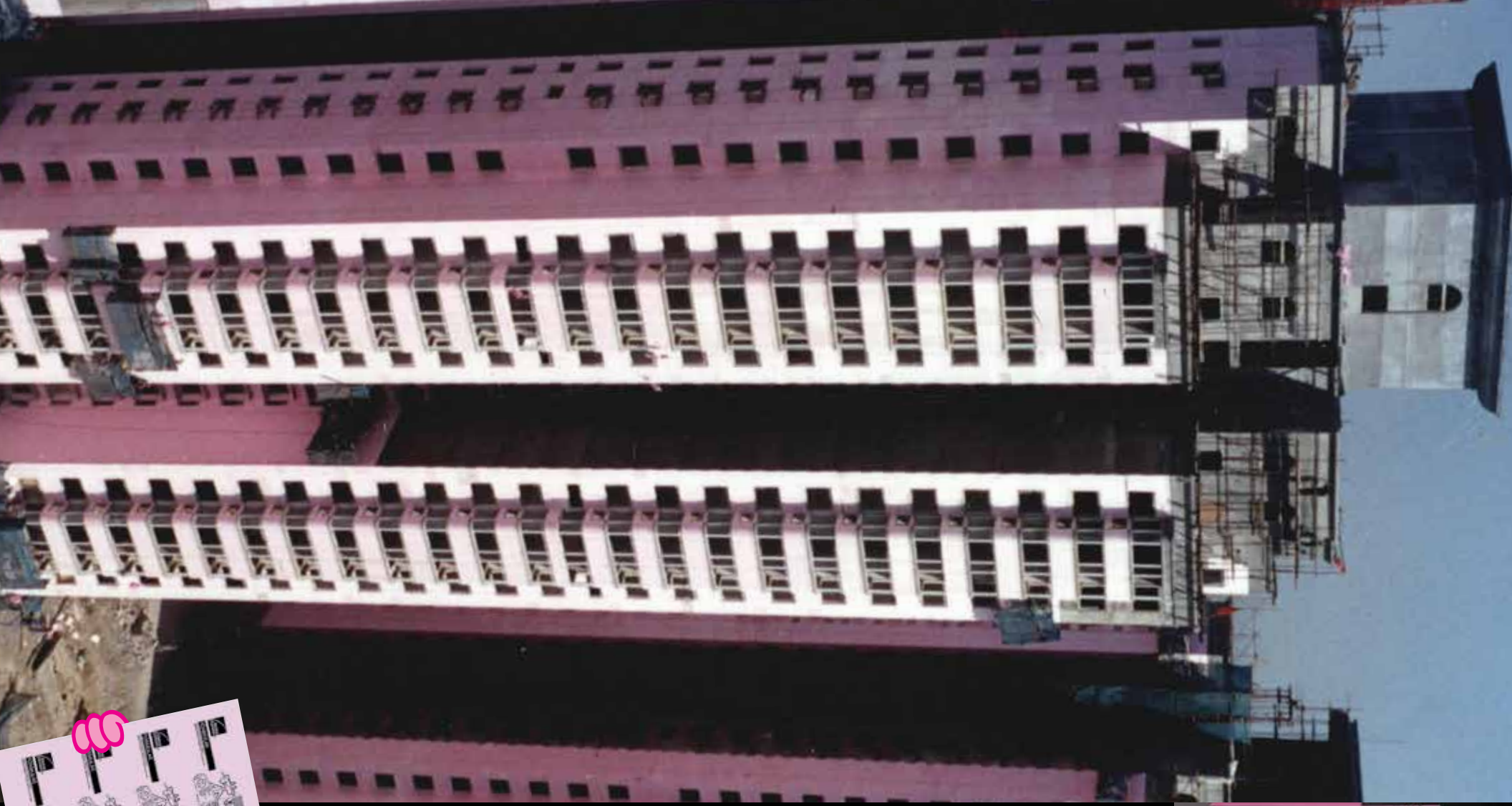

OWENS CORNING®

Insulation Systems Catalog

FOR COMMERCIAL BUILDINGS

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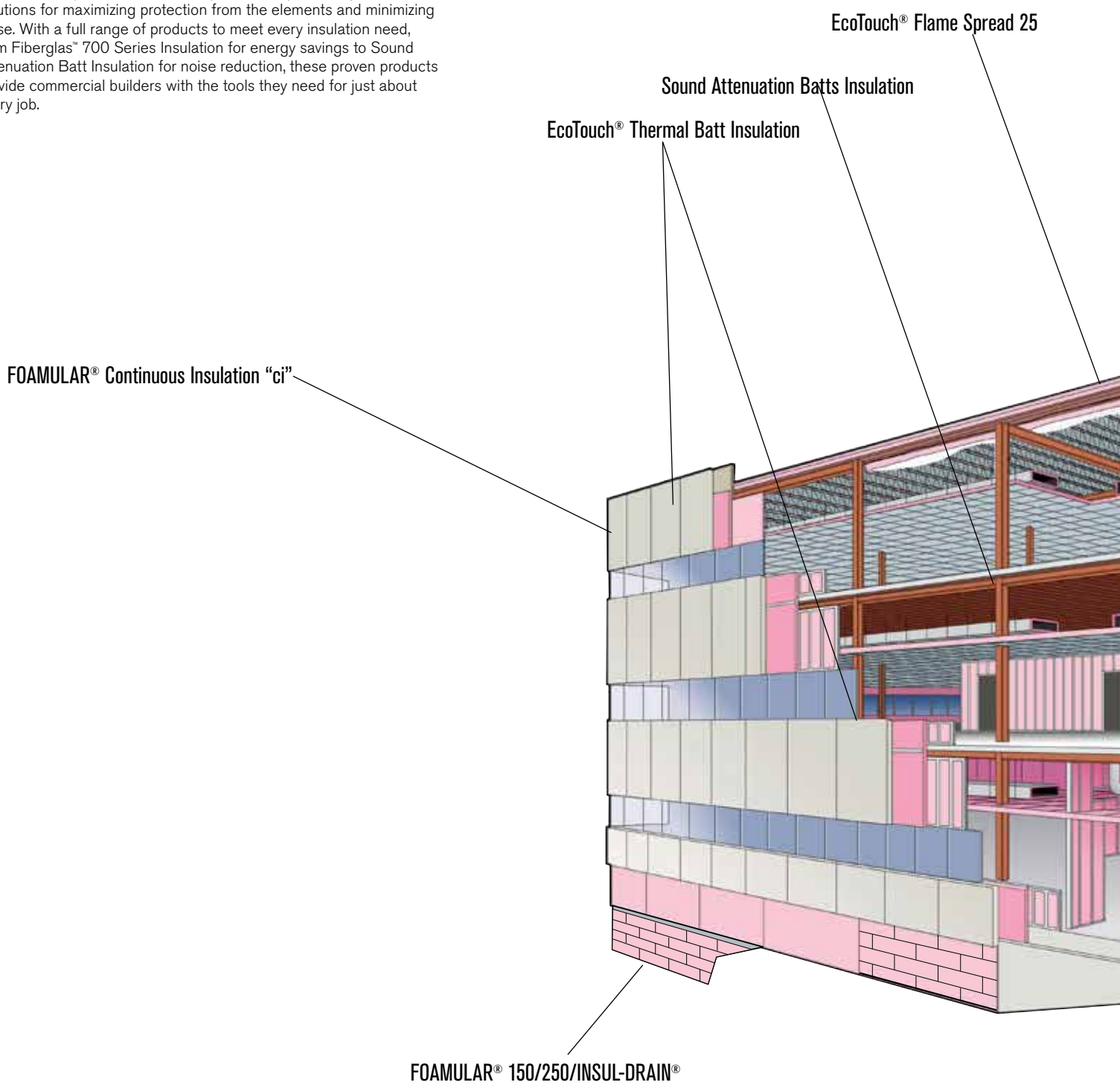
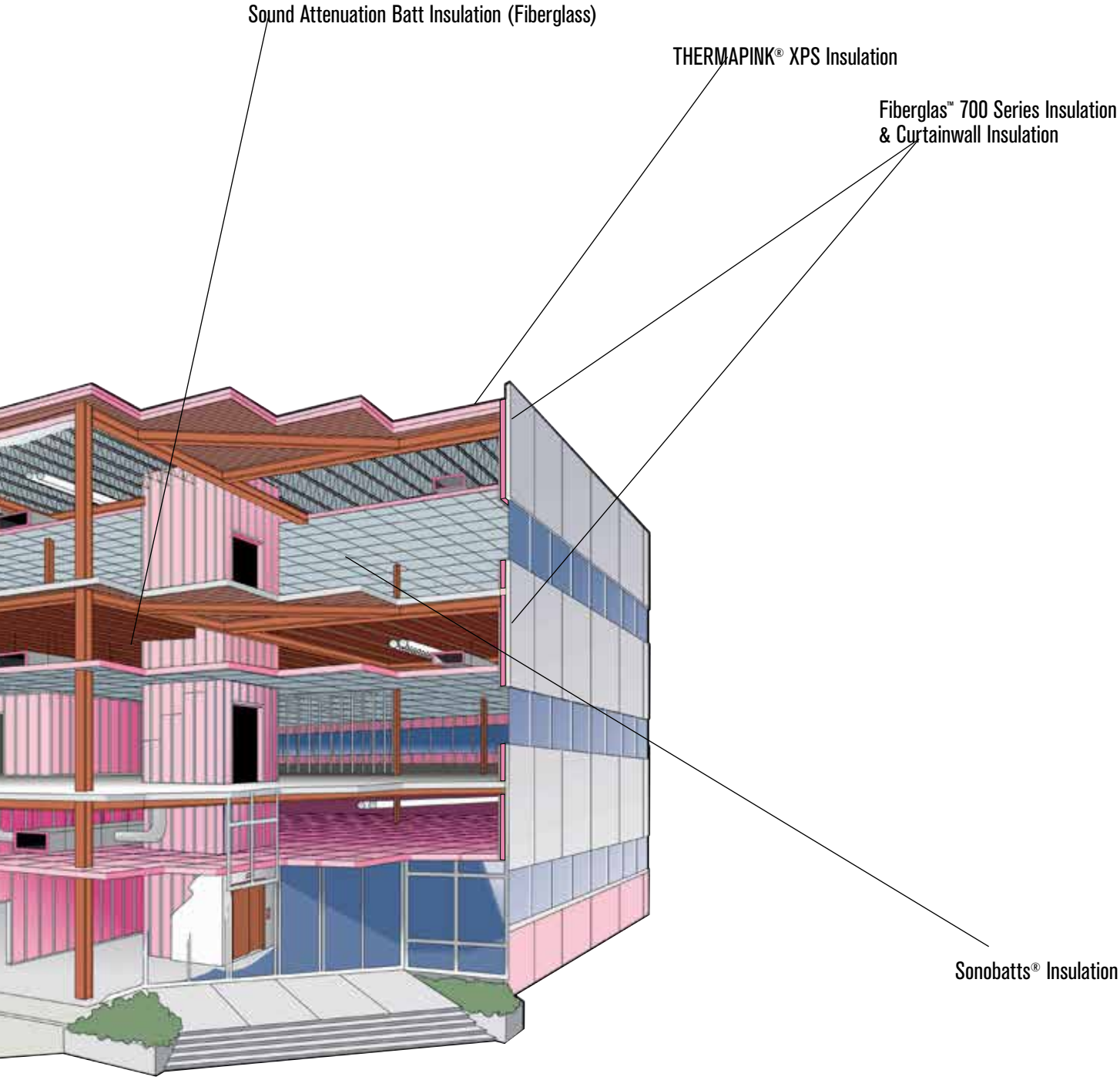
PRODUCT OVERVIEW

Owens Corning commercial building insulation products provide solutions for maximizing protection from the elements and minimizing noise. With a full range of products to meet every insulation need, from Fiberglas™ 700 Series Insulation for energy savings to Sound Attenuation Batt Insulation for noise reduction, these proven products provide commercial builders with the tools they need for just about every job.




Sound Attenuation Batt Insulation (Fiberglass)
THERMAPINK® XPS Insulation
Fiberglas™ 700 Series Insulation
& Curtainwall Insulation
Sonobatts® Insulation

ECOTOUCH® THERMAL BATT INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION & USES

- Unfaced
- Kraft-Faced
- Foil-Faced
- For roof/ceiling and interior/exterior wall applications; installed in wood or metal framing cavities or between furring channels.
- Flexible fiberglass insulation 3½" to 12" thick available unfaced, foil-faced or kraft-faced.

FEATURES & BENEFITS

- Sized for metal or wood framing; can be stapled
  or friction-fit. Easy to handle and install. Trim and fabricate with a utility knife.
- Meets thermal specifications.
- Improves interior noise control.
- Inorganic. Non-corrosive to steel, aluminum or copper.
- Dimensionally stable and will not decay or slump in the cavity.
- SpaceSaver packaging reduces freight and streamlines handling.

DESIGN CONSIDERATIONS

- In commercial roof/ceiling thermal applications, the building envelope must block air movement. Do not rely on the insulation or facing to provide an air barrier.
- Adding insulation inside a structure's perimeter exposes the exterior building materials to greater temperature extremes and expansion and contraction forces.
- Equip curtainwall buildings with sprinkler systems for fire protection as required by building codes.
- Luminaire performance may be affected by closely placed insulation. The National Electric Code requires: Unless fixtures are approved for such use, do not install insulation on top of or within 3" of recessed light fixtures.
- Evaluate the use of vapor retarders based on the project's unique requirements. Maintain facing integrity for vapor retarder performance.
- Kraft facings on this insulation will burn and must not be left exposed. Facings should be installed in substantial contact with approved ceiling, wall or floor material.

APPLICABLE STANDARDS

- Surface burning characteristics comply with ASTM E84, a standard used to measure and describe properties of products in response to heat and flame under laboratory conditions. The results are not intended to reflect hazards presented under actual fire conditions. Base material is classified as noncombustible when tested per ASTM E136.
- See tables for data and other applicable standards.

ECOTOUCH® THERMAL BATT INSULATION TECHNICAL DATA/WALL OR CEILING

WIDTH			LENGTH				THICKNESS	R-VALUE[1]
METAL FRAME CONSTRUCTION								
	16" 406 mm		24" 609 mm	48" 1219 mm	96" 2,438 mm		3½" 89 mm	11.0
	16" 406 mm		24" 609 mm	48" 1219 mm	96" 2438 mm		3½" 89 mm	13.0
	16" 406 mm		24" 609 mm	48" 1219 mm	96" 2438 mm		6¼" 159 mm	19.0
WOOD FRAME CONSTRUCTION								
	15" 381 mm	19.25" 489 mm	23" 584 mm		93" 2362 mm	105" 2667 mm	3½" 89 mm	11.0
11" 279 mm	15" 381 mm	19.25" 489 mm	23" 584 mm		93" 2362 mm	105" 2667 mm	3½" 89 mm	13.0
	15" 381 mm		23" 584 mm		93" 2362 mm	105" 2667 mm	3½" 89 mm	15.0
11" 279 mm	15" 381 mm	19.25" 489 mm	23" 584 mm	48" 1219 mm	93" 2362 mm	105" 2667 mm	6¼" 159 mm	19.0
	15" 381 mm		23" 584 mm		93" 2362 mm		5½" 139 mm	21.0
ROOF/CEILING CONSTRUCTION								
11" 279 mm	15" 381 mm		23" 584 mm	48" 1219 mm	93" 2362 mm		6¼" 159 mm	19.0
	16" 406 mm	19.25" 489 mm	24" 609 mm	48" 1219 mm	96" 2438 mm		6¼" 159 mm	19.0
	15" 381 mm	19.25" 489 mm	23" 584 mm	48" 1219 mm			6¾" 171 mm	22.0
	15" 381 mm		23" 584 mm	48" 1219 mm	96" 2438 mm		8" 203 mm	25.0
	16" 406 mm	19.25" 489 mm	24" 609 mm		96" 2438 mm		8" 203 mm	25.0
	15" 381 mm		23" 584 mm	48" 1219 mm			9½" 241 mm	30.0
12" 305 mm	16" 406 mm	19.25" 489 mm	24" 609 mm	48" 1219 mm			9½" 241 mm	30.0
	15.5" 394 mm		23.75" 603 mm	48" 1219 mm			8¼" 209 mm	30.0 C[2]
12" 305 mm	16" 406 mm		24" 609 mm	48" 1219 mm			12" 305 mm	38.0
	15.5" 394 mm		23.75" 603 mm	48" 1219 mm			10¼" 260 mm	38.0 C[2]

1. R-values differ. Find out why in the seller's fact sheet. Higher R-values mean greater insulating power.
2. C = Cathedral ceilings.
   Unfaced EcoTouch® Thermal Batt Insulation complies with the property requirements of ASTM C665, Type I and ASTM E 136. Kraft-Faced Thermal Batt Insulation complies with ASTM C665, Type II and Class C. Check for availability in your service area. Foil-Faced EcoTouch® Thermal Batt Insulation complies with ASTM C665, Type III, Class B and C.

SURFACE BURNING CHARACTERISTICS/BUILDING CODE CONSTRUCTION CLASSIFICATIONS

PRODUCT TYPES	FLAME SPREAD	SMOKE DEVELOPED	ICBO	BOCA	SBCCI	ICC
EcoTouch® Unfaced Insulation	10	10	All Types	All Types	All Types	All Types
EcoTouch® Foil-Faced Insulation	75	150	III, IV, V	All Types	All Types	III, IV, V
EcoTouch® Kraft-Faced Insulation	N/R	N/R	III, IV, V	III, IV, V	III, V, VI	III, IV, V

EcoTouch® Thermal Batt Insulation complies with the International Building Code (ICC), Uniform Building Code (ICBO), National Building Code (BOCA) and Standard Building Code (SBCCI) model code requirements for building construction types listed above. Kraft and standard foil facing on EcoTouch® Thermal Batt Insulation will burn and must not be left exposed. The facing must be installed in substantial contact with an approved interior partition construction material. Protect facing from open flame or other heat source. Due to the potential for skin irritation, unfaced EcoTouch® Thermal Batt Insulation should not be used for exposed applications where it will be subject to human contact.

VAPOR RETARDERS	KRAFT	FOIL
Perms Maximum[1]	1	0.5
WATER VAPOR SORPTION		
Maximum by Weight	5%	
DIMENSIONAL STABILITY		
Linear Shrinkage	Less than 0.1%	

1. Products are tested in accordance with:

R-value	ASTM C518
Surface Burning Characteristics	ASTM E84
Perm Rating	ASTM E96

CERTIFIED RECYCLED CONTENT SCS GLOBAL SERVICES
AVERAGE 65% RECYCLED CONTENT
18% PRE-CONSUMER
47% POST-CONSUMER
APPLIES TO UNFACED PRODUCT

CERTIFIED RECYCLED CONTENT SCS GLOBAL SERVICES
AVERAGE 55% RECYCLED CONTENT
18% PRE-CONSUMER
37% POST-CONSUMER
APPLIES TO FACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 98%
APPLIES TO UNFACED PRODUCT

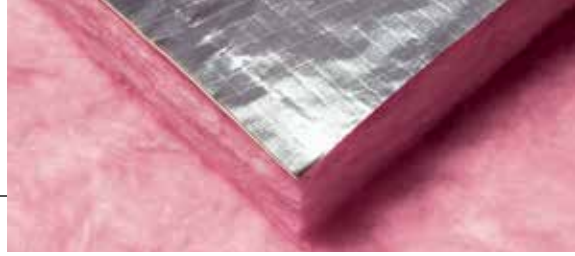
USDA CERTIFIED BIOBASED PRODUCT PRODUCT 57%
APPLIES TO KRAFT-FACED PRODUCT

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818 GOLD

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818

ECOTOUCH® FLAME SPREAD 25/FLAME SPREAD 25 EXTENDED FLANGES

FIBERGLASS INSULATION–PRODUCT DATA



DESCRIPTION & USES

- FSK-Faced (Foil)
- PSK-Faced (White)
- Install between metal or wood framing or attach with impaling pins.
- Light-density, flexible batt insulation with low flame spread FSK or PSK facing, and R-values* from 11 to 30.
- For walls, ceilings and floors where a low flame spread vapor retarder is required or where insulation will be exposed. Also suited for concealed applications in noncombustible constructions.

FEATURES & BENEFITS

- Meets thermal specifications.
- Meets building code requirements for exposed applications thereby eliminating the need for a covering or separate finish.
- Improves acoustical performance.
- Easy to install and fabricate with 1¼" or 4" flanges for installation in framing applications. Widths accommodate metal and wood framing.

DESIGN CONSIDERATIONS

- In commercial roof/ceiling thermal applications, the building envelope must block the movement of air into the conditioned space. Do not rely on the insulation or its facing to provide an air barrier.
- Adding insulation inside a structure's perimeter exposes the exterior building materials to greater temperature extremes and expansion and contraction forces.
- Equip curtainwall buildings with sprinkler systems for fire protection as required by building codes.
- Luminaire performance may be affected by closely placed insulation. The National Electric Code requires: Unless fixtures are approved for such use, do not install insulation on top of or within 3" of recessed light fixtures.
- Evaluate the use of vapor retarders based on the unique requirements of each project.

APPLICABLE STANDARDS

- ASTM C518 tests were used to determine R-values.* Listed R-values are for insulation only.
- Complies with ASTM C665, Type III, Class A when FSK-faced. Complies with the property requirement of ASTM C665, Type II, Class A when PSK-faced or Poly-faced.

ECOTOUCH® FLAME SPREAD 25 FIBERGLASS INSULATION TECHNICAL DATA

WIDTH(S)				LENGTH		THICKNESS		R-VALUE[1]
METAL FRAME CONSTRUCTION								
16"	406 mm	24"	609 mm	96"	2438 mm	3½"	89 mm	11.0
16"	406 mm	NA		96"	2438 mm	3½"	89 mm	13.0
16"	406 mm	24"	609 mm	96"	2438 mm	6¼"	159 mm	19.0
16"	406 mm	24"	609 mm	48"	1219 mm	9½"	241 mm	30.0
WOOD FRAME CONSTRUCTION								
16"	406 mm	23"	584 mm	96"	2438 mm	6¼"	159 mm	19.0

1. R-values differ. Find out why in the seller's fact sheet. Higher R-values mean greater insulating power. Check for availability in your service area.

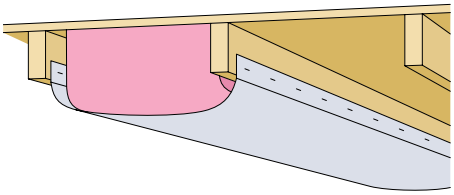
SURFACE BURNING CHARACTERISTICS/BUILDING CODE CONSTRUCTION CLASSIFICATIONS

PRODUCT TYPES	FLAME SPREAD	SMOKE DEVELOPED	ICBO	BOCA	SBCCI	ICC
FSK-Faced	25	50	All Types	All Types	All Types	All Types
PSK-Faced	25	50	All Types	All Types	All Types	All Types

EcoTouch® Flame Spread 25 Fiberglas Insulation complies with the International Building Code (ICC), Uniform Building Code (ICBO), National Building Code (BOCA) and Standard Building Code (SBCCI) model code requirements for building construction types listed above.

VAPOR RETARDERS	FSK	PSK
Perms Maximum	0.02	0.02
WATER VAPOR SORPTION		
Maximum by Weight	5%	
DIMENSIONAL STABILITY		
Linear Shrinkage	Less than 0.1%	
LIGHT REFLECTANCE		
PSK-Faced—Per ASTM C523	–	85%

- Surface burning characteristics tests performed in accordance with ASTM E84, a standard used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions. Results are not intended to reflect hazards presented by this material under actual fire conditions. It also complies with the MEA 332-83-M requirements of New York City.
- Facing permeance tests conducted in accordance with ASTM E96 (desiccant method).



EcoTouch® Flame Spread 25 with 4" Extended Flanges shown in a 2" x 4" exposed ceiling.

CERTIFIED RECYCLED CONTENT SCS GLOBAL SERVICES
AVERAGE 55% RECYCLED CONTENT
18% PRE-CONSUMER
37% POST-CONSUMER
APPLIES TO FACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 78%
APPLIES TO FSK-FACED PRODUCT

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818 GOLD

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818

* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

SOUND ATTENUATION BATT INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION & USES

- SAB Unfaced
- Designed to deliver noise control in standard metal-framed interior partitions, SABs are slightly wider than stud spaces and up to 9' long to accommodate easy, friction-fit installation.
- Lightweight, flexible fiberglass insulation batts, Owens Corning Sound Attenuation Batts/ SABs are manufactured in thicknesses of 2½", 3½" and 5½".

FEATURES & BENEFITS

- Sound Attenuation Batts can improve Sound Transmission Class (STC) ratings by 4 to 10 points, depending on the construction method used. See next page for STC performance data.
- Classified as noncombustible by model building codes. When installed in wall systems and tested per ASTM E119, assembly fire resistance ratings up to 2 hours can be achieved. Sound Attenuation Batt Surface Burning Characteristics meet the code requirements for all building types as described by the Standard Building Code (SBCCI), the National Building Code (BOCA), the Uniform Building Code (ICBO) and the International Building Code (IBC).
- Adhesives and fasteners are not required.
- Easily cut or split to fit around wires, pipes, electrical service boxes and other obstructions, SABs are simply placed in the metal stud framing cavity for a friction-fit.
- Adds thermal value in applications where a temperature differential exists.

SOUND ATTENUATION BATT INSULATION TECHNICAL DATA

WIDTH(S)		LENGTH		THICKNESS	
16"	406 mm	24"	609 mm	96" 2438 mm	3½" 89 mm
16"	406 mm	24"	609 mm	96" 2438 mm	2½" 64 mm
16"	406 mm	24"	609 mm	108" 2438 mm	2½" 64 mm
16"	406 mm	24"	609 mm	108" 2438 mm	3½" 64 mm

1. R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power. R-value ASTM C518

   Sound Attenuation Batt Insulation complies with the property requirements of ASTM C665, Type I and ASTM E136.

SURFACE BURNING CHARACTERISTICS/BUILDING CODE CONSTRUCTION CLASSIFICATIONS

PRODUCT TYPES	FLAME SPREAD	SMOKE DEVELOPED	ICBO	BOCA	SBCCI	ICC
Unfaced	10	10	All Types	All Types	All Types	All Types

Sound Attenuation Batt Insulation complies with the International Building Code (ICC), Uniform Building Code (ICBO), National Building Code (BOCA) and Standard Building Code (SBCCI) model code requirements for building construction types listed above.

WATER VAPOR SORPTION	
Maximum by Weight	5%
DIMENSIONAL STABILITY	
Linear Shrinkage	Less than 0.1%

Products are tested in accordance with: Surface Burning Characteristics ASTM E84.

STEEL STUD

STC	TEST NO.	CONSTRUCTION DESCRIPTION	FIRE TEST	FIRE RATING
DOUBLE LAYER WALL SYSTEM				
56	TL-93-351	⅝" Type "X" gypsum; 3⅝" SS, 3½" thick Sound Attenuation Batt Insulation	UL-U423	2 Hr.
54	NBC No. S3a	⅝" Type "X" gypsum; 2½" SS, 2½" thick Sound Attenuation Batt Insulation	NBC No. S3a	2 Hr.
UNBALANCED WALL SYSTEM (2 LAYER/1 LAYER OF GYPSUM)				
54	TL-92-368	Unbalanced ⅝" Type "X" gypsum; 3⅝" SS, 3½" thick, Sound Attenuation Batt Insulation	UL-U465	1 Hr.
51	TL-93-036	Unbalanced ⅝" Type "X" gypsum; 2½" SS, 2½" thick, Sound Attenuation Batt Insulation	ULC W409	1 Hr.
SINGLE LAYER WALL SYSTEM				
49	TL-92-349	Single layer ⅝" Type "X" gypsum; 3⅝" SS, 2½" thick, Sound Attenuation Batt Insulation	UL U465	1 Hr.
44	TL-93-033	Single layer ⅝" Type "X" gypsum; 2½" SS, 2½" thick, Sound Attenuation Batt Insulation	ULC W409	1 Hr.

SOUND ATTENUATION BATT INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESIGN CONSIDERATIONS

Several important design and construction details can significantly improve acoustical performance of interior drywall partitions.

Door specifications: For optimum noise control, solid wood core or metal doors should be specified. A soft weather-stripping should be used to gasket door tops and sides. Air seals or threshold closures at the bottom of the door will reduce sound transmission. Stagger doors on hallways so that doors do not open across from one another.

Ducts: Pay special attention to duct design when planning the layout because outdoor sounds are easily transmitted into the building interior through them. Vertical ducts and ventilation shafts often rattle in windy areas or pop due to thermal expansion and contraction. Owens Corning offers a variety of products—including duct wraps and liners—to effectively reduce duct noise.

Equipment: Ideally, HVAC equipment should be positioned away from areas where acoustical performance is important. A well-insulated room with a solid core door can help to isolate the noise of furnaces, air conditioners and other equipment.

Plumbing: Eliminate unwanted sounds in pipe runs by designing in swing arms so expansion and contraction can occur without binding. Isolate piping from surrounding structures with resilient mounts. Avoid back-to-back fixture installation. For optimum acoustical integrity, plumbing openings made in walls should be caulked.

Electrical: Electrical service boxes, switches and outlets can increase sound transmission if placed back-to-back. Position them on well-insulated interior walls, not on party or corridor walls.

Seal the perimeter: Use a nonhardening caulk such as a butyl rubber-based compound to seal walls at both top and bottom plates. Two layers of properly staggered wallboard, with joint compound and tape, will effectively seal corners where required.

Special: Unfaced Thermal Batt Insulation should not be used for applications where it could be subject to human contact because of the potential for skin irritation.

INSTALLATION

- Select the SAB product that completely fills the cavity space.
- Friction-fit Sound Attenuation Batts in place until the interior finish is applied.
- Supplementary support should be provided if the cavity is open on one side greater than 8'.
- Cut or split insulation to fit around obstructions such as wiring, junction boxes and outlets.
- Keep product dry during storage, shipping and installation.

APPLICABLE STANDARDS

- Sound Attenuation Batts comply with ASTM C665, Type I and ASTM E136. ASTM C665 replaces canceled Federal Specification HH-I-521F and the MEA 332-83-M requirements of New York City.
- Sound Attenuation Batt Insulation surface burning characteristics were derived from products tested in accordance with ASTM E84, a standard used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions. The resulting numerical values—reported to the nearest 5 rating—are not intended to reflect hazards presented by this or any other material under actual fire conditions.

CERTIFIED RECYCLED CONTENT SCS GLOBAL SERVICES

AVERAGE 65% RECYCLED CONTENT
18% PRE-CONSUMER
47% POST-CONSUMER

APPLIES TO UNFACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 98%

APPLIES TO UNFACED PRODUCT

GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818 GOLD

GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818

SONOBATTS® INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION & USES

- Unfaced
- Kraft-Faced
- Designed and sized for application over standard suspended ceiling tiles, they control noise and improve the thermal performance of ceiling systems.
- Sonobatts® flexible fiberglass insulation is available in R-values* ranging from 11 to 38 and either unfaced or kraft-faced in thicknesses from 3½" to 12".

FEATURES & BENEFITS

- Ideal for renovation and remodeling projects; install in suspended ceiling systems by simply laying the product on top of the ceiling panels.
- Because of the excellent thermal resistance of Sonobatts insulation, it may be possible to reduce the size and/or operating cost of HVAC equipment.
- Significantly improves ceiling STC ratings by 4 to 10 points. Sonobatts insulation has been tested for air erosion (according to UL 181) and can be used in a return air plenum at air velocities up to 1,000 fpm for acoustical benefit.

DESIGN CONSIDERATIONS

- For Sonobatts® insulation to improve energy efficiency when installed on suspended ceiling systems, the building envelope must block the movement of air from the outdoor environment to the conditioned space. Do not rely on the insulation or its facing to provide an air barrier.
- Minimizing the number of penetrations in the ceiling will help to maximize thermal performance. Large (4' x 4') ceiling panels and surface-mounted lighting can be used to reduce penetrations and improve thermal performance.
- Using the area above the insulation as a return air plenum would render the insulation thermally ineffective, as the air above the ceiling would be at the same temperature as the room below. In return plenum applications, thermal insulation would best be added at the side walls and roof.
- For acoustical control in floor-to-ceiling partition systems, insulation placed at the top of a suspended ceiling will reduce the transfer of sound over the partition. If thermal performance is not a factor, the area above the insulation may serve as a return air plenum.
- Adding insulation inside a structure's perimeter exposes the exterior building materials to greater temperature extremes and expansion and contraction forces.

* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

SONOBATTS® INSULATION TECHNICAL DATA

WIDTH		LENGTH		THICKNESS		R-VALUE[1]
24"	609 mm	48"	1219 mm	12"	305 mm	38.0
24"	609 mm	48"	1219 mm	9½"	241 mm	30.0
24"	609 mm	48"	1219 mm	6¼"	159 mm	19.0
24"	609 mm	48"	1219 mm	3½"	89 mm	11.0

1. R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

Note: Unfaced Sonobatts® insulation complies with the property requirements of ASTM C665, Type I and ASTM E136. Kraft-faced Sonobatts® Insulation complies with the property requirements of ASTM C665, Type II, Class C.

SURFACE BURNING CHARACTERISTICS/BUILDING CODE CONSTRUCTION CLASSIFICATIONS

PRODUCT TYPES	FLAME SPREAD	SMOKE DEVELOPED	ICBO	BOCA	SBCCI	ICC
Unfaced	10	10	All Types	All Types	All Types	All Types
Kraft-Faced	N/R	N/R	III, IV, V	III, IV, V	III, IV, V	III, IV, V

Sonobatts® insulation complies with the International Building Code (ICC), Uniform Building code (ICBO), National Building Code (BOCA) and Standard Building Code (SBCCI) model code requirements for building construction types listed above. Kraft facing on Sonobatts® insulation will burn and must not be left exposed. The facing must be installed in substantial contact with an approved ceiling construction material. Protect facing from open flame or heat source.

VAPOR RETARDERS	KRAFT
Perms Maximum[1]	1
WATER VAPOR SORPTION	
Maximum by Weight	5%
DIMENSIONAL STABILITY	
Linear Shrinkage	Less than 0.1%
AIR EROSION	
Air Velocities per UL 181 up to 1000 fpm	Less than 0.1%

1. Products are tested in accordance with:

R-value	ASTM C518
Surface Burning Characteristics	ASTM E84
Perm Rating	ASTM E96

- Refer to the ceiling system manufacturer's recommendations for maximum backloading and for information on fire-resistance rated floor or roof-ceiling assemblies.
- Kraft facings on this insulation will burn and must not be left exposed. Facing should be installed in substantial contact with an approved ceiling construction material.

INSTALLATION

- Easily installed by simply laying them on top of the ceiling panel and suspension system. Fit Sonobatts together tightly to reduce heat loss.
- Keep product dry during storage, shipping and installation.

APPLICABLE STANDARDS

- Tests conducted according to ASTM C18 were used to determine thermal resistance values. The listed R-values* are for insulation only.
- Sonobatts® insulation complies with ASTM C665, Type I and ASTM E136 (unfaced) and with ASTM C665, Type II, Class C (kraft-faced.)
- The surface burning characteristics for Sonobatts insulation were derived from products tested in accordance with ASTM E84, a standard used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions. The resulting numerical values—reported to the nearest 5 rating—are not intended to reflect hazards presented by this or any other material under actual fire conditions.
- Tests conducted in accordance with ASTM E96 (desiccant method) were used to produce the vapor retarder permeance of the kraft facings on Sonobatts insulation.

CERTIFIED RECYCLED CONTENT™ SCS GLOBAL SERVICES
AVERAGE 65% RECYCLED CONTENT
18% PRE-CONSUMER
47% POST-CONSUMER
APPLIES TO UNFACED PRODUCT

CERTIFIED RECYCLED CONTENT™ SCS GLOBAL SERVICES
AVERAGE 55% RECYCLED CONTENT
18% PRE-CONSUMER
37% POST-CONSUMER
APPLIES TO FACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 98%
APPLIES TO UNFACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT PRODUCT 57%
APPLIES TO KRAFT-FACED PRODUCT

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818 GOLD

UL GREENGUARD PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS UL.COM/GG UL 2818

CURTAINWALL INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION, USES & DESIGN CONSIDERATIONS

- Unfaced
- Faced (FSK)
- Provides thermal performance in curtainwall spandrel systems when placed between or over framing members and held in place with mechanical fasteners.
- Semirigid, board-like fiberglass insulation is available unfaced or FSK (foil-reinforced kraft) faced in thicknesses from 1" to 4". (Evaluate the use of vapor retarders based on the project requirements.)
- Equip curtainwall buildings with sprinkler systems for fire protection as required by building codes.

FEATURES & BENEFITS

- The standard size is 24" x 48"; nonstandard lengths and widths are available.
- Accommodates most thermal specifications.
- Will not decay or slump within the wall cavity, and its fibers will not shrink or warp.

INSTALLATION

- Impaling pins, if used, should be 3" to 8" from the edges. Follow pin manufacturer's recommendations.
- Cut with a utility knife and fit into irregularly shaped areas. Install on impaling pins, friction-fit between furring strips, or install with appropriate adhesive. Seal joints and repair facing tears and punctures with a pressure-sensitive foil tape.
- Keep product dry.
- Use adhesives appropriate for lightweight board insulation. Follow manufacturer's recommendations.

APPLICABLE STANDARDS

- ASTM C518 tests determined R-values.* Listed R-values are for insulation only.
- Surface burning characteristics were determined with ASTM E 84, a standard used solely to measure and describe properties of products in response to heat and flame under controlled laboratory conditions. The results are not intended to reflect hazards presented under actual fire conditions.
- Complies with ASTM C612, Type 1A/1B. ASTM C 612 replaces Federal Specification HH-I-558B.
- NRC data produced through ASTM C423 testing.
- Facing permeance determined through ASTM E96 (desiccant method) and the MEA 87-84 requirements of New York City.

* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

CURTAINWALL INSULATION/CW 225 TECHNICAL DATA

DENSITY 2.25 PCF—K-VALUE .23

WIDTH		LENGTH		THICKNESS		R-VALUE[1]
24"	609 mm	48"	1219 mm	4"	102 mm	17.4
24"	609 mm	48"	1219 mm	3½"	89 mm	15.2
24"	609 mm	48"	1219 mm	3"	76 mm	13.0
24"	609 mm	48"	1219 mm	2½"	64 mm	10.9
24"	609 mm	48"	1219 mm	2"	51 mm	8.7
24"	609 mm	48"	1219 mm	1½"	38 mm	6.5
24"	609 mm	48"	1219 mm	1"	25 mm	4.3

1. R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

   Note: CW 225 FSK-faced is not available in 1" thicknesses. Contact your Owens Corning sales representative for complete details on size availability and minimum order quantities.

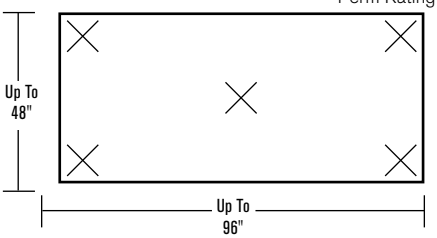
SURFACE BURNING CHARACTERISTICS/BUILDING CODE CONSTRUCTION CLASSIFICATIONS

PRODUCT TYPES	FLAME SPREAD	SMOKE DEVELOPED	ICBO	BOCA	SBCCI	ICC
Unfaced	20	20	All Types	All Types	All Types	All Types
FSK	25	50	All Types	All Types	All Types	All Types

Curtainwall Insulation/CW 225 complies with the International Building Code (ICC), Uniform Building Code (ICBO), National Building Code (BOCA) and Standard Building Code (SBCCI) model code requirements for building construction types listed above.

VAPOR RETARDERS	FSK
Perms Maximum[1]	.02
WATER VAPOR SORPTION	
Maximum by Weight	5%
DIMENSIONAL STABILITY	
Linear Shrinkage at Maximum Use Temperature	Max. 2%

1. Products are tested in accordance with: R-value ASTM C518
   Surface Burning Characteristics ASTM E84
   Perm Rating ASTM E96



Recommended impaling pin pattern. Pins should be located 3" to 8" from the edge(s) of the board.

PERIMETER FIRE CONTAINMENT JOINT[1]

1. See approved System Listing Directories for full system details.

AVERAGE 53% RECYCLED CONTENT
31% PRE-CONSUMER
22% POST-CONSUMER

FIBERGLAS™ 700 SERIES INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION & USES

- Unfaced
- FSK-faced (Foil-Scrim Kraft)
- ASJ (All Service)
- Flexible, semi-rigid and rigid rectangular boards formed from inorganic glass fibers with a thermosetting resin binder.
- 701, 702, 711—Unfaced, lightweight, resilient insulation in a sheet form, used on vessels with irregular surfaces where an exterior finish will be supported mechanically.
- 703, 704—Semi-rigid boards for use on equipment, vessels and air conditioning ductwork. Available unfaced, with factory-applied FSK, ASJ or vapor retarding facings.
- 705—High-strength, rigid board for use on equipment where high abuse resistance and good appearance are required. Available unfaced or with factory-applied FSK, ASJ or vapor retarding facings.
- 707—For acoustical wall panels and specialized ceiling applications.

FEATURES & BENEFITS

- Helps save energy and reduce heat transfer.
- Available in various densities to meet specific performance, appearance and economic requirements.
- Resists damage and maintains structural integrity.
- Excellent acoustic properties.

AVAILABILITY

- Fiberglas™ 700 Series Insulations are available in standard 24" x 48" (610 mm x 1219 mm) boards with thicknesses from 1" (25 mm) to 4" (102 mm) in ½" (13 mm) increments. Contact your Owens Corning Sales Representative for additional sizes or if specific labeling is required for air handling.

SPECIFICATION COMPLIANCE

ASTM C553, Mineral Fiber Blanket Thermal Insulation, Types I, II, III—Type 701, 711
ASTM C612, Mineral Fiber Block & Board Thermal Insulation, Types IA, IB—Types 702, 703, 704, 705, 707
ASTM C795, Thermal Insulation For Use Over Austenitic Stainless Steel[1]
ASTM C1136, Flexible Low Permeance Vapor Retarders for Thermal Insulation, Type I: ASJ; Type II: FSK
Nuclear Regulatory Commission Guide 1.36, Non-Metallic Thermal Insulation[1]
New York City MEA No. 227-83—Types 703 & 705, plain and FSK-faced
CAN/CGSB-51.10—Type I, Class I–Types 703, 704[2]
NFPA 90A and 90B
California Insulation Quality Standards CA-T052

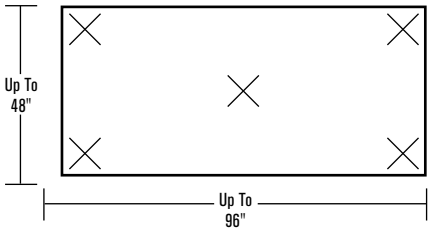
1. Preproduction qualification testing complete and on file. Chemical analysis of each production lot required for total conformance.
2. Standard obsolete, replaced by ASTM C612.

PHYSICAL PROPERTY DATA

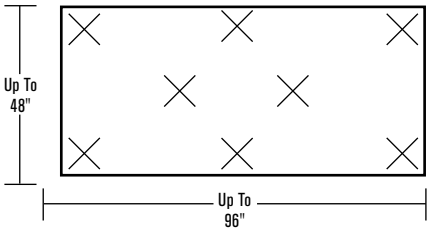
PROPERTY	TEST METHOD		VALUE	
Equipment Operating Temperature Limitation	ASTM C411		Up to 450°F (232°C)[1]	
Insulation Jacket Temperature Limitation	ASTM C1136		-20°F to 150°F (-29°C to 66°C)	
Jacket Permeance	ASTM E96, Proc. A		0.02 perm	
Jacket Puncture Resistance	TAPPI T803		FRK: 25 units; ASJ: 50 units	
Compressive Strength (Minimum) at 10% Deformation	ASTM C165	Type 703	Type 704	Type 705
		25 lb/ft² (1,197 Pa)	60 lb/ft² (2,873 Pa)	200 lb/ft² (9,576 Pa)
at 25% Deformation		90 lb/ft² (4,309 Pa)	225 lb/ft² (10.8 kPa)	
Water Vapor Sorption	ASTM C1104		Max. 5% by Weight	
Nominal Density	ASTM C167	Type 701:	1.5 pcf (24 kg/m³)	
		711:	1.65 pcf (26 kg/m³)	
		702:	2.3 pcf (37 kg/m³)	
	ASTM C303	703:	3.0 pcf (48 kg/m³)	
		704:	4.2 pcf (67 kg/m³)	
		705:	6.0 pcf (96 kg/m³)	
		707:	7.0 pcf (112 kg/m³)	
Composite Surface Burning Characteristics	UL 723[2], ASTM E84[2] or CAN/ULC-S102[2]	Flame Spread	25[2]	
		Smoke Developed	50	

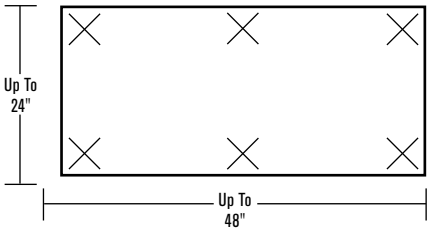
1. Maximum thickness at 450°F (232°C): Type 701, 702: 6" (152 mm); Type 703, 704, 705: 4" (102 mm).
2. The surface burning characteristics of these products have been determined in accordance with ASTM E84, UL 723 or CAN/ULC-S102. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

WALLS: 703 AND 705 SERIES



CEILINGS: 703 AND 705 SERIES





Recommended impaling pin pattern. Pins should be located 3" to 8" from the edge(s) of the board.

FIBERGLAS™ 700 SERIES INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

THERMAL PERFORMANCE, ASTM C680 (TYPE 703)

THICKNESS		OPERATING TEMPERATURE, °F (°C)									
		200	(93)	250	(121)	300	(149)	350	(177)	400	(204)
in	(mm)	HL	ST	HL	ST	HL	ST	HL	ST	HL	ST
1.0	(25)	27	98	42	106	57	114	75	123	95	133
1.5	(38)	19	93	29	99	40	105	52	112	66	119
2.0	(5l)	15	90	22	95	31	100	40	105	50	111
2.5	(64)	12	88	18	92	25	96	32	101	41	106
3.0	(76)	10	87	15	91	21	94	27	98	34	102
3.5	(89)	9	86	13	89	18	92	23	96	30	99
4.0	(102)	8	86	11	88	16	91	21	94	26	97

The above table provides approximate heat loss values (HL), Btu/hr•ft², and Surface Temperatures (ST), °F, for flat surfaces. Values are based on horizontal heat flow, vertical flat surface, 80°F ambient temperature, still air, ASJ jacket. To convert heat loss values to W/m², multiply values by 3.15. To convert surface temperatures, use the formula: °C = (°F-32)/1.8.

SOUND ABSORPTION COEFFICIENTS, ASTM C423

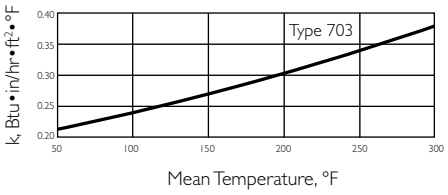
MOUNTING: TYPE A—MATERIAL PLACED AGAINST A SOLID BACKING

PRODUCT	THICKNESS		OCTAVE BAND CENTER FREQUENCIES, HZ						
TYPE	IN	(MM)	125	250	500	1000	2000	4000	NRC
701, plain	1	(25)	0.17	0.33	0.64	0.83	0.90	0.92	0.70
	2	(51)	0.22	0.67	0.98	1.02	0.98	1.00	0.90
703, plain	1	(25)	0.11	0.28	0.68	0.90	0.93	0.96	0.70
	2	(51)	0.17	0.86	1.14	1.07	1.02	0.98	1.00
705, plain	1	(25)	0.02	0.27	0.63	0.85	0.93	0.95	0.65
	2	(51)	0.16	0.71	1.02	1.01	0.99	0.99	0.95
703, FSK	1	(25)	0.18	0.75	0.58	0.72	0.62	0.35	0.65
	2	(51)	0.63	0.56	0.95	0.79	0.60	0.35	0.75
705, FSK	1	(25)	0.27	0.66	0.33	0.66	0.51	0.41	0.55
	2	(51)	0.60	0.50	0.63	0.82	0.45	0.34	0.60
703, ASJ	1	(25)	0.17	0.71	0.59	0.68	0.54	0.30	0.65
	2	(51)	0.47	0.62	1.01	0.81	0.51	0.32	0.75
705, ASJ	1	(25)	0.20	0.64	0.33	0.56	0.54	0.33	0.50
	2	(51)	0.58	0.49	0.73	0.76	0.55	0.35	0.65

Note: Values given in table above are for design approximations only; production and test variabilities will alter results. Specific designs should be evaluated in end-use configurations.

THERMAL CONDUCTIVITY

MEAN	k, Btu•in/hr•ft2•°F							MEAN	l, W/m•°C						
TEMP.°F	701	702	703	704	705	707	711	TEMP.°F	701	702	703	704	705	707	711
50	0.22	0.21	0.21	0.22	0.22	0.27	0.22	10	0.032	0.030	0.030	0.032	0.032	0.039	0.032
75	0.24	0.23	0.23	0.23	0.23	0.28	0.24	25	0.035	0.032	0.033	0.034	0.034	0.041	0.035
100	0.26	0.24	0.24	0.25	0.25	0.29	0.25	50	0.040	0.036	0.036	0.038	0.037	0.043	0.039
150	0.30	0.27	0.27	0.28	0.27	0.31	0.29	75	0.045	0.041	0.040	0.042	0.041	0.046	0.044
200	0.35	0.31	0.30	0.31	0.30	0.33	0.33	100	0.052	0.046	0.045	0.046	0.045	0.048	0.048
250	0.40	0.36	0.34	0.35	0.33	0.35	0.37	125	0.059	0.053	0.050	0.051	0.049	0.051	0.058
300	0.46	0.41	0.38	0.39	0.37	0.37	0.43	150	0.067	0.060	0.055	0.056	0.053	0.053	0.062



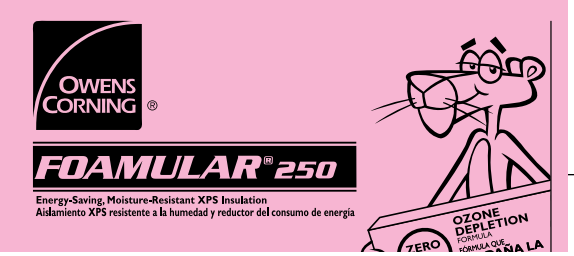
Apparent thermal conductivity curve determined in accordance with ASTM Practice C1045 with data obtained by ASTM Test Method C177. Values are nominal, subject to normal testing and manufacturing tolerances.

APPLICATION RECOMMENDATIONS

- Types 701 and 702 are lightweight, unfaced, flexible insulations in batt form for use on vessels having irregular surfaces, where compressive strength is not a performance criterion.
- Types 703, 704 and 705 are board insulations usually impaled over welded pins on flat surfaces. Unfaced boards are normally finished with reinforced insulation cement or weather-proof mastic.
- ASJ-, FSK- or faced insulation boards shall be applied using mechanical fasteners such as weld pins or speed clips. Fasteners shall be located not less than 3" (75 mm) from each edge or corner of the board. Pin spacing along the equipment shall be no greater than 12" (300 mm) on center. Additional pins or clips may be required to hold the insulation tightly against the surface where cross breaking is used for stiffening. Weld pin lengths must be selected to ensure tight fit but avoid "oil canning."
- In multiple layer applications, use faced material on outer layer only. Where a vapor retarder is required, cover pins and clips with vapor sealing, pressure-sensitive patches matching insulation facing. Rub hard with a plastic sealing tool to ensure a tight bond and a vapor seal.
- All insulation joints should be sealed with pressure-sensitive joint sealing tape to match the insulation facing. Rub hard with a plastic sealing tool to effect a tight bond. Recommended practice suggests a 3" (76 mm) wide tape on flat surfaces or where edges are shiplapped and stapled. Use 5" (102 mm) wide tape in lieu of shiplapping. If insulation is being applied to sheet metal ductwork, all sheet metal joints must be sealed prior to insulating. Glass fabric and mastic may be used in lieu of pressure sensitive tape.
- May be installed in either single or multiple layers up to a maximum of 6" (152 mm) at temperatures not over 450°F (232°C).

CERTIFIED RECYCLED CONTENT™
SCS GLOBAL SERVICES

AVERAGE 53% RECYCLED CONTENT
31% PRE-CONSUMER
22% POST-CONSUMER



FOAMULAR® EXTRUDED POLYSTYRENE (XPS)

RIGID FOAM INSULATION

DESCRIPTION & USES

- FOAMULAR® 150/250 Insulation
- FOAMULAR® 400/600/1000 Insulation
- FOAMULAR® CW15/CW25 Cavity Wall Insulation
- FOAMULAR® High-R CW Plus Insulation
- FOAMULAR® INSULPINK®-Z Insulation
- FOAMULAR® PROPINK® Insulating Sheathing
- FOAMULAR® Insulating Sheathing
- FOAMULAR® INSUL-DRAIN® Insulating Drainage Board
- FOAMULAR® AGTEK Insulation
- FOAMULAR® 404/604/404RB/604RB Insulation
- FOAMULAR® THERMAPINK® and DURAPINK® Insulation
- FOAMULAR® LT30 and LT40 Insulation
- FANFOLD Damproofing Waterproofing Board (DWB)

WHAT MAKES FOAMULAR® EXTRUDED POLYSTYRENE (XPS) SUSTAINABLE?

Sustainability has many definitions in the design community, but in simple terms it's all about how the construction, use and maintenance of buildings impacts the use of resources over the long-term life of the building.

FOAMULAR® extruded polystyrene is a highly effective insulation. The energy used in making insulation products is typically saved in reduced energy usage in the first year of building occupancy.

FOAMULAR® rigid foam insulation is highly moisture resistant and will not support mold growth.** This resistance to moisture, combined with excellent compressive strength and dimensional stability, makes FOAMULAR® insulation re-usable.

FOAMULAR® is certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification Program® and the GREENGUARD Children & Schools Certification Program℠.

FOAMULAR® rigid foam insulation is made with a high percentage of pre-consumer recycled material and has been certified by SCS Global Services. FOAMULAR® insulation is also reusable.

FOAMULAR® rigid foam insulation can help contribute to credits under the Leadership in Energy and Environmental Design (LEED®) program of the U.S. Green Building Council in the following categories: Energy and Atmosphere (various credits), Materials and Resources (Resource Re-use, Recycled Content, Local Regional Materials) and Innovation & Design.

FEATURES & BENEFITS

- FOAMULAR® insulation is an extruded polystyrene rigid foam insulation
- A wide variety of standard sizes, thicknesses and compressive strengths meet the requirements of nearly every application. High-strength FOAMULAR® insulation products meet the challenge of under-slab and foundation, wall and cavity applications. Compressive strengths range from an economical 15psi—the world's lowest density extruded polystyrene insulation—to 100 psi.
- Suited for diverse applications such as cavity walls, steel- or wood-framed wall sheathing, furred walls, foundation walls, precast and tilt-up concrete walls, under concrete slabs and in decks. Ideal for roofing applications including single-ply, tapered, BUR and protected membrane systems.
- FOAMULAR® insulation maintains 90 percent of its R-value for the lifetime† of the product and covers all ASTM C578 properties.

- Thermal performance is better than other commonly used insulating products with a long-term, aged thermal resistance (R-value*) of 5 per 1" of thickness at 75°F mean temperature.
- FOAMULAR® insulation is easy to handle and install. Extruded polystyrene insulation is lightweight, durable and impact resistant, which helps to reduce job site damage. Foam insulation can be scored and fabricated easily with common hand tools.
- Hydrophobic properties minimize wicking and contribute to excellent dimensional stability under moist conditions. Resists groundwater, condensation, water leakage and freeze/thaw cycling, but is also resistant to the effects of fungus, mildew, corrosion and common soil acids. Moisture resistance helps to maintain thermal performance over the life of the product.
- Panels are available with square edge, shiplap or tongue and groove edge to further reduce air infiltration.

STANDARDS, CODES COMPLIANCE

- Meets ASTM C578
- UL Classified. A copy of UL Classification Certificate U-197 is available at www.foamular.com
- See UL ER8811-01 at UL.com
- Fire rated wall and roof assemblies including ASTM E119, E108, NFPA 285, UL 1256 and FM Class I
- Meets California Quality Standards; HUD UM #71A
- Compliance verification by RADCO (AA-650)

DESIGN CONSIDERATIONS

This product is combustible. A thermal barrier is required as specified in the appropriate building code. For additional information, consult MSDS or contact Owens Corning World Headquarters at 1-800-GET-PINK®.

- Many solvent-laden mastics, and some plastic- or oil-based adhesives are not compatible with polystyrene-based insulations.
- Take provisions to protect the insulation from excessive exposure to direct sunlight by covering it as soon as possible.
- In horizontal roof and under slab applications, place foam with black lettering and logo facing down.
- Evaluate all constructions to assess the necessity for providing vapor retarders to avoid condensation and subsequent structural damage. (See the current ASHRAE Handbook of Fundamentals.)

* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

** As manufactured, Fiberglas™ insulation is resistant to mold growth. However, mold growth can occur on building materials, including insulation, when it becomes contaminated with organic material and when water is present. To avoid mold growth on Fiberglas™ insulation, remove any water that has accumulated and correct or repair the source of the water as soon as possible. Insulation that has become wet should be inspected for evidence of residual moisture and contamination, and any insulation that is contaminated should be promptly removed and replaced.

† See actual warranty for details.

AVERAGE 20% RECYCLED CONTENT PRE-CONSUMER

FOAMULAR® EXTRUDED POLYSTYRENE (XPS)

RIGID FOAM INSULATION

FOAMULAR® EXTRUDED POLYSTYRENE INSULATION

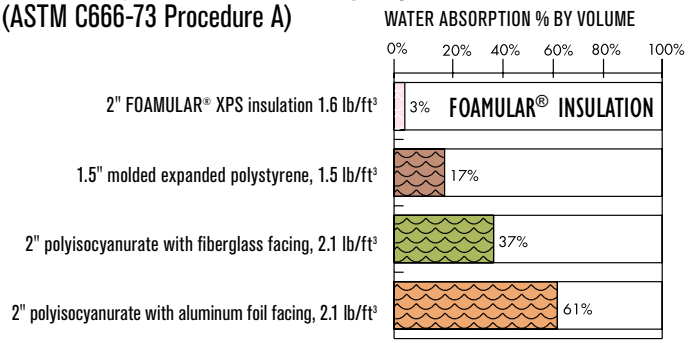
TYPICAL PHYSICAL PROPERTIES[1]

PROPERTY	TEST METHOD[2]	FOAMULAR® 150, INSULPINK®, PROPINK® IS, CW15, HERMAPINK® 18	FOAMULAR® 250, AGTEK, CW25, INSUL-DRAIN®, THERMAPINK® 25, LT30	FOAMULAR® 400, 404, 404RB, LT40	FOAMULAR® 600, 604, 604RB	FOAMULAR® 1000	FOAMULAR® HIGH-R CW PLUS	FOAMULAR® FANFOLD DWB
Thermal Resistance[3], R-Value (180 day), minimum hr•ft²•°F/Btu (RSI, m²•°C/W)	ASTM C518	R-5/inch	R-5/inch	R-5/inch	R-5/inch	R-5/inch	1⅞": R-10 2⅛": R-12 3": R-17	R-1
Compressive Strength[4], minimum psi (kPa)	ASTM D1621	15 CC: 16 (124) TP18: 18 (172)	25 (172) LT30: 30 (207)	40 (276)	60 (414)	100 (689)	25 (172)	10 (69)
Flexural Strength[5], minimum psi (kPa)	ASTM C203	60 (414)	75 (517)	LT30 (30)	115 (793)	115 (793)	75 (517)	–
Water Absorption[6], maximum % by volume	ASTM C272	0.1	0.1	0.05	0.05	0.05	0.1	0.2
Water Vapor Permeance[7], maximum perm (ng/Pa•s•m²)	ASTM E96	1.5 (86)	1.5 (86)	1.1 (63)	1.1 (63)	1.1 (63)	1.5 (86)	1.0 (57)
Dimensional Stability, maximum % linear change	ASTM D2126	2.0	2.0	2.0	2.0	2.0	2.0	–
Flame Spread[8,9]	ASTM E84	5	5	5	5	5	10	10
Smoke Developed[8,9,10]	ASTM E84	45-175	45-175	45-175	45-175	45-175	40	165
Oxygen Index[8], minimum % by volume	ASTM D2863	24	24	24	24	24	24	–
Service Temperature, maximum °F (°C)	–	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)	165 (74)
Linear Coefficient of Thermal Expansion, in/in/°F (m/m/°C)	ASTM E228	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	–
Type Classifications[11]	ASTM C578	Type X	Type IV	Type VI	Type VII	Type V	Type IV	–

1. Properties shown are representative values for 1" thick material, unless otherwise specified. Testing modified as needed for products less than ½" thickness.
2. Modified as required to meet ASTM C578
3. R means the resistance to heat flow; the higher the value, the greater the insulation power. This insulation must be installed properly to get the marked R-value. Follow the manufacturer's instructions carefully. If a manufacturer's fact sheet is not provided with the material shipment, request this and review it carefully. R-values vary depending on many factors including the mean temperature at which the test is conducted, and the age of the sample at the time of testing. The R-value for FOAMULAR® XPS is provided from testing at two mean temperatures, 40°F and 75°F, and 180 day real-time aged (as mandated by ASTM C578). The R-value at 180 day real-time age and 75° F mean temperature is commonly used to compare products and is the value printed on the product.
4. Values at yield or 10% deflection, whichever occurs first. Testing modified as needed for products less than ½" thickness.
5. Value at yield or 5%, whichever occurs first
6. Data ranges from 0.00 to value shown due to the level of precision of the test method
7. Water vapor permeance decreases as thickness increases
8. These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions
9. Data from Underwriters Laboratories Inc.® classified. See Classification Certificate U-197
10. ASTM E84 is thickness-dependent, therefore a range of values is given
11. ASTM Type is not applicable for LT40.

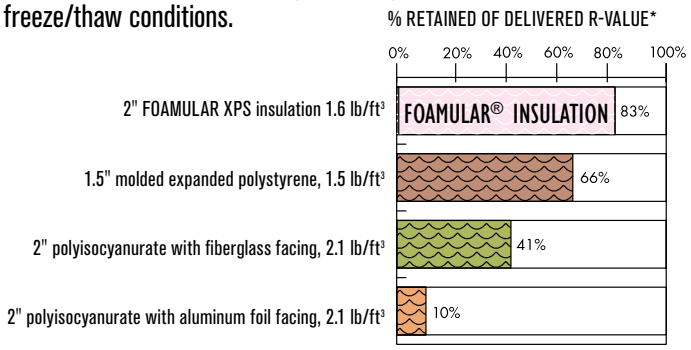
MOISTURE EFFECTS COMPARISON

Water Absorption in Freeze/Thaw Cycling Test (ASTM C666-73 Procedure A)



THERMAL RESISTANCE RATIO (TRR%)

Retention of R-value* after repeated exposure to moisture and freeze/thaw conditions.



* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

ELAMINATOR® METAL BUILDING INSULATION SYSTEM

FIBERGLASS INSULATION–PRODUCT DATA

FEATURES & BENEFITS

- ELAMINATOR® insulation system offers the 100 and 300 Series patented machines to insulate metal building roof assemblies. ELAMINATOR® insulation is available for any project through a nationwide coverage of franchised laminators who comply with the operational requirements of the Owens Corning™ ELAMINATOR® franchise.
- The ELAMINATOR® 300 Series machines meet OSHA requirements to provide fall safety protection while enhancing roof-sheeting productivity. (See Technical Bulletin Pub. No. 57201 for OSHA compliance details.) Each project has a qualified operator who is in the Owens Corning™ ELAMINATOR® Certified Operator Program (CEOP).
- The ELAMINATOR® insulation meets thermal performance codes and specifications with either the single-layer (R-10 up to R-19) or the double-layer insulation levels (total out-of-package R-values R-20 up to R-38).
- ELAMINATOR® insulation provides an attractive appearance with 100 Series machines or single-layer insulation levels and 300 Series with machines standard installation profile: Sculpture Profile.
- ELAMINATOR® Sculpture Profile™ provides a uniform interior appearance without exposed seams where the facing vapor barrier overlaps over the top of the purlins. The profile provides exposed purlins meeting thermal performance requirements for most buildings.

Installation Methods

- In double-layer applications with 300 Series, Owens Corning™ ELAMINATOR® insulation is installed in two layers: the first layer is installed between the purlins, and the second layer is installed perpendicular and over the purlins with patented folding facing sized to accommodate the total thickness of the two layers. Sculpture Profile is achieved with the vapor barrier facing overlapped over the top of the purlins with 1" Foamular (extruded polystyrene) thermal blocks as an option to achieve specified U-values.
- In double-layer applications with 100 Series (120 machines), Owens Corning™ ELAMINATOR® insulation is installed in two layers: the first layer is installed between the purlins in pieces cut to fit the purlin space, and the second layer is installed perpendicular and over the purlins with folding facing sized to accommodate the total thickness of the two layers. Sculpture Profile is achieved with the vapor barrier facing overlapped over the top of the purlins with 1" FOAMULAR® (extruded polystyrene) insulation thermal blocks as an option to achieve specified U-values.
- In single-layer applications with 100 or 300 Series machines, Owens Corning™ ELAMINATOR® insulation is installed perpendicular and over the purlins with facing sized to accommodate the total thickness of the single layer. Sculpture Profile is achieved with the vapor barrier facing overlapped over the top of the purlins with 1" FOAMULAR® (extruded polystyrene insulation) thermal blocks as an option to achieve specified U-values.

Important Safety Issues

- The roof slope may be less than or equal to 3:12 for both the 100 and 300 Series machines.
- 300 Series machines equipped with Purlin Stabilizer Wheels can install the ELAMINATOR® insulation system on purlins without structural roof cross bracing.
- 100 Series machines with double-layer applications require structural roof cross bracing.
- 300 Series machines provide fall protection that meets current OSHA safety standards.
- 100 Series machines require additional OSHA-compliant safety methods and/or personal fall arrest systems to meet current OSHA safety standards.
- 100 Series 120 machines are designed to install the ELAMINATOR® insulation system over the SkyWeb II® safety net system.
- 300 Series machines are advanced down the roof with a cable pulling system or a patented Power Puller system. Owens Corning recommends the use of the Power Puller system, which allows the workers to stay within the guardrail system for the operation of the machines.
- Use of a crane or a forklift with appropriate rigging is required to lift the machines to and from the roof.
- A qualified machine operator who is certified or has a certificate from the Owens Corning™ ELAMINATOR® Certified Operator Program (CEOP) must assemble, operate and disassemble the 300 Series machines during the project roofing stage. This assures the owner, architect and contractor that the machine operation is performed by an operator who was trained to operate the 300 Series machines in accordance with Owens Corning written procedures.

Vapor Control Considerations

- All reinforced laminated vapor retarder facings may be used with the ELAMINATOR® insulation system.
- Selection of a specific facing depends on the building design to meet light reflectance, vapor control and abuse resistance requirements.
- For optimum moisture control, facings with a maximum permeance rating of 0.10 perm are recommended.
- ELAMINATOR® insulation system is not to be used in buildings with high moisture levels, such as buildings that house swimming pools.
- Detailed information on performance of available facings can be obtained from the ELAMINATOR® franchisee.

Installation Specifications Considerations

- Installation must be made in accordance with Owens Corning published ELAMINATOR® installation manuals and must comply with applicable provisions of OSHA, state, local and owner safety and health codes.
- Selection of the appropriate ELAMINATOR® installation method is at the discretion of the ELAMINATOR® franchisee and depends on the insulation levels required, conditions at the job site and other project-specific criteria.
- To specify R-values to meet U-value performance, see the Owens Corning™ ELAMINATOR® Technical Bulletins on ELAMINATOR® insulation U-value thermal performance data which is obtained by ANSYS, finite element model, validated by hotbox test (ASTM C976). (100 Series Pub No: 5-MB-43647C or 300 Series Pub No: 5-MB-22790D.)

CERTIFIED RECYCLED CONTENT™ SCS GLOBAL SERVICES
AVERAGE 65% RECYCLED CONTENT
18% PRE-CONSUMER
47% POST-CONSUMER

UL GREENGUARD
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818
GOLD

UL GREENGUARD
PRODUCT CERTIFIED FOR LOW CHEMICAL EMISSIONS
UL.COM/GG
UL 2818

* SkyWeb II is a registered trademark of Butler Manufacturing, Inc.

CERTIFIED R METAL BUILDING INSULATION

FIBERGLASS INSULATION–PRODUCT DATA

DESCRIPTION & USES

- A light-density glass fiber blanket designed for use as part of the insulation system in the roofs and walls of pre-engineered metal buildings. Certified R Metal Building Insulation is designed to be laminated with a variety of appropriate facings for attractiveness, abuse resistance and moisture control.
- It is available in standard R-values* of 10, 11, 13, 16 and 19. R-25 and R 30 are available as special order items. Standard roll widths are 36", 48", 60" and 72." Selected made-to-order widths are also available.
- Several methods are used to insulate metal buildings. The usual method is to apply the insulation over the structural members (purlins and girts) and inside the exterior panels. Methods such as the Owens Corning ELAMINATOR insulation system are also available to apply insulation between purlins so as to accommodate greater insulation thicknesses and better thermal performance.

Certified Thermal Performance

Owens Corning™ Certified R Metal Building Insulation is regularly tested to ensure compliance to the NAIMA 202-96 (Rev. 2000) Standard. Sampling and testing are performed by the National Association of Home Builders Research Laboratories (NAHBR). The product is labeled on the top surface of each roll with the nominal R-value* and the "NAIMA 202-96 (Rev. 2000)" to indicate compliance. The NAIMA 202-96 (Rev. 2000) standard specifies thermal performance which provides the capability of obtaining nominal thermal resistance (R-values*) after laminating. The actual thermal performance obtained from the laminated product will depend primarily on the recovered thickness.

SPECIFICATION COMPLIANCE

NAIMA 202-96 (Rev. 2000) Standard for Flexible Fiberglass Insulation Used in Metal Buildings
ASTM C991 Type I, Standard Specification for Flexible Fibrous Glass Insulation for Metal Buildings

PHYSICAL PROPERTY DATA

PROPERTY	TEST METHOD	RESULT
Water Vapor Sorption	ASTM C1104	<2% by weight
Fungi Resistance	ASTM C1338	Provides no sustenance
Fire Hazard Classification	UL 723[1], ASTM E84[1] and CAN/ULS S102[1]	FHC 25/50
Noncombustibility	ASTM E136	Noncombustible

1. The surface burning characteristics of these products have been determined in accordance with UL 723. This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Values are reported to the nearest 5 rating.

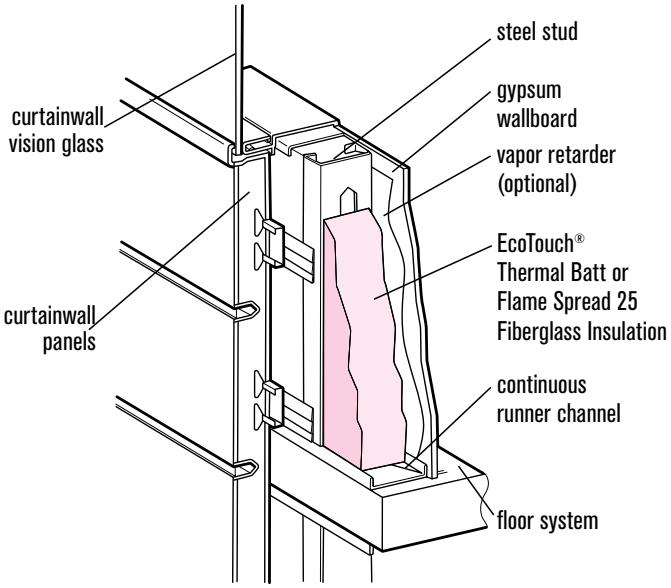
AVERAGE 65% RECYCLED CONTENT
18% PRE-CONSUMER
47% POST-CONSUMER

* R-values differ. Find out why in the seller's fact sheet on R-values. Higher R-values mean greater insulating power.

EXTERIOR WALL SYSTEM: STEEL STUD FRAMING

Product Options

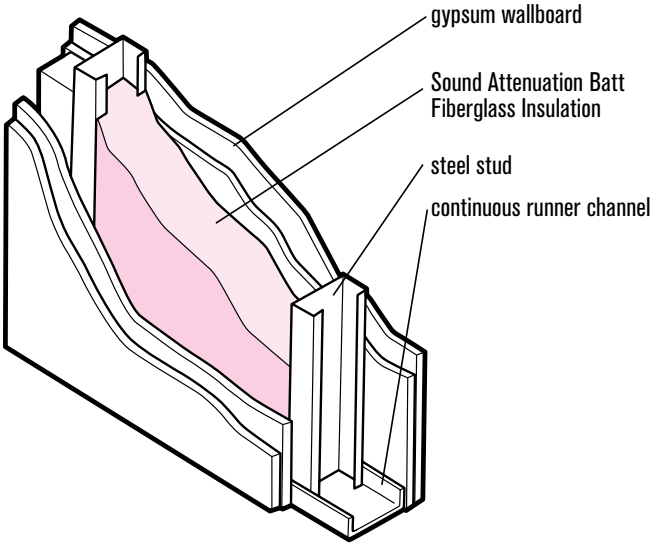
- EcoTouch® Thermal Batt Fiberglass Insulation
- EcoTouch® Flame Spread 25 Insulation



INTERIOR WALL SYSTEM: DOUBLE LAYER GYPSUM

Product Options

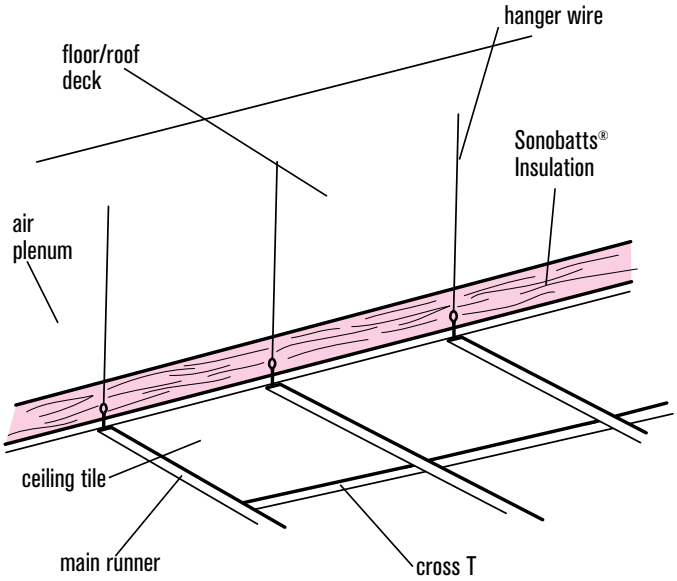
- Sound Attenuation Batt Fiberglass Insulation



SUSPENDED CEILING SYSTEM

Product Options

- Sonobatts® Insulation



Steel Stud/Brick Veneer Walls

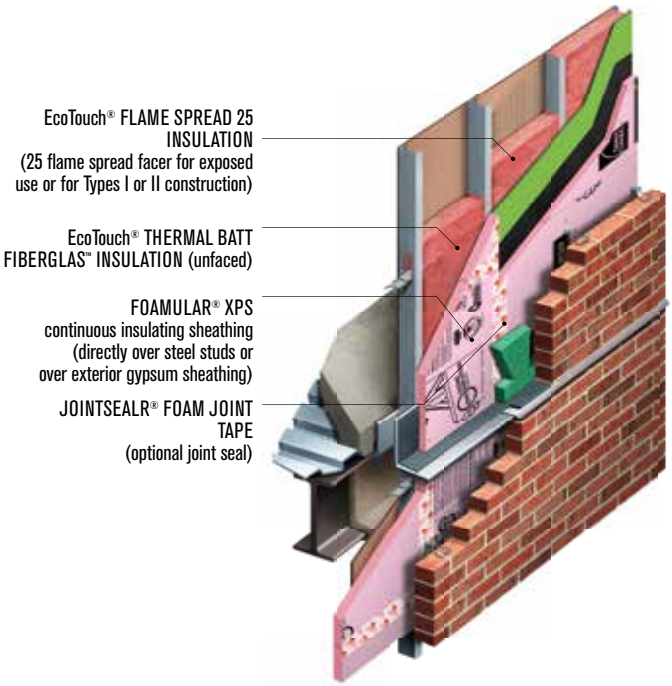
Product Options

- EcoTouch® Flame Spread 25 or Thermal Batt Fiberglass Insulation
- FOAMULAR® XPS Insulation
- JointSealR® Foam Joint Tape

Installation & Design Considerations

- EcoTouch® Batts are suitable for installation in the stud cavity.
- FOAMULAR® Insulation is not a structural material so when using, provide adequate bracing for structural framing.
- Steel stud spacing, 24" o.c. maximum.
- Between the inside brick face and the exterior surface of the insulation board, provide a minimum of 1" clear space, 1" in residential construction.
- Use corrosion-resistant masonry ties; connect them directly to steel framing.
- Install with caulk movement joints, functioning weep holes and adequate flashings.
- Insulation joints must fit together tightly and should be sealed with sealant or tape recommended by its manufacturer for this application.
- Building designer should determine the need for and placement of vapor retarders, air barriers and moisture barriers.

IMPORTANT NOTE: ASHRAE 90.1 compliance requires the use of a "CONTINUOUS INSULATION LAYER" over the exterior flange of the steel stud. FOAMULAR® XPS insulation meets this requirement.



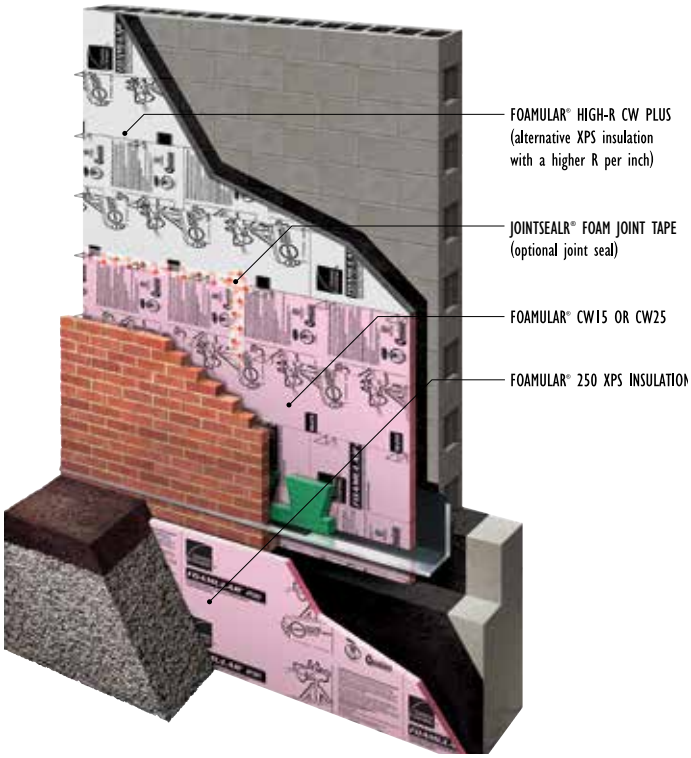
MASONRY CAVITY WALLS

Product Options

- FOAMULAR® CW15/CW25 Insulation
- FOAMULAR® 250 Insulation Scored Square Edge
- FOAMULAR® High-R CW Plus Insulation
- JointSealR® Foam Joint Tape

Installation & Design Considerations

- Position insulation horizontally between wall ties directly on back-up wall.
- Tightly fit insulation around vents, louvers, pipes, conduits and other penetrations. Foam insulation board joints should also fit tightly.
- Install with caulk movement joints, functioning weep holes and adequate flashings.
- Openings and joints may be sealed with construction tape per tape manufacturers' recommendations.
- Use corrosion-resistant masonry ties.
- Maintain a minimum of 1" of clear space between inside brick face and the insulation board's exterior surface.
- Building designer should determine the need for and placement of vapor retarders, air barriers and moisture barriers.



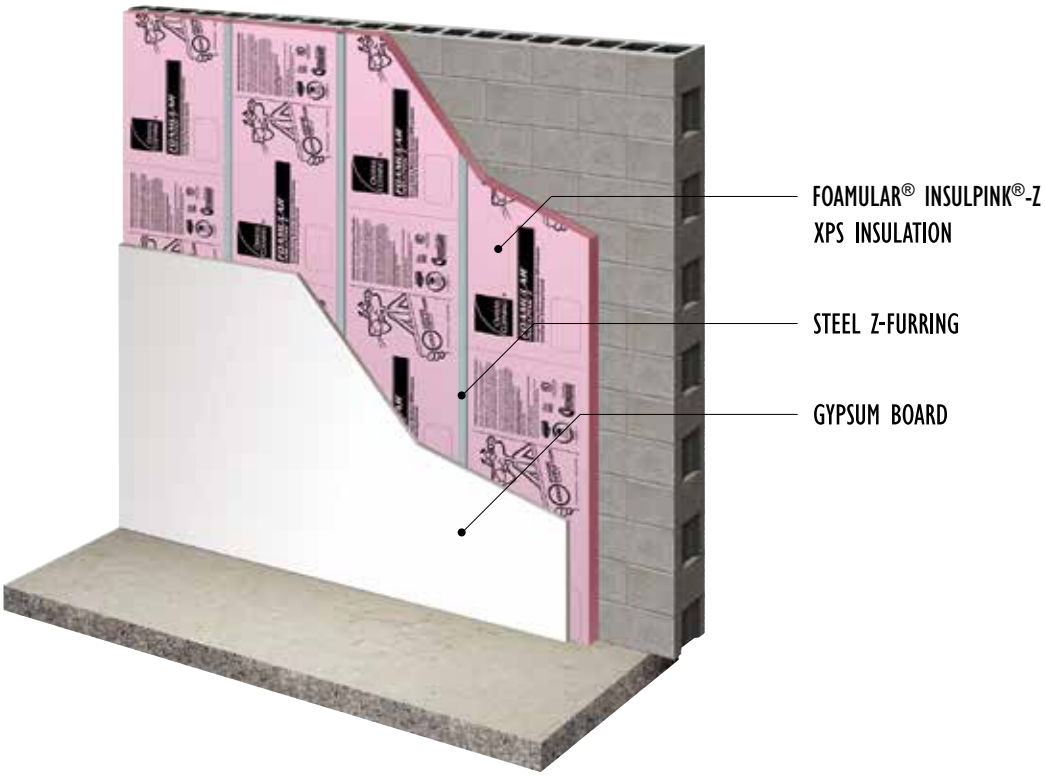
INTERIOR FURRING SYSTEMS

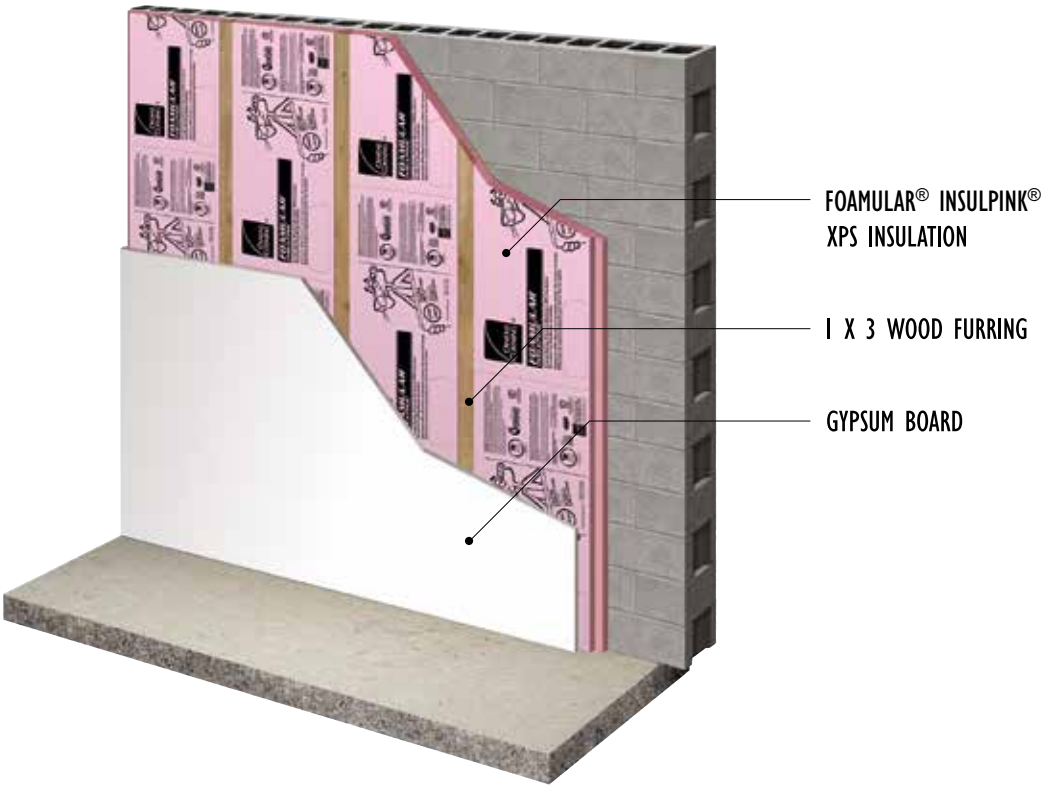
Product Options

- INSULPINK® Insulation
- INSULPINK®-Z Insulation
- Fiberglas™ 700 Series Insulation

Installation & Design Considerations

- Eliminate thermal "shorts" by installing insulation under furring for maximum performance.
- Separate rigid foam from the building interior. Completely cover insulation with an approved thermal barrier.
- 24" o.c. maximum furring spacing. Attach furring to structural wall. Tightly close joints between foam insulation panels.
- Building designer should determine the need for and placement of vapor retarders, air barriers and moisture barriers.





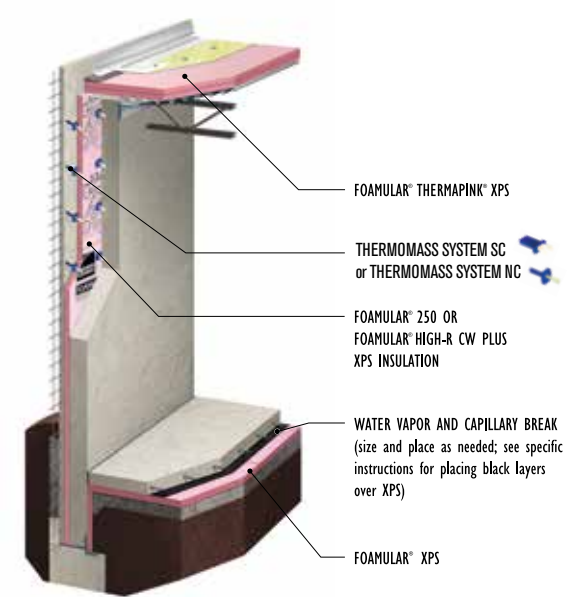
PRECAST/TILT-UP WALLS/VERTICAL POUR

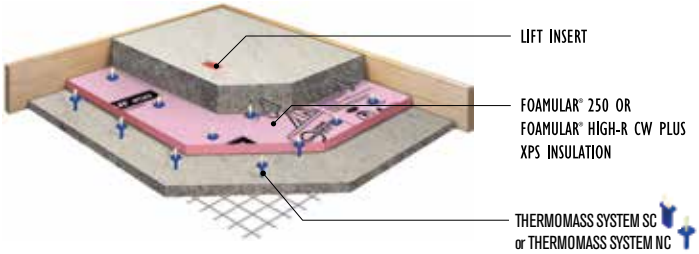
Product Options

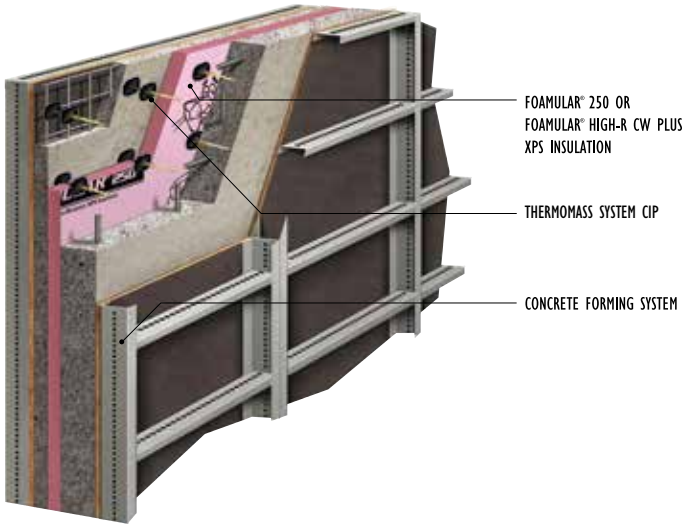
- FOAMULAR® 250 Extruded Polystyrene Rigid Foam Insulation
- Thermomass System NC
- Thermomass System SC
- Thermomass System CIP

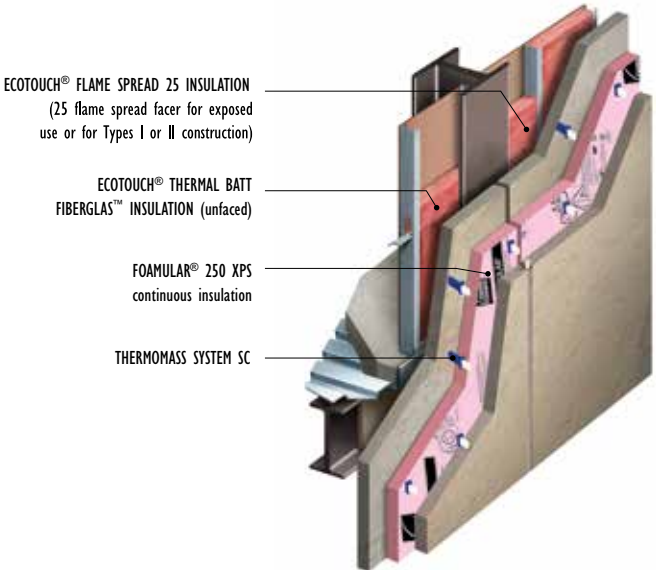
Installation & Design Considerations

- Low-conductivity ties are designed to hold the fascia in place without a concrete-foam bond or solid concrete sections in the panel.
- Minimum wythe thicknesses should be as recommended by the tie system manufacturers.
- Minimum tie spacings should be as recommended by the tie system manufacturers.
- For maximum panel thermal performance, eliminate solid sections of concrete.
- Thermomass connectors are fiber-composite connectors. Follow manufacturers recommendations for structural performance.
- Consolidate concrete in forms by vibrating, walking or other recommended means.









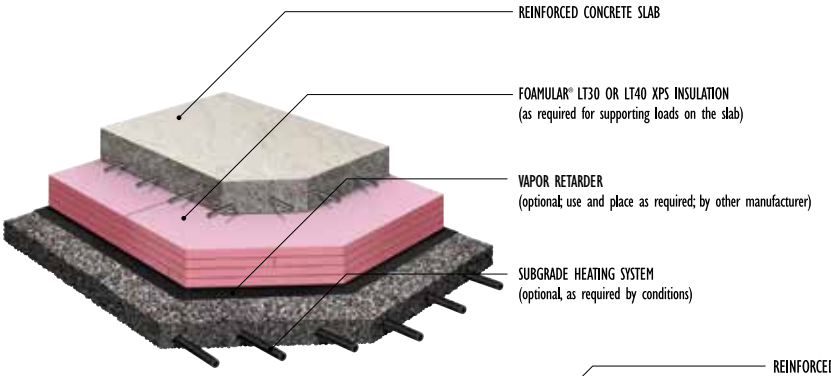
UNDER FLOOR SLABS

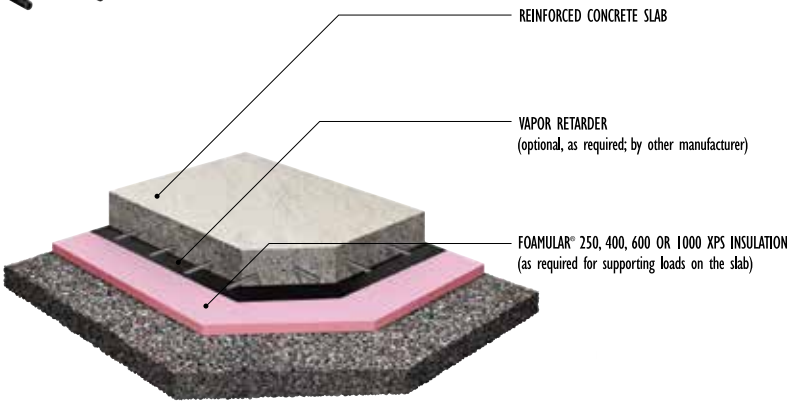
Product Options

- FOAMULAR® 250/400/600/1000 Insulation
- FOAMULAR® LT30 or LT40 Insulation

Installation & Design Considerations

- FOAMULAR® 400, 600 and 1000 Insulation are for industrial applications where floor will experience heavy loads.
- Use FOAMULAR® 250 Insulation in light commercial or residential applications where floors are subject to pedestrian or light working loads.
- To establish a stable, even base, use gravel fill. Gravel must be tamped thoroughly before installing insulation.
- Insulation board should be butted together tightly, and against adjacent vertical insulation surfaces or foundation walls.
- Building designer should determine the need for and placement of vapor retarders.





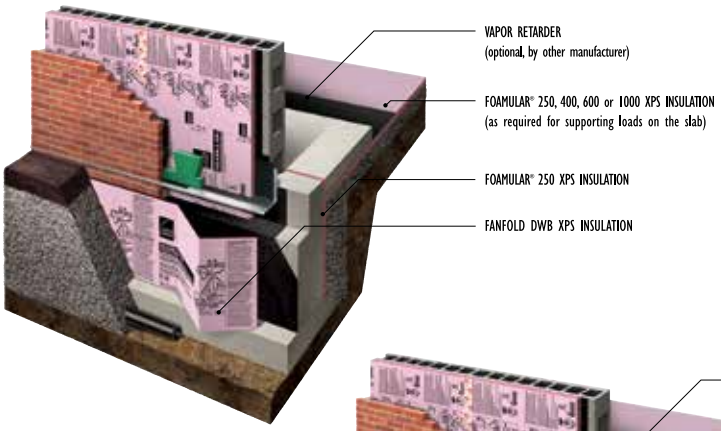
VERTICAL FOUNDATION WALLS

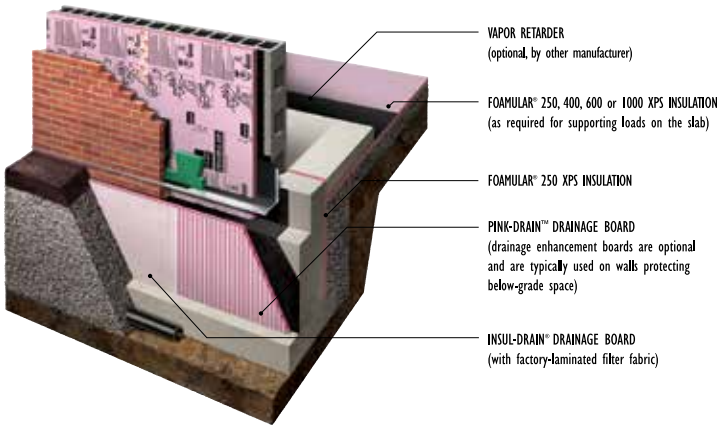
Product Options

- INSUL-DRAIN® Insulating Drainage Board
- FOAMULAR® 250/400/600/1000 Insulation
- FOAMULAR® DWB XPS Insulation

Installation & Design Considerations

- For complete installation details, see the INSUL-DRAIN® insulation drainage board product data sheets.
- Surrounding grades and/or concrete slabs should be sloped away from the foundation.
- Cover any insulation that is installed above grade. Typical coverings include siding, cementitious coatings or masonry veneers.





ENVIRONMENTAL AND SUSTAINABILITY

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. For more information about how Owens Corning can help meet your green building standards, call 1-800-GET-PINK®. For Owens Corning sustainability progress, please visit www.sustainability.owenscorning.com.

HEALTH ASPECTS

The health effects of man-made mineral fibers, such as fiberglass and mineral wool insulation, have been studied for more than 50 years. Several national and international organizations have reviewed that research and evaluated the hazards and risks possibly associated with this material.

There is extensive research stating that Owens Corning insulation glass fibers are safe to manufacture and use when recommended work practices are followed. Among the most recent developments supporting the safety of Owens Corning insulation products is the decision by the U.S. National Toxicology Program to remove soluble glass wool fibers from their list of substances "Reasonably anticipated to be Human Carcinogen". Their decision was released June 10, 2011, in their report to the US Congress titled the 12th Report on Carcinogens.

Research demonstrates:

- Exposures to airborne fibers are low during handling and use.
- Fibers that are inhaled disappear rapidly from the body—at a rate equal to or faster than normal dust.
- There is no evidence of disease from inhaling glass wool insulation fibers.

FIBERGLASS AND MOLD

As manufactured, fiberglass insulation is resistant to mold growth.* However, mold growth can occur on building materials, including insulation, when it becomes contaminated with organic materials and when water is present. To avoid mold growth on fiberglass insulation, remove any water that has accumulated and correct or repair the source of that water as soon as possible. Insulation that has become wet should be inspected for evidence of residual moisture and contamination, and any insulation that is contaminated should be promptly removed and replaced.

APPLICABLE STANDARDS BY PRODUCT

PAGE NO.	PRODUCT	ASTM C578 TYPES IV, V, VI, VII, X	ASTM C612 TYPES IA & IB	ASTM C665 TYPE I	ASTM C665 TYPES I OR II	ASTM C665 TYPES I-III	ASTM C665 TYPE II OR III	NAIMA 202-96	ASTM C991 TYPE I
4	EcoTouch® Thermal Batt Insulation					X			
5	EcoTouch® Flame Spread 25/FS25 Ext. Flgs Fiberglass Insulation						X		
6	Sound Attenuation Batt Insulation			X					
8	Sonobatts® Insulation				X				
9	Curtainwall Insulation		X						
15	Certified R Metal Building Insulation							X	X
10	Fiberglas™ 700 Series Insulation: 701-711			X					
10	Fiberglas™ 700 Series Insulation: 703-705		X						
12	FOAMULAR® XPS Insulation	X							
6	Sound Attenuation Batts			X					

* ASTM C1338-96 Fungi Resistance of Insulation Materials and Facings.

ATTACHMENT SYSTEMS

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

The friction-fit characteristics of Owens Corning glass fiber insulation batts frequently let you install them without additional support. However, many applications of fiberglass and FOAMULAR® insulation products do require support to maintain insulation position. The following list is supplied as a convenience to readers interested in learning more about attachment systems.

ATTACHMENT SYSTEMS

COMPANY	PRODUCT	TELEPHONE
PNEUMATIC NAILERS AND STAPLERS		
Stanley Bostitch	TU20-7, RN45B	1-800-556-6696
Linic Systems	HT-550, HT-755	1-800-513-9918
Paslode	3150W16R, 3200W16	1-800-222-6990
Pneutek	PT-79, PT-250, PT-300-I	1-800-431-8665
Senco	PW, SJ10	1-800-543-4596
Spotnails	HL1620, HL7616AP	1-800-873-2239
POWDER ACTUATED SYSTEMS		
Hilti	DX-600N, XA41-X-AM72	1-800-879-8000
Pneutek	FA-75, SA-45, SA-75W	1-800-431-8665
ITW Ramset/Red Head	D60, SA270, 721, D45	1-800-348-3231
ANCHOR PINS, WASHERS, CAPS AND CLIPS		
AGM Industries	Tactoo Insul-Hangers, Series T and Series TSA	1-800-225-9990
Buildex	Tapcon Concrete Fastening Systems, HWH Teks/3, Gridmate	1-800-848-5611
Gemco	Insulation Hangers, Self Locking Washers, Cupped Head Weld Pins, Weld Pins	1-800-331-1164
Wind-lock Products	Steel Screws, Steel/Plastic Washers	1-800-872-5625
WIRE AND INSULATION SUPPORTS		
Moore Products	Insulation Support Rods and Netting	1-800-241-5807
ADHESIVES		
OSI Sealants	PL 200, PL Premium	1-800-624-7767
Foster & Childers Products	Max Bond, 85-15, 85-120, 85-60, CP-56, CP-82, CP-85, CP-88, CP-89, CP-35	1-800-231-9541
Macco Adhesives	LN-601, LN-604, Liquid Nails	1-800-634-0015
Tacc International	MA-4062, DSA-40, PF-101	1-800-503-6991
3M	Fastbond 42 NF Plus, 847L, 1357, 1870, 1300L	1-800-362-3550
Gemco	Tuff-Bond	1-800-331-1164

This list is supplied for the reader's convenience. Owens Corning does not endorse or recommend these products. Contact the manufacturer for information on products and approved applications.

GUIDE SPECIFICATIONS

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

Owens Corning has a complete family of guide specifications for all of the products and applications shown in this catalog. The specifications are presented in the standardized CSI MasterFormat® 3-part style which facilitates communication among architects, specifiers, contractors and suppliers, helping meet building codes, owners' requirements, timelines and budgets.

The listed guide specifications are published in Owens Corning's Division 7: Thermal and Moisture Protection binder or can be downloaded at www.owenscorningcommercial.com.

GUIDE SPECIFICATIONS	
GENERAL INSULATION (07 21 00)	
FOAMULAR® Extruded Polystyrene (XPS) Insulation	General Product
EcoTouch® Fiberglas™ Insulation	General Product
EnergyComplete™ with Flexible Seal Technology, Exterior Wall	Air Barrier System
WALL INSULATION SYSTEMS (07 21 00 AND 07 24 00)	
CommercialComplete™ Wall Systems	Steel Stud/Masonry Veneer Insulation
CommercialComplete™ Wall Systems	Masonry Cavity Wall Insulation
EcoTouch® Fiberglas™ Insulation	Exterior Wall
Senergy®, Sentry	Stucco CI Wall System (EIFS)
ROOFING/WATERPROOFING INSULATION SYSTEMS (07 22 00 AND 07 21 00)	
THERMAPINK® XPS Insulation	New Roof Construction, Below Membrane Insulation
THERMAPINK® XPS Insulation	Tapered, Below Membrane Insulation
DURAPINK® XPS Insulation, Reroofing	Recover Roofing Insulation
FOAMULAR® XPS Insulation	PRMA, Horizontal Waterproofing Insulation
EcoTouch® Fiberglas™ Insulation	Below Deck Insulation
METAL BUILDING SYSTEMS (07 21 00)	
Optiliner™ Banded Liner System	Metal Building Insulation
ELAMINATOR® Insulation System	Metal Building Insulation System
STEEP SLOPE ROOFING SHINGLES (07 31 00)	
Steep Slope Roofing Shingles	Steep Slope Roofing Shingles
ACOUSTICAL SYSTEMS (09 54 00, 09 81 00 AND 09 84 00)	
EcoTouch® Fiberglas™ Insulation	Acoustical Interior Partition
EuroSpan® Stretch Wall System	Stretched Acoustical Wall Treatment
EuroSpan® Ceilings	Ceiling System
EuroSpan® EOS Ceiling System	Ceiling System
EuroSpan® Translucence System	Stretch Fabric System

ASTM E84: Standard Test Method for Surface Burning Characteristics of Building Materials*
Test determines the relative burning behavior of building materials by observing the flame spread along a specimen in the ceiling position. Both flame spread and smoke developed are reported to the nearest 5 rating.

ASTM E90 Standard Method for Laboratory Measurement of Airborne Sound Transmission Loss in Building Partitions
Test covers lab measures of airborne sound transmission loss in partitions such as walls, floor/ceiling assemblies, doors and other dividing elements.

ASTM E96 Standard Test Method for Water Vapor Transmission of Materials
Test covers transmission of water vapor through materials. Commonly applied to paper, plastic films, fiberboard, gypsum and other sheet plastics and wood materials.

ASTM E119 Standard Test Method for Fire Tests of Building Construction and Materials*
Test determines the time duration for which construction material assemblies will contain a fire, retain their structural integrity or exhibit both properties during a standardized exposure to fire.

ASTM E136 Standard Test Method for Behavior of Materials in Vertical Tube Furnace at 750°C*
Test determines the combustion characteristics of building materials under specific laboratory conditions. Not intended for coated or laminated materials.

ASTM C177 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Guarded Hot Plate
Test uses a guarded hot plate to measure the steady-state thermal transmission properties of insulating specimens. Test accuracy may be difficult to verify when testing specimens of low-density thermal insulation.

ASTM C423 Standard Test Method for Sound Absorption and Sound Absorption Coefficient by the Reverberation Room Method
Test determines the sound absorption coefficients of samples measured over ⅓ octave bands, reported at preferred octave band center frequencies. Several defined mounting conditions are used for testing samples.

ASTM C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter
Test covers the steady-state thermal transmission properties of thermal insulation specimens using a heat flow meter. Test complements and compares specimen data to ASTM C177.

ASTM C523 Standard Test Method for Light Reflectance of Acoustical Materials by Integrating Sphere Reflectometer
Test measures the light reflectivity of acoustical materials and is generally used to predict the room lighting requirements. Results are expressed as a percentage of the incident light reflected by the surface.

ASTM C553 Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications
Specification covers the composition, dimensions and physical properties of mineral fiber blanket intended for use as thermal insulation on surfaces at temperatures from subambient up to 1,200°F (649°C).

ASTM C578 Standard Specification for Rigid Cellular Polystyrene Thermal Insulation
Specification covers the types, dimensions and physical properties of cellular polystyrene intended for use as thermal insulation at temperatures from
-65 to +165°F (-54 to +74°C).

ASTM C612 Standard Specification for Mineral Fiber Block and Board Thermal Insulation
Specification covers the dimensions, composition and physical properties of mineral fiberboard insulation for use on cooled surfaces and on heated surfaces up to 1,800°F (982°C).

ASTM C665 Standard Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing
Specification covers the physical properties and composition of mineral fiber blanket insulation used to acoustically or thermally insulate walls, ceilings and floors in light frame construction and manufactured housing.

ASTM C 1136 Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation
Specification covers vapor retarders for thermal insulation intended for use at temperatures from -20 to +150°F (-29 to +66°C). Specifically, this specification applies to flexible materials with a permeance of 0.10 perm or lower and burning characteristics of no more than 25 flame spread/50 smoke developed or lower.

ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics
Test determines compressive properties of rigid cellular materials such as expanded plastics.

For Certified R Metal Building Insulation.
ASTM C991 TYPE I
ASTM C1104
ASTM C1338

ASTM C203 Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
Test determines the breaking load and calculated flexural strength of a rectangular cross section of a preformed block-type thermal insulation tested as a simple beam. Applicable to cellular plastics.

ASTM C272 Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
Test determines the relative amount of water absorption by various types of structural core materials when immersed or in a high relative humidity environment.

ASTM D2126 Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
Test method covers procedures for the thermal and humid exposure of rigid cellular plastics.

ASTM D2863 Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index)
Test method provides for the measuring of the minimum concentration of oxygen in a flowing mixture of oxygen and nitrogen that will just support flaming combustion of plastics. Correlation with burning characteristics under actual use conditions is not implied.

ASTM E228 Standard Test Method for Linear Thermal Expansion of Solid Materials With a Push-Rod Dilatometer
Test method covers the determination of the linear thermal expansion of rigid solid materials using push-rod dilatometers. This method is applicable over any practical temperature range where a device can be constructed to satisfy the performance requirements set forth in this standard.

NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components
This test provides a method of determining the flammability characteristics of exterior, non-load-bearing wall assemblies/panels. The test method described is intended to evaluate the inclusion of combustible components within wall assemblies/panels of buildings that are required to be of non-combustible construction. It is intended to simulate the tested wall assemblies' fire performance.

CAN/ULC S770 Standard Test Method for Determination of Long-term Thermal Resistance of Closed-Cell Thermal Insulating Foams
Test procedure defines the long-term thermal resistance (LTTR) of a foam product as the value measured after 5-year storage in a laboratory environment and provides means for its prediction based on an accelerated laboratory test.

* These tests are used to measure and describe the response of materials, products or assemblies to heat and flame under laboratory conditions and should not be used to describe the fire risk of materials, products or assemblies under actual fire conditions. The results of these tests may be used as contributing elements in an assessment of fire risk that considers all factors pertinent to a specific end use application.

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