U.S. and foreign patents:
U.S. Pat. Nos. 6,808,772; 6,878,455; 6,890,666; and 7,008,800
Can. Pat. No. 2215502
Other U.S. and foreign patents pending.

InsulSafe® SP
Fiber Glass Blowing Insulation

DESCRIPTION

InsulSafe SP is a fiber glass blowing insulation used in residential and commercial construction as a thermal and sound absorbing insulation. It is designed for pneumatic installation in open (attic) and closed (sidewalls/floor) construction cavities. It may be used in retrofit applications.

PRODUCT BENEFITS

- Better coverage
- Thermally efficient
- Excellent sound control
- Won't settle
- Lasts for life of the home to reduce energy demand and costs
- Environmentally sustainable
- Noncombustible
- Noncorrosive
- Won't rot or decay
- Won't absorb moisture or support fungus growth
- GREENGUARD® Children and Schools Certified
- Limited lifetime warranty

INSTALLATION

When installed with pneumatic equipment, the following thermal performances will be achieved at the thicknesses, weights and coverage specified, based on a nominal 31 lb. bag (141 kg). For proper installation, see InsulSafe SP Installation Guide (30-24-302).

COMPLIANCES

InsulSafe SP complies with national, state and local building standards and qualifies as a Type I insulation under ASTM C 764. Surface burning characteristics per ASTM E 84 include a flame spread index less than 25 and a smoke developed index less than 50. InsulSafe SP is noncombustible per ASTM E 136.

- ASTM C 764, Type I Pneumatic Applications
  - Thermal resistance—SASTM C687 and C518
  - Critical Radiant Flux—ASTM E970
  - Combustion Characteristics—ASTM E136 (Non-combustibility)
  - Water Vapor Sorption—ASTM C1104
  - Odor Emission—ASTM C1304
  - Corrosiveness—ASTM C764.12.7
  - Fungi Resistance—ASTM C1338
- Surface Burning Characteristics—ASTM E84 (Flame Spread 5, Smoke Developed 5)
- California Quality Standards Reg. No. CA-T024 (PA)
- New York City—MEA 218-85M
- California 1350

THERMAL PERFORMANCE: HORIZONTAL OPEN BLOW INSTALLATION

R-VALUE		MINIMUM BAGS REQUIRED		MAXIMUM NET COVERAGE		MINIMUM WEIGHT		MINIMUM INSTALLED THICKNESS		MINIMUM SETTLED THICKNESS	
TO OBTAIN A THERMAL RESISTANCE OF:		PER 1000 SQUARE FT. (100 m²) OF NET AREA		CONTENTS OF BAG SHOULD NOT COVER MORE THAN:		INSTALLED INSULATION SHOULD NOT BE LESS THAN:		INSTALLED INSULATION SHOULD NOT BE LESS THAN:		SETTLED INSULATION SHOULD NOT BE LESS THAN:	
R	RSI	number of bags		ft²	m²	lbs/ft²	kg/m²	in.	mm	in.	mm
60	10.6	31.4	33.8	31.9	3.0	0.972	4.751	22	559	22	559
49	8.6	25.2	27.1	39.7	3.7	0.780	3.812	18.5	470	18.5	470
44	7.7	22.4	24.1	44.6	4.1	0.695	3.397	16.75	425	16.75	425
38	6.7	19.1	20.5	52.5	4.9	0.591	2.888	14.5	368	14.5	368
30	5.3	14.9	16.0	67.1	6.2	0.462	2.259	11.75	298	11.75	298
26	4.6	12.8	13.8	77.9	7.2	0.398	1.944	10.25	260	10.25	260
22	3.9	10.8	11.6	92.9	8.6	0.334	1.630	8.75	222	8.75	222
19	3.3	9.3	10.0	107.4	10.0	0.289	1.411	7.75	197	7.75	197
13	2.3	6.2	6.7	161.7	15.0	0.192	0.937	5.25	133	5.25	133
11	1.9	5.3	5.7	190.5	17.7	0.163	0.795	4.5	114	4.5	114

Initial installed thickness testing per ASTM C1374 using Unisul VoluMatic III; 4th gear; 15-inch gate opening; 150 ft. x 4-inch diameter internally corrugated blowing hose.

OPTIMA®
Closed Cavity Insulation System

CLOSED CAVITY

R-VALUE		BAG REQUIREMENTS		MAXIMUM COVERAGE		MINIMUM WEIGHT		THICKNESS		DENSITY	
		BAGS PER 1000ft. (100 m²) OF NET AREA		PER BAG						PER BAG	
R	RSI	number of bags		sq.ft.	m²	lbs./sq.ft.	kg/m²	in.	mm	lbs./cu ft.	kg/m³
56	9.9	71.4	76.9	14	1.3	1.988	9.706	13¼(2x14)	337	1.8	29
47	8.3	58.8	62.5	17	1.6	1.688	8.241	11¼(2x12)	286	1.8	29
39	6.9	50.0	52.6	20	1.9	1.388	6.777	9¼(2x10)	235	1.8	29
30	5.3	38.5	41.7	26	2.4	1.088	5.132	7¼(2x8)	184	1.8	29
23	4.1	29.4	31.3	34	3.2	0.825	4.028	5½(2x6)	140	1.8	29
15	2.6	18.9	20.4	53	4.9	0.525	2.563	3½(2x4)	89	1.8	29

FABRIC COVERED WALLS, CEILINGS AND FLOORS AND CLOSED CAVITY

R	RSI	number of bags		sq.ft.	m²	lbs./sq.ft.	kg/m²	in.	mm	lbs./cu ft.	kg/m³
38	6.7	43.5	47.6	23	2.1	1.233	6.020	9¼(2x10)	235	1.6	26
36	6.3	38.5	41.7	26	2.4	1.079	5.268	9¼(2x10)	235	1.4	22
35	6.2	33.3	35.7	30	2.8	0.925	4.516	9¼(2x10)	235	1.2	19
33	5.8	27.8	30.3	36	3.3	0.771	3.764	9¼(2x10)	235	1.0	16
30	5.3	34.5	37.0	29	2.7	0.967	4.721	7¼(2x8)	184	1.6	26
29	5.1	30.3	32.3	33	3.1	0.846	4.131	7¼(2x8)	184	1.4	22
27	4.9	25.7	27.8	39	3.6	0.725	3.540	7¼(2x8)	184	1.2	19
26	4.6	21.7	23.3	46	4.3	0.604	2.949	7¼(2x8)	184	1.0	16
22	3.9	26.3	28.6	38	3.5	0.733	3.579	5½(2x6)	140	1.6	26
22	3.9	22.7	24.4	44	4.1	0.642	3.135	5½(2x6)	140	1.4	22
21	3.7	19.6	21.3	51	4.7	0.550	2.685	5½(2x6)	140	1.2	19
19	3.3	16.4	17.5	61	5.7	0.458	2.236	5½(2x6)	140	1.0	16
14	2.5	16.7	17.9	60	5.6	0.467	2.280	3½(2x4)	89	1.6	26
14	2.5	14.5	15.6	69	6.4	0.408	1.992	3½(2x4)	89	1.4	22
13	2.3	12.5	13.5	80	7.4	0.350	1.709	3½(2x4)	89	1.2	19
12	2.1	10.4	11.2	96	8.9	0.292	1.426	3½(2x4)	89	1.0	16

ENCLOSED RETROFIT

R	RSI	number of bags		sq.ft.	m²	lbs./sq.ft.	kg/m²	in.	mm	lbs./cu ft.	kg/m³
30	5.3	34.5	37.1	29	2.7	0.967	4.717	7¼	184	1.6	26
22	3.9	26.2	28.2	38	3.5	0.733	3.579	5½	140	1.6	26
16	2.8	19.0	20.5	53	4.9	0.533	2.603	4	102	1.6	26
15	2.6	17.3	18.6	58	5.4	0.483	2.359	3½	92	1.6	26
14	2.5	16.7	17.9	60	5.6	0.467	2.277	3½	89	1.6	26

DESCRIPTION

OPTIMA gives homes a custom-designed, seamless, thermally efficient sound-reducing blanket that completely fills any void. OPTIMA fiber glass insulation is blown behind a special OPTIMA fabric, or equivalent, in new construction. It can also be used for retrofitting existing sidewalls. This product is designed for closed-cavity applications only.

SYSTEM BENEFITS

- Blown in dry
- No drying required—immediately ready for drywall
- Thermally efficient—fills voids for higher R-Values per inch
- Excellent sound control
- Little dust—quick clean-up
- Uniform application
- Won't settle

INSTALLATION

When installed, OPTIMA will achieve the thermal performances at the thicknesses, densities and coverages specified, based on a nominal 28 lb. bag (see charts). For proper installation of OPTIMA, see our OPTIMA Installation Guide (30-24-223).

All coverage values are based on net area. Gross coverage will increase when adjusting for wall, floor or ceiling framing members and will vary based on the size and spacing of the framing members.

CertaSpray™ Foam Insulation

DESCRIPTION

CertaSpray Foam is a fast-rising, spray-applied residential product that provides outstanding air sealing, thermal performance and sound control. Two types of CertaSpray foam—open cell and closed cell—are available to cover virtually every kind of application.

PRODUCT BENEFITS

- Superior air sealing and thermal performance
- Outstanding energy efficiency
- Minimizes hot and cold spots
- Filling every void, especially irregular cavities
- Fast coverage with fewer strokes, less fatigue and less waste
- Superior comfort and indoor air quality
- Excellent sound control
- Part of an ENERGY STAR® home
- Closed cell foam adds structural integrity

INSTALLATION

The product must be installed according to local code by a certified applicator. Open and closed cell foam can be spray-applied into open wall cavities, crawlspaces, perimeter joists, and cathedral and garage ceilings. Thermal performance values depicted in the charts below are achieved at the thickness recommended when installed as recommended.

Please consult the appropriate product data sheet for thermal performance values.

Acoustical Insulation

NOISEREDUCER™ SOUND CONTROL BATTS

NoiseReducer sound control batts are designed for wood stud interior partitions and floors to help you add "the sound of silence" to any home. A special white kraft facing provides stapling flanges and has easily recognizable graphics to sell the value of sound control for interior walls.

NOISEREDUCER BATTS

R-VALUE		THICKNESS		WIDTH		FACING	LENGTH
R	RSI	in.	mm	in.	mm	TYPE	in.
11	1.9	3½	89	15	381	White	93
11	1.9	3½	89	23	584	White	93

NOISEREDUCER™ ACOUSTICAL CEILING BATTS

NoiseReducer acoustical ceiling batts are designed to lie directly on suspended ceilings, providing excellent thermal protection and acoustical performance. They are available unfaced or with a kraft facing. Kraft faced NoiseReducer acoustical ceiling batts, due to their intended application, have no stapling flanges.

ACOUSTICAL CEILING BATTS

R-VALUE		THICKNESS		WIDTH		FACING	LENGTH
R	RSI	in.	mm	in.	mm	TYPE	in.
11	1.9	3½	89	24	610	Unfaced	48, 96
11	1.9	3½	89	24	610	Kraft Faced	48
19	3.3	6¼	159	24	610	Unfaced	48
19	3.3	6¼	159	24	610	Kraft Faced	48

NOISEREDUCER™ SOUND ATTENUATION BATTS

NoiseReducer sound attenuation batts are unfaced fiber glass batts designed for use in metal framing construction to improve acoustical performance in residential and commercial applications. They are slightly wider and longer than conventional fiber glass batts for friction fitting into metal framing cavities.

SOUND ATTENUATION BATTS

R-VALUE		THICKNESS		WIDTH		FACING	LENGTH
R	RSI	in.	mm	in.	mm	TYPE	in.
8	1.4	2½	64	16	406	Unfaced	96
8	1.4	2½	64	24	610	Unfaced	96
11	1.9	3½	89	16	406	Unfaced	96
11	1.9	3½	89	24	610	Unfaced	48, 96

COMPLIANCES

For compliances, see page 26.

Masonry Wall Insulation

Masonry wall insulation batts are unfaced fiber glass insulation that are designed for use behind paneling or in masonry-type construction where cavity depth is limited by the furring strips used. No stapling is required because the batts fit tightly between furring strips. Use with a separate vapor retarder or where no vapor retarder is required or recommended. Check local practice and/or building code requirements before installation.

MASONRY WALL

R-VALUE		THICKNESS		WIDTH		FACING
R	RSI	in.	mm	in.	mm	TYPE
3	.5	¾	19	15	381	Unfaced
6	1.1	1¾	44	15, 23	381, 584	Unfaced

Basement Wall Insulation

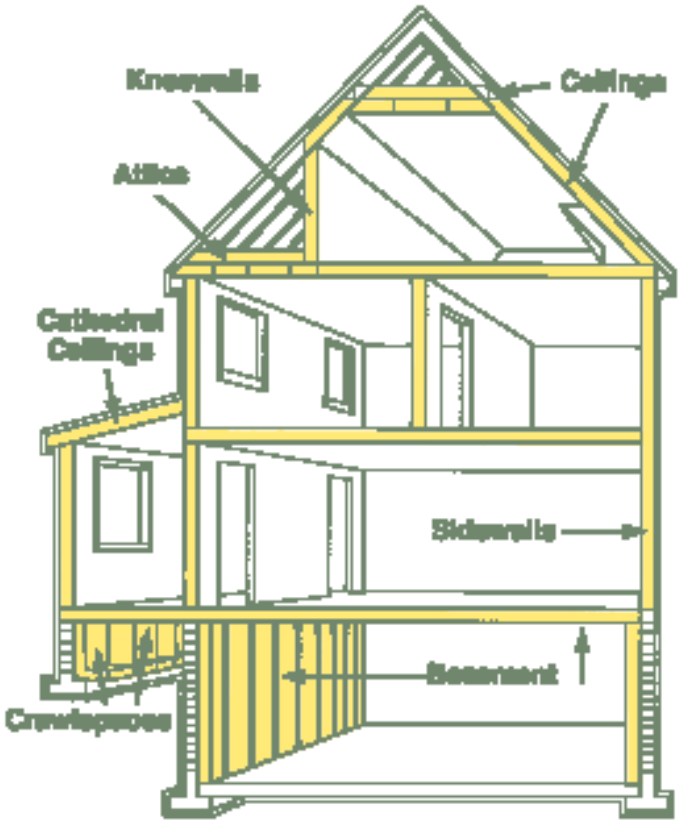
Basement wall insulation comes in two facings—white PSK and standard FSK—and is designed for use in both residential and commercial applications where code or builder preference specifies an insulated basement area. Both facings are perforated. Both products comply with ASTM C 665, Type II, Class A.

This product is intended for use in applications where the insulation will be left exposed. It can be applied either half-wall or full-wall. (Half-wall is not recommended for hollow block walls; they should be insulated full height.)

BASEMENT WALL

R-VALUE		THICKNESS		WIDTH		FACING
R	RSI	in.	mm	in.	mm	TYPE
11	1.9	3⅛	79	48, 72	1219, 1829	White PSK, Perforated
11	1.9	3⅛	79	48, 72	1219, 1829	FSK, Perforated

Thermal Recommendations



INSULATION IS A WISE INVESTMENT.

This diagram shows the most important areas of the home to insulate for energy efficiency. In new construction, sidewalls are readily accessible. For older homes, installing additional insulation in the attic, in floors over basements and crawl spaces and in the garage can pay dividends—because heat loss and heat gain are reduced while installation cost is minimized.

There are many sets of energy standards commonly in use today. The most widely adopted standards are listed in the next column:

(1) **International Energy Conservation Code (IECC) Formerly the Model Energy Code**—A stand alone energy code that evolved from three legacy codes (BOCA, ICBO, SBCCI) that were combined after creation of the International Code Council (ICC) in 1994 and consolidated into the ICC in 2003.

(2) **International Residential Code (IRC) and International Building Code (IBC)**—All inclusive building codes that evolved from legacy codes and administered by the ICC. Many jurisdictions have adopted one of these codes in its entirety and the energy portion contained within.

(3) **HUD MPS (Minimum Property Standards)**—For HUD funded new construction. It is considered a minimum standard for energy and cost efficiency.

(4) **Farmers Home Administration (FmHA)**—For FmHA funded new construction. Standards are higher than MPS.

(5) **State and Local Jurisdiction Energy Codes**—Many states and local areas have adopted some version of the IECC or their own energy codes.

(6) **CertainTeed Recommendations**—Comply with the latest Federal Department of Energy (DOE) recommendations or local code—whichever is greater.

Homes that are not insulated to today's energy standards can experience substantial heat loss in winter and heat gain in summer. Installing proper amounts of thermally efficient fiber glass insulation is one of the most cost-effective energy conservation measures that can be taken.

Climate and fuel costs determine how much insulation should be used for maximum economic return. As fuel and electric costs increase, higher R-Values are usually justified.

In some areas of the country, heating costs determine how much insulation should be used. In other areas air-conditioning costs are the major influence. In many areas both heating and air-conditioning costs contribute to the insulation recommendations shown here.

R-Values on the chart represent CertainTeed recommendations based on the latest DOE recommendations.

Find the appropriate zone. Then use the R-Values on the chart below.

R-Values listed for walls include those for both cavity insulation and sheathing. If the home has a heated basement, the basement walls should be insulated to a level such that the calculated energy consumed would be no greater than if the basement were unheated and the floor above insulated to the floor R-Value indicated.

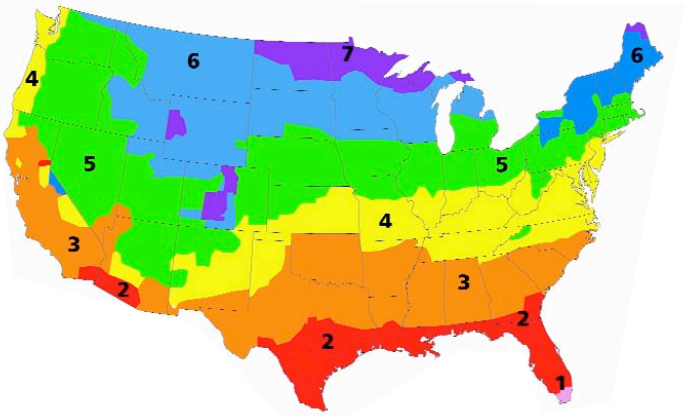
US DEPARTMENT OF ENERGY R-VALUE RECOMMENDATIONS

New Wood-Framed Houses

Zone	Heating System	Attic	Cathedral Ceiling	Wall		Floor
				Cavity	Insulation Sheathing	
1	All	R30 to R49	R22 to R15	R13 to R15	None	R13
2	Gas, oil, heat pump Electric furnace	R30 to R60	R22 to R38	R13 to R15	None	R13 R19-R25
3	Gas, oil, heat pump Electric furnace	R30 to R60	R22 to R38	R13 to R15	None R2.5 to R5	R25
4	Gas, oil, heat pump Electric furnace	R38 to R60	R30 to R38	R13 to R15	R2.5 to R6 R5 to R6	R25 to R30
5	Gas, oil, heat pump Electric furnace	R38 to R60	R30 to R38 R30 to R60	R13 to R15 R13 to R21	R2.5 to R6 R5 to R6	R25 to R30
6	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
7	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30
8	All	R49 to R60	R30 to R60	R13 to R21	R5 to R6	R25 to R30

All of Alaska in Zone 7 except for the following Boroughs in Zone 8: Bethel, Dillingham, Fairbanks N. Star, Nome, North Slope, Northwest Arctic, Southeast Fairbanks, Wade Hampton, Yukon-Koyukuk

Zone 1 Includes: Hawaii, Guam, Puerto Rico, and the Virgin Islands



Existing Wood-Framed Houses

Zone	Add Insulation to Attic		Floor
	Uninsulated Attic	Existing 3-4 Inches of Insulation	
1	R30 to R49	R25 to R30	R13
2	R30 to R60	R25 to R38	R13 to R19
3	R30 to R60	R25 to R38	R19 to R25
4	R38 to R60	R38	R25 to R30
5-8	R49 to R60	R38 to R49	R25 to R30

Wall Insulation: ***Whenever exterior siding is removed*** on an

Uninsulated wood-frame wall:

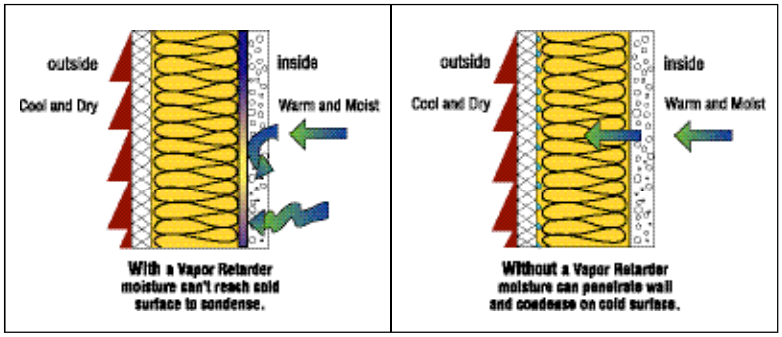
- Drill holes in the sheathing and blow insulation into the empty wall cavity before installing the new siding.
- Zones 3-4: Add R5 insulative wall sheathing beneath the new siding.
- Zones 5-8: add R5 to R6 insulative wall sheathing beneath the new siding.

Insulated wood-frame wall:

- For Zones 4 to 8: Add R5 insulative sheathing before installing the new siding.

Reference: DOE/CE-0180 2008, Insulation Fact Sheet

Performance Considerations



MOISTURE

In every household, occupants generate moisture by cooking, bathing, laundering and breathing. A family of four can produce two to three gallons of water vapor per day.

During the heating season this moisture vapor moves from a home's warm interior to the cooler exterior. If its passage into attics and exterior walls is not slowed by a vapor retarder, condensation can occur when the vapor reaches a cold surface. Continued or prolonged condensation can cause wood rot and growth of mildew and mold. If insulation becomes damp, its thermal performance is reduced. All building insulation should be kept dry. Wet fiber glass insulation will lose its effectiveness. Fiber glass will often dry naturally and regain its original R-Value. However, under conditions when the insulation will not dry thoroughly, it should be removed and replaced.

VAPOR RETARDER

A vapor retarder is any material that limits or restricts the transmission of water vapor. The most common vapor retarders are the kraft or foil facings adhered directly to fiber glass insulation and nylon or polyethylene films applied over insulation filled building cavities.

For some warm and humid areas vapor retarders—if used—should be installed outside the heating or building envelope. It is not appropriate to install kraft, foil, or DryRight faced fiber glass with the facing toward the exterior. Check local practice and/or building codes before installation.

Vapor retarders are not required in some dry, temperate climates such as certain areas of California and Arizona.

VENTILATION

To allow excess moisture vapor to escape, allowances should be made for proper ventilation. This can be accomplished through either a natural (static) or a power ventilation system.

In attics, the most common method is the static system which consists of simple vent openings. These can be gable, eave or ridge vents or a combination of the three.

An attic probably has two or more vent openings located so that air can flow in one and out the other.

Regardless of the types of vents, as a basic guide you should provide one square foot of vent area for each 150 square feet of ceiling floor area when there is no vapor retarder in the ceiling. If the ceiling does have a vapor retarder, provide one square foot for each 300 square feet of ceiling area. Ideally, 50 percent of the required ventilation should be provided by vents located in the upper portion of the attic with the remaining 50 percent provided by eave vents. When insulating, do not cover eave or other vent openings.

The term "cathedral ceiling" refers to sloped ceilings where insulation is installed in rafter spaces and the ceiling finish layer is fastened directly to the rafters. In this type of ceiling a vented air space between insulation and roof sheathing is desirable.

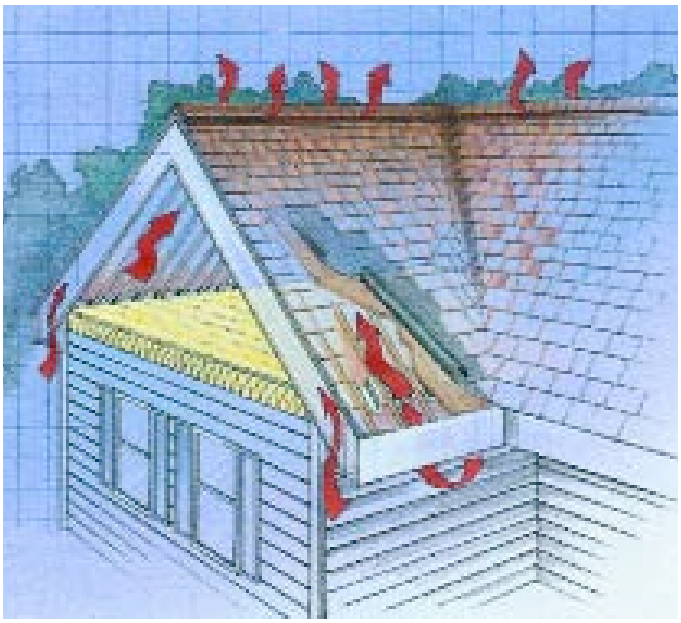
Remember, properly insulating and ventilating a home helps prevent moisture from damaging an attic and walls. In winter, there will be less risk of ice dams which are caused when heat escapes and allows snow to melt down the roof and freeze on the colder overhang areas. In the summer, hot air will also be able to escape to the outside, helping to reduce your cooling costs.

For most of the U.S., vapor retarders should be installed on the warm-in-winter side of the insulation (toward the interior).

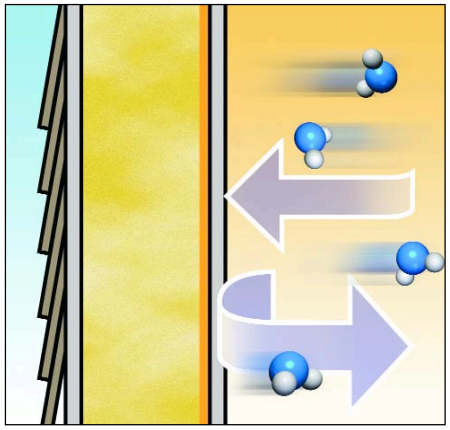
Vapor retarders are not a standard recommendation for all attics. Except for very cold regions, or isolated cases where there is high interior humidity, an attic vapor retarder is not required if there is sufficient ventilation.

CertainTeed fiber glass insulation is available with kraft, standard foil, MemBrain™ or flame resistant vapor retarders. Although fiber glass is noncombustible, some vapor retarders can burn and should not be left exposed. They must be installed behind and in substantial contact with the back surface of wall, ceiling or floor finish materials. Only flame resistant vapor retarders can be left exposed.

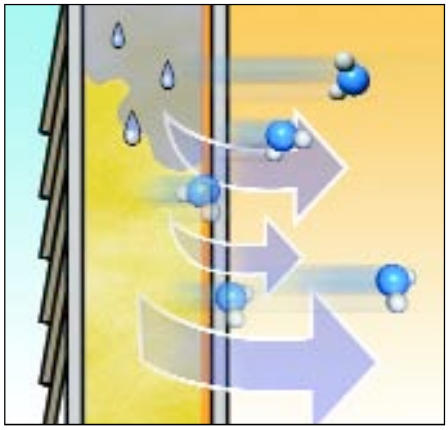
Unfaced building insulation is used with a separate vapor retarder such as MemBrain, or where a vapor retarder is not needed. It is also used in retrofitting attics when additional insulation is installed over existing insulation.



Performance Considerations (cont.)



MemBrain Protects: During the heating season, when the relative humidity in insulated cavities is low, MemBrain works as a vapor barrier.



MemBrain Breathes: During the cooling season, when relative humidity in insulated cavities is high, MemBrain changes its permeance to increase the system's drying potential.

MEMBRAIN™

To reduce the risk of moisture-related problems in building envelopes, consider using the newest scientific innovation from CertainTeed—MemBrain, The Smart Vapor Retarder. MemBrain is a polyamide film (as opposed to polyethylene) that changes its permeability with ambient relative humidity conditions. When relative humidity is low, MemBrain's pores close, blocking vapor transmission into the wall cavity. When humidity is high, MemBrain's molecular-scale pores open, which permits moisture vapor to escape. This allows wall cavities to dry, reducing the risk of moisture and mold in the wall cavity.

CONDENSATION CONTROL

Air normally contains moisture in vapor form. Moisture in vapor form is not a problem; in fact, it is beneficial to us when the amount present is not excessive. But when moisture vapor encounters a cold, impermeable surface, it can condense to a liquid and cause problems. Vapor retarders placed where they will stay above the dew point temperature can prevent condensation problems. In most U.S. climates, vapor retarders should be located at the warm-in-winter side of the insulation.

In very mild, dry climates, vapor retarders are not required. In very hot, humid climates, vapor retarders should be located outside the insulation. Generally, a masonry wall below grade, should not have a vapor retarder because it is not always certain which side of the wall has the greater vapor pressure. Check local practice and/or building codes. For more information, refer to the ASHRAE Handbook, Fundamentals Volume, chapter titled "Thermal and Moisture Control in Insulated Assemblies–Applications."

FIRE SAFETY

Proper consideration must always be given to fire safety. Most building codes require that exposed vapor retarders have an ASTM E 84 flame spread index of 25 or less and a smoke density developed of 50 or less. FSK 25 Facing meets these requirements. Standard foil or kraft facings should always be covered by a low flame spread index material such as gypsum wallboard.

NOISE CONTROL

Noise in buildings can be controlled by isolating noise sources from the rest of the structure with resilient supports, by absorbing sound energy with porous materials such as insulation, and by creating sound barriers between different areas.

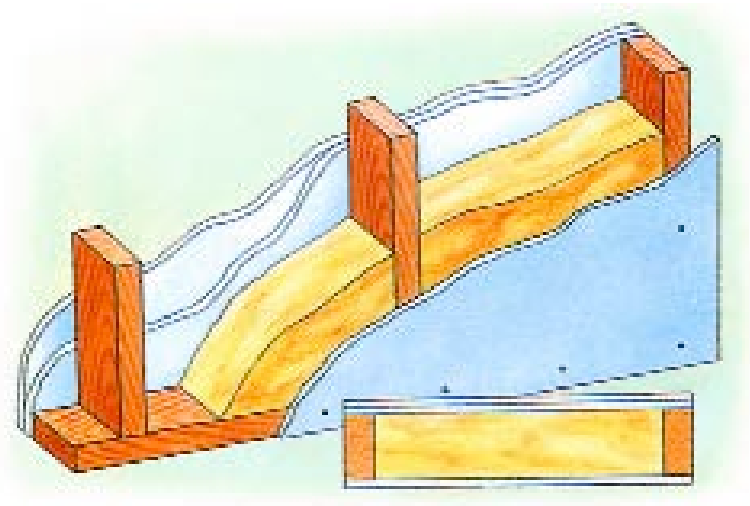
A material's ability to absorb sound can be measured in the laboratory over a range of frequencies. The absorption at a particular frequency, expressed as a decimal fraction, is called a sound absorption coefficient. The average of a material's sound absorption coefficients at 250, 500, 1000, and 2000 Hz is called the Noise Reduction Coefficient, or NRC.

Materials that are good sound absorbers (NRC's close to 1.00), are usually not good at resisting the transmission of sound. But by combining a good sound absorber with a structure that resists sound transmission, you can create an effective sound barrier. An assembly's ability to act as a sound barrier is called its transmission loss (TL). TL can be measured in the laboratory over a range of frequencies.

A single number rating, derived from TL measurements over the 125 to 4000 Hz range, is called the Sound Transmission Class, or STC of a wall, floor or ceiling. STC ratings should be used with some caution since they do not measure transmission of impact noises or low frequency noises commonly associated with mechanical equipment. They are, however, quite useful in designing office partitions where speech privacy is the main concern. Small differences in STC ratings (two or three points) are not significant; they can't be detected by the human ear. Additionally, STC ratings obtained at different laboratories can vary by three points.

The strategies most commonly used to obtain high STC ratings are:

- Increasing partition mass through the use of heavy materials such as a double layer of wallboard.
- Breaking the sound transmission path by using resilient channel mountings or staggered studs.
- Providing sound absorption in partition cavities by filling them with sound absorbing materials such as fiber glass insulation.



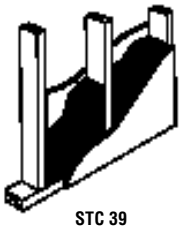
Fire and Sound Ratings for Typical Insulated Construction Assemblies

CertainTeed NoiseReducer fiber glass batts will typically add from four to ten to the Sound Transmission (STC) ratings of walls. STC, the performance rating of wall or floor sections for airborne sound transmission loss, depends on good construction practices. Workmanship, mass of materials, thickness of insulation and separation of wall surfaces (resilient channels, staggered or double studs) all play a role.

The higher the STC rating, the less sound is transmitted. The fire and sound ratings shown are based on specific and generic tests. For more detailed information see CertainTeed Sound Control Brochure (30-28-008).

2 x 4 Wood Stud Partition

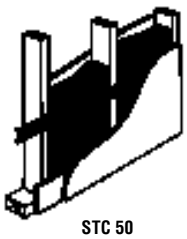
2 x 4 wood studs 16" o.c.
CertainTeed 3½" Batts
1 layer ½" regular gypsum wallboard each side



STC 39
Fire Rating 1 hr.

2 x 4 Wood Stud Resilient Channel Partition

2 x 4 wood studs 16" o.c.
CertainTeed 3½" Batts
Resilient channels 24" o.c. one side
1 layer ⅝" type "X" gypsum wallboard each side



STC 50
Fire Rating 1 hr.

2 x 4 Wood Stud Partition

2 x 4 wood studs 24" o.c.
CertainTeed 3½" Batts
2 layers ⅝" type "X" gypsum wallboard each side

STC 46
Fire Rating 2 hrs.

Staggered Wood Stud Partition

2 x 4 wood studs staggered 16" o.c.
2 x 6 wood plates
CertainTeed 2½" Batts in all stud spaces
1 layer ½" regular gypsum wallboard each side

STC 50
Fire Rating 1 hr.

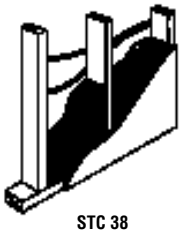
Double Wood Stud Partition

2 x 4 wood studs 16" o.c. (double row)
Separate 2 x 4 wood plates
CertainTeed 3½" Batts in all stud spaces
1 layer ½" regular gypsum wallboard each side

STC 57
Fire Rating 1 hr.

Exterior Wood Stud Wall

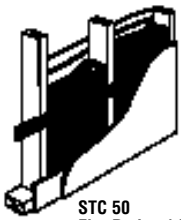
2 x 4 wood studs 16" o.c.
CertainTeed 3½" Batts
Interior: 1 layer ½" regular gypsum wallboard each side
Exterior: ½" exterior plywood
½" vinyl siding



STC 38
Fire Rating 1 hr.

Exterior Wood Stud Wall

2 x 4 wood studs 16" o.c.
CertainTeed 3½" Batts
Interior: resilient channels 24" o.c. one side; 1 layer ⅝" type "X" gypsum wallboard each side
Exterior: ½" gypsum sheathing
⅜" exterior plywood



STC 50
Fire Rating 1 hr.

2½" & 3⅝" Steel Stud Partitions

2½" or 3⅝" steel studs 24" o.c.
CertainTeed 2½" or 3½" Batts
1 layer ½" regular gypsum wallboard each side

STC 45 w/2½" studs
STC 46 w/3⅝" studs

Steel Stud Partitions

2½" or 3⅝" steel studs 24" o.c.
CertainTeed 2½" or 3½" Batts
1 layer ⅝" type "X" gypsum wallboard each side

STC 47 w/2½" studs
STC 50 w/3⅝" studs
Fire Rating 1 hr.

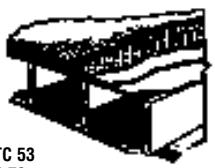
Steel Stud Partitions

2½" steel studs 24" o.c.
CertainTeed 2½" Batts
2 layers ½" type "X" gypsum wallboard each side

STC 54
Fire Rating 2 hrs.

Floor/Ceiling Construction

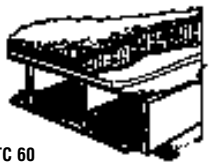
Wood Joists 16" o.c.
CertainTeed 3½" Batts
Resilient channel
½" type "X" gypsum wallboard
⅝" plywood subfloor
⅜" particle board underlayment
Carpet & pad



STC 53
IIC 73
Fire Rating 1 hr.

Floor/Ceiling Construction

Wood Joists 16" o.c.
CertainTeed 3½" Batts
Resilient channel
½" type "X" gypsum wallboard
⅝" plywood subfloor
1½" cellular or light weight concrete
Carpet & pad



STC 60
IIC 73
Fire Rating 1 hr.

Code Information

COMPLIANCE

CertainTeed has a variety of insulation products that permit compliance with insulation flame spread requirements in the ICC model building code. Most codes require that flame spread ratings be determined in accordance with ASTM Test Method E 84. This method measures and describes surface flame spread and smoke developed measurements under laboratory conditions.

CertainTeed unfaced fiber glass insulation products have flame spread ratings of 25 or less and smoke developed ratings no greater than 50. These ratings are a requirement of material standard ASTM C 665 for building insulation. The strictest ratings specified by the model codes are flame spread 25 or less and smoke developed rating not to exceed 50. Unfaced fiber glass products can therefore be used in exposed and concealed installations and in both combustible or noncombustible construction types.

The white reinforced polypropylene facing and the reinforced foil facing on CertainTeed basement wall insulation also have a flame spread rating of 25 or less and a smoke developed rating of 50 or less. These facings can also be left exposed.

Standard kraft facing is a vapor-retarder (one perm or less) but does not have an established flame spread rating. It is therefore a non-rated facing and can only be used in combustible construction when it is concealed.

MODEL BUILDING CODE FLAME SPREAD REQUIREMENTS

There are different requirements for exposed and concealed installations for combustible and noncombustible construction. Exposed means uncovered, or exposed to view. A facing is exposed, for example, if uncovered in attics, crawl spaces, basements, plenums or kneewall areas. Concealed means covered by another building material as in enclosed wall and ceiling cavities. Combustible construction means wood frame construction such as in single or multi-family housing. Noncombustible construction means construction with steel and concrete framing such as in hospitals and nursing homes.

Compliance and Specifications Information

COMPLIANCES

- ASTM C 665
  Type I (unfaced)
  Type II, Class C, Category 1 (kraft faced)
  Type II, Class A, (basement wall)
  Type III, Class B, Category 1 (foil faced)
  Type III, Class A, Category 1 (FSK)
- ASTM C 764, Type I (InsulSafe® SP, OPTIMA® and System 5™)
- California and Minnesota Quality Standards
- Tested for use under NYSUFPBC Article 15
- ASTM E 136 for noncombustibility (unfaced batts, InsulSafe SP, OPTIMA and System 5 only)
- ASTM E 84 Fire Hazard Classification (FHC) Flame Spread 25/Smoke Developed 50 (unfaced only); Flame Spread 5/Smoke Developed 5 (InsulSafe SP, OPTIMA and System 5 only)
- ASTM C 687 Determination of Thermal Resistance of Loose-Fill Building Insulation
- ASTM E 136 Behavior of Materials in a Vertical Tube Furnace at 750° C
- NY City MEA 18-80-M (unfaced)
- NY City MEA 19-80-M (FSK)
- NY City MEA 218-85-M (InsulSafe SP)
- Model Building Codes IECC, IRC

SAMPLE PROCUREMENT/ SPECIFICATION STATEMENT

Insulation as shown on drawings or procurement documents shall be Fiber Glass Building Insulation—(appropriate product name) as manufactured by CertainTeed Corporation, Valley Forge, PA. Thermal resistance R-Values (RSI) of the insulation shall be R (RSI)_____ in ceilings, R (RSI) _____ in walls, and R (RSI) _____ in floors over unheated spaces. Insulation shall comply with the requirements of (Appropriate Specification) and shall be installed in accordance with the manufacturer's recommendations.

Specify either CertainTeed's recommended R-Values, current HUD/FHA Minimum Property Standard values or local code requirements in the blanks above. CertainTeed recommends that the R-Values shown on the chart on page 19 be used.

VAPOR RETARDERS

ASTM C 665, HUD MPS, ASHRAE and some state codes specify that a vapor retarder have a permeance of not more than one perm. The HUD MPS code specifies a < or = to one perm vapor retarder in sidewalls, but permits a vapor retarder to be omitted in attic floors if adequate ventilation is provided.

CODES AND STANDARDS

CertainTeed fiber glass building insulation products described in this catalog comply with federal or local specifications and standards listed below, including several important specific approvals. Data pertaining to InsulSafe SP is shown separately.

Building Insulation Products Complies with:
ASTM C 665
(Classified by Type & Class of membrane)
California Quality Standards
Minnesota Quality Standards

Specific Approvals: New York City*
MEA 18-80-M (unfaced)

InsulSafe SP and OPTIMA®
Complies with: ASTM C 764
(Classified as Type I)
California Quality Standards
Minnesota Quality Standards

Specific Approvals: New York City*
MEA 218-85-M

*New York City approval requires passage of Combustion Toxicity Test.

CertainTeed is the right choice for your business.

THE RIGHT PRODUCTS.

CertainTeed has been making quality building products for more than 100 years and is part of the largest building materials company in the world, Saint-Gobain. We offer you a full line of fiber glass insulation products to meet the needs of your business and your customers.

And even though we've been doing this for a long time, we're always looking for new and better ways to improve our products and increase productivity. Many of our manufacturing plants are registered to ISO 9001:2000 standards. So you know you're getting the best products possible.

THE RIGHT PERFORMANCE.

Our fiber glass insulation products have achieved GREENGUARD® Certification for superior indoor air quality performance. This means our products will contribute very low levels of volatile organic compounds (VOCs) and other pollutants to the indoor environment.

THE RIGHT DELIVERY.

It's tough for you to sell something when it's not there. CertainTeed delivers product when we say we will—or we will credit you 3% of the invoice amount. Our Customer Bill of Rights guarantees it.

THE RIGHT PROGRAMS.

Our ultimate goal, of course, is to deliver the absolute best products and programs for your business. We offer solutions that streamline inventory and incentives to maximize sales as well as margins.

THE RIGHT SUPPORT.

We don't just sell insulation. We listen. We want to understand the unique needs of your business in order to deliver solutions that actually work. From our Building Science department to our dedicated sales team, we work to earn your trust and your business—order after order, year after year.

For questions regarding specifications, building codes and installation practices, contact our Technical Services Department at (800) 233-8990.

In addition to our residential fiber glass insulation products, CertainTeed offers a full line of commercial and HVAC insulation products.

ASK ABOUT OUR OTHER CERTAINTEED PRODUCTS AND SYSTEMS:

EXTERIOR: ROOFING • SIDING • WINDOWS • FENCE • RAILING • TRIM • DECKING • FOUNDATIONS • PIPE
INTERIOR: INSULATION • GYPSUM • CEILINGS

CertainTeed Corporation
P.O. Box 860
Valley Forge, PA 19482

Professional: 800-233-8990
Order Management: 800-441-9850
www.certainteed.com