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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.

FOAMULAR® Continuous Insulation "ci">







ECOTOUCH® THERMAL BATT INSULATION

FIBERGLASS INSULATION-PRODUCT DATA

ECOTOUCH® THERMAL BATT INSULATION TECHNICAL DATA/WALL OR CEILING

WIDTH		LENGTH	THICKNESS	R-VALUE ¹					
METAL FRAME CONSTRUCTION	METAL FRAME CONSTRUCTION								
16" 406 mm	24" 609 mm 48" 1219 n	ım 96" 2,438 mm	31⁄2" 89 mm	11.0					
16" 406 mm	24" 609 mm 48" 1219 n	nm 96" 2438 mm	3½" 89 mm	13.0					
16" 406 mm	24" 609 mm 48" 1219 n	nm 96" 2438 mm	6¼" 159 mm	19.0					
WOOD FRAME CONSTRUCTION									
15" 381 mm 19.25" 489 m	m 23" 584 mm	93" 2362 mm 105" 2667 mm	31⁄2" 89 mm	11.0					
11" 279 mm 15" 381 mm 19.25" 489 n	m 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 m	m 23" 584 mm 48" 1219 n	ım 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 n	ım 93" 2362 mm	6¼" 159 mm	19.0					
16" 406 mm 19.25" 489 m	m 24" 609 mm 48" 1219 n	ım 96" 2438 mm	6¼" 159 mm	19.0					
15" 381 mm 19.25" 489 n	m 23" 584 mm 48" 1219 n	ım	6¾" 171 mm	22.0					
15" 381 mm	23" 584 mm 48" 1219 n	ım 96" 2438 mm	8" 203 mm	25.0					
16" 406 mm 19.25" 489 m	m 24" 609 mm	96" 2438 mm	8" 203 mm	25.0					
15" 381 mm	23" 584 mm 48" 1219 n	ım	91⁄2" 241 mm	30.0					
12" 305 mm 16" 406 mm 19.25" 489 n	m 24" 609 mm 48" 1219 n	ım	9½" 241 mm	30.0					
15.5" 394 mm	23.75" 603 mm 48" 1219 n	ım	8¼" 209 mm	30.0 C ²					
12" 305 mm 16" 406 mm	24" 609 mm 48" 1219 n	ım	12" 305 mm	38.0					
15.5" 394 mm	23.75" 603 mm 48" 1219 n	ım	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

	FLAME	SMOKE					
PRODUCT TYPES	SPREAD	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	
Faster all Returned Rettles and the source line with the later strengthered Revealed (ICC) United Revealed in a							

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 a	ACCORDANCE WITH: R-valu Surfac Perm I	e tee Burning Characteristics Rating USDA CERTIFIED RODUCT PRO	ASTM C518 ASTM E84 ASTM E96	CREENCUARD CREENCUARD ROUC CRETIED FOR the COM GO (2.11)

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 31/2" 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® 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 11/4" 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.

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

ECOTOUCH® FLAME SPREAD 25 FIBERGLASS INSULATION TECHNICAL DATA

	WIDTH(S)			LE	NGTH	THIC	KNESS	R-VALUE ¹
METAL FRA	ME CONSTRUCTION							
16"	406 mm	24"	609 mm	96"	2438 mm	31⁄2"	89 mm	11.0
16"	406 mm	NA		96"	2438 mm	31⁄2"	89 mm	13.0
16"	406 mm	24"	609 mm	96"	2438 mm	61⁄4"	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	61⁄4"	159 mm	19.0

 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	59	6	
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.









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 21/2", 31/2" and 51/2".

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	21⁄2" 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 Shrinkag	inear Shrinkage Less than 0.1%						
Products are tested in accordance with: Surface Burning Characteristics ASTM E84.							

STEEL STUD STC TEST NO. C

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STC	TEST NO.	CONSTRUCTION DESCRIPTION	FIRE TEST	FIRE Rating			
DOUB	LE LAYER WAL	L SYSTEM					
56	TL-93-351	$\%^{"}$ Type "X" gypsum; 3 $\%^{"}$ SS, 3 $1\!\!\!/ 2^{"}$ thick Sound Attenuation Batt Insulation	UL-U423	2 Hr.			
54	NBC No. S3a	%" Type "X" gypsum; $2%"$ SS, $2%"$ thick Sound Attenuation Batt Insulation	NBC No. S3a	2 Hr.			
UNBA	LANCED WALL	SYSTEM (2 LAYER/1 LAYER OF GYPSUM)					
54	TL-92-368	Unbalanced $\%^{\prime\prime}$ Type "X" gypsum; $3\%^{\prime\prime}$ SS, $31\!\!\!/2$ ' thick, Sound Attenuation Batt Insulation	UL-U465	1 Hr.			
51	TL-93-036	Unbalanced $\%^{\rm m}$ Type "X" gypsum; $2\%^{\rm m}$ SS, $2\%^{\rm m}$ thick, Sound Attenuation Batt Insulation	ULC W409	1 Hr.			
SINGL	SINGLE LAYER WALL SYSTEM						
49	TL-92-349	Single layer $\%^{\rm m}$ Type "X" gypsum; $3\%^{\rm m}$ SS, $2\%^{\rm m}$ thick, Sound Attenuation Batt Insulation	UL U465	1 Hr.			
44	TL-93-033	Single layer $\%"$ Type "X" gypsum; $2\%"$ SS, $2\%"$ thick, Sound Attenuation Batt Insulation	ULC W409	1 Hr.			

SOUND ATTENUATION BATT INSULATION

FIBERGLASS INSULATION-PRODUCT DATA



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.









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 31/2" 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

FIBERGLASS INSULATION-PRODUCT DATA

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 F96

- 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 valuesreported 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.



APPLIES TO UNFACED PRODUCT





USDA CERTIFIED BIOBASED PRODUCT APPLIES TO KRAFT-FACED PRODUCT

USDA CERTIFIED BIOBASED PRODUCT



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, frictionfit between furring strips, or install with appropriate adhesive. Seal joints and repair facing tears and punctures with a pressuresensitive 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

WIE	DTH	LENGTH			NESS	R-VALUE ¹
24"	609 mm	48"	1219 mm	4"	102 mm	17.4
24"	609 mm	48"	1219 mm	31⁄2"	89 mm	15.2
24"	609 mm	48"	1219 mm	3"	76 mm	13.0
24"	609 mm	48"	1219 mm	21⁄2"	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

 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%

Linear Shrinkage at Maximum Use Temperature 1. Products are tested in accordance with: R-value



Recommended impaling pin pattern. Pins

of the board.

should be located 3" to 8" from the edge(s)

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

PERIMETER FIRE CONTAINMENT JOINT



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







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 factoryapplied 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 1/2" (13 mm) increments. Contact your Owens Corning Sales Representative for additional sizes or if specific labeling is required for air handling.

WALLS: 703 AND 705 SERIES



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

SPECIFICATION COMPLIANCE

FIBERGLAS[™] 700 SERIES INSULATION

FIBERGLASS INSULATION-PRODUCT DATA

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
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'
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

 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	FI	RK: 25 units; ASJ: 50 uni	its			
Compressive Strength (Minimum)	ASTM C165	Type 703	Type 704	Type 705			
at 10% Deformation		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	Туре 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	UL 723 ² , ASTM E84 ²	Flame Spread	25 ²				
Characteristics	or CAN/ULC-S102 ²	Smoke Developed	50				

Maximum thickness at 450°F (232°C): Type 701, 702: 6" (152 mm); Type 703, 704, 705: 4" (102 mm).
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.

CEILINGS: 703 AND 705 SERIES



FIBERGLAS[®] 700 SERIES INSULATION

FIBERGLASS INSULATION-PRODUCT DATA

THERMAL PERFORMANCE, ASTM C680 (TYPE 703)

	OPERATING TEMPERATURE, °F (°C)												
THICI	KNESS	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	(5I)	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	THIC	KNESS		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			I, 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 weatherproof 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).





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 BoardFOAMULAR® 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 ProgramSM.

- * 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.

FOAMULAR® rigid foam insulation is made with

FOAMULAR[®] EXTRUDED POLYSTYRENE (XPS)

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

RIGID FOAM INSULATION

- 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 tiltup 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 the (Pavaluet) of 5 per 1" of th

Lifetime Limited Varranty on Formulars Insulation The second

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.



 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 plasticor 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.)



FOAMULAR[®] EXTRUDED POLYSTYRENE (XPS)

RIGID FOAM INSULATION



DEODEDTY	TEST	FOAMULAR® 150, INSULPINK®, Pro pink® IS, CW15, UFDAMADINK® 10	FOAMULAR® 250, Agtek, CW25, Insul-drain®, Thermapink® 25,	FOAMULAR® 400,	FOAMULAR® 600,	FOAMULAR®	FOAMULAR®	FOAMULAR®
PRUPERTY Thermal Desistance's D Value			LI JU D. E. Garak	404, 404KD, L140	004, 004KD	IUUU D.E./insk		
(180 day), minimum hr•ft²=°F/Btu (RSI, m²=°C/W)	A21M C218	K-9/Inch	K-3/INCN	R-57 Inch	K-97 INCN	R-9/INCN	21/8 : R-10 21/8": R-12 3": R-17	K-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 Strength⁵, 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®, 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 x 10⁻⁵ (6.3x10⁻⁵)	3.5 x 10 ⁻⁵ (6.3x10 ⁻⁵)	3.5 x 10⁻⁵ (6.3x10⁻⁵)	3.5 x 10⁻⁵ (6.3x10⁻⁵)	3.5 x 10 ^{-₅} (6.3x10⁻₅)	3.5 x 10 ^{-₅} (6.3x10 ^{-₅})	-
Type Classifications ¹¹	ASTM C578	Туре Х	Type IV	Type VI	Type VII	Type V	Type IV	-

Properties shown are representative values for 1" thick material, unless otherwise specified. Testing modified as needed for products less than 1/2" thickness. Modified as required to meet ASTM C578

1.

Modified as required to meet ASTM C5/8 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. Values at yield or 10% deflection, whichever occurs first. Testing modified as needed for products less than ½" thickness. Value at yield or 5%, whichever occurs first Data ranges from 0.00 to value shown due to the level of precision of the test method Water valor represence decreases as thickness increases 3. 4

5.

6. 7. 8.

Data ranges non-octo to value is nown due to the level of precision in the test method
Water vapor permeance decreases as thickness increases
These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions
Data from Underwriters Laboratories Inc.* classified. See Classification Certificate U-197
ASTM E84 is thickness-dependent, therefore a range of values is given
ASTM Type is not applicable for LT40.

MOISTURE EFFECTS COMPARISON

Water Absorption in Freeze/Thaw Cycling Test (ASTM C666-73 Procedure A) WATER ABSORPTION % BY VOLUME

THERMAL RESISTANCE RATIO (TRR%)

Retention of R-value* after repeated exposure to moisture and freeze/thaw conditions. % RETAINED OF DELIVERED R-VALUE*

2" FOAMULAR® XPS insulation 1.6 lb/

1.5" molded expanded polystyrene, 1.5 lb/

2" polyisocyanurate with fiberglass facing, 2.1 lb.

2" polyisocyanurate with aluminum foil facing, 2.1 lb.

	0% 20% 40% 60% 80% 100)%
/ft³	3% FOAMULAR® INSULATION	
/ft³	17%	
/ft³	37%	
/ft³	61%	

40% 60% 20% 2" FOAMULAR XPS insulation 1.6 lb/ft³ FOAMULAR[®] INSULATION 1.5" molded expanded polystyrene, 1.5 lb/ft³ 66%

10%

2" polyisocyanurate with fiberglass facing, 2.1 lb/ft³

2" polyisocyanurate with aluminum foil facing, 2.1 lb/ft³

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

80%

41%

83%

100%



ΠΑΜΠΠ

AR

Resistant XPS Insulation



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-ofpackage 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.

FIBERGLASS INSULATION-PRODUCT DATA

ELAMINATOR® METAL BUILDING INSULATION SYSTEM

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 OSHAcompliant 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.)



^{*} 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 FHC 25/50 S102(1) 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.



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



Product Options

EcoTouch[®] Thermal Batt

APPLICATION RECOMMENDATIONS

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

EXTERIOR WALL SYSTEM: STEEL STUD FRAMING

SUSPENDED CEILING SYSTEM

- Product Options
- Sonobatts[®] Insulation



floor/roof deck air plenum ceiling tile main runner Sonobatts® Insulation ceiling tile rooss T

INTERIOR WALL SYSTEM: DOUBLE LAYER GYPSUM

Product Options

 Sound Attenuation Batt Fiberglass Insulation



OWENS CORNING

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

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. EcoTouch® FLAME SPREAD 25 INSULATION (25 flame spread facer for exposed use or for Types I or II construction)

EcoTouch® THERMAL BATT FIBERGLAS" INSULATION (unfaced)

> FOAMULAR® XPS continuous insulating sheathing (directly over steel studs or over exterior gypsum sheathing) JOINTSEALR® FOAM JOINT

> > TAPE (optional joint seal)



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.



FOAMULAR® HIGH-R CW PLUS (alternative XPS insulation with a higher R per inch)

JOINTSEALR® FOAM JOINT TAPE (optional joint seal)

FOAMULAR® CW15 OR CW25

— FOAMULAR® 250 XPS INSULATION



INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

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.





INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS



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.





LIFT INSERT

FOAMULAR® 250 OR FOAMULAR® HIGH-R CW PLUS XPS INSULATION

THERMOMASS SYSTEM SC 🕇 🛉 or Thermomass system NC 🕈





INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

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.





VAPOR RETARDER (optional, by other manufacturer)

FOAMULAR® 250, 400, 600 or 1000 XPS INSULATION (as required for supporting loads on the slab)

FOAMULAR® 250 XPS INSULATION

PINK-DRAIN^W DRAINAGE BOARD (drainage enhancement boards are optional and are typically used on walls protecting below-grade space)

INSUL-DRAIN® DRAINAGE BOARD (with factory-laminated filter fabric)

ENVIRONMENTAL AND SUSTAINABILITY

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS



ENVIRONMENTAL AND SUSTAINABILITY

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of highquality 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	5505/107	ASTM C578	ASTM C612	ASTM C665	ASTM C665	ASTM C665	ASTM C665	NAIMA	ASTM C991
NO.	PRUDUCI	I YPES IV, V, VI, VII, X	TYPES IA & IB	IYPEI	I YPES I OR II	TYPES I-III	TYPE II OR III	202-96	IYPEI
4	EcoTouch® Thermal Batt Insulation					X			
5	EcoTouch® Flame Spread 25/FS25 Ext. Flgs Fiberglass Insulation						Х		
6	Sound Attenuation Batt Insulation			Х					
8	Sonobatts® Insulation				Х				
9	Curtainwall Insulation		Х						
15	Certified R Metal Building Insulation							Х	Х
10	Fiberglas [™] 700 Series Insulation: 701-711			Х					
10	Fiberglas" 700 Series Insulation: 703-705		Х						
12	FOAMULAR® XPS Insulation	Х							
6	Sound Attenuation Batts			Х					



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

INSULATION SYSTEMS FOR COMMERCIAL BUILDINGS

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	Max Bond, 85-15, 85-120, 85-60, CP-56, CP-82, CP-85, CP-88, CP-89, CP-35	1-800-231-9541	
Products			
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

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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 lowdensity 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 ½ 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.

INDUSTRY STANDARDS

INSULATION-PRODUCT DATA

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-loadbearing 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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INDUSTRY STANDARDS

INSULATION-PRODUCT DATA



For more information, contact the North American Insulation Manufacturing Association at:

NAIMA

44 Canal Center Plaza, Suite 310 Alexandria, VA 22314 Phone: (703) 684-0084 Fax: (703) 684-0427 E-mail: insulation@naima.org Web site: www.naima.org

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