



WALL INSULATION

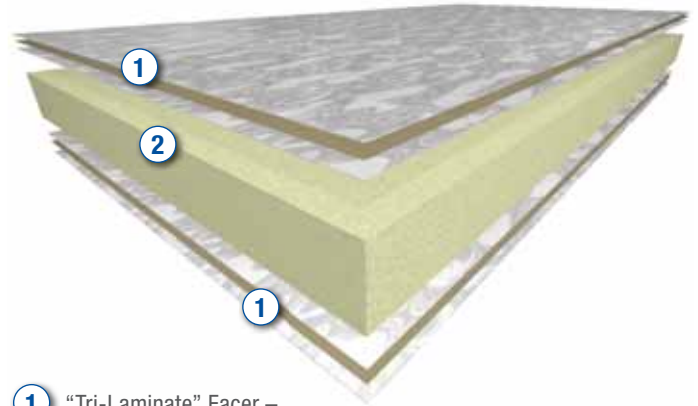
R2+[®] SILVER Foil-Faced Polyiso Insulation

Description

R2+ SILVER is a rigid foam insulation board designed for use in commercial construction above-grade wall applications to provide continuous, high R-value insulation. The product is composed of a closed-cell polyisocyanurate foam core bonded on both sides to a composite foil “tri-laminate” facer. R2+ SILVER can be installed on the exterior or the interior side of the wall assembly. R2+SILVER is offered in different thicknesses, sizes and foam core densities. It is secured in place with fasteners, adhesive or a combination of the two. Installation technique depends on the wall assembly. R2+ SILVER has been fire-tested to NFPA 285 and passes this tough test in several wall assemblies. CCW provides R2+ SILVER insulation, R2+ accessories and CCW air/vapor barrier membranes for a complete wall weatherization system.

Features and Benefits

- Passes NFPA 285 in several wall assemblies, including WRB membrane and practical window details
- High R-value per inch – enables thinner board to be used, while still meeting code requirements
- Meets wall assembly continuous insulation (ci) requirements prescribed by the International Building Code
- Multiple thicknesses and sizes available to provide fine-tuned R-value and easy installation
- Reflective facer can act as a radiant barrier – up to equivalent R-2.3 additional insulating value when facing a 1-3/4" dead air space (Ref: 2010 ASHRAE 90.1 Table A9.4A)
- Factory-controlled thickness and composition
- No special tools or equipment required for installation – lightweight, easy to handle, cuts with a knife or saw
- Can be installed as an air barrier with proper joint sealing and detailing
- Manufactured in multiple plants across the U.S. – ready product availability and LEED[®] regionally sourced material.
- Part of a full weatherization system by CCW – takes the guesswork out of installation procedures and product compatibility



- ① “Tri-Laminate” Facer – Aluminum Foil/Kraft Paper/Aluminum Foil
- ② Closed-cell Polyisocyanurate (Polyiso) Foam Core

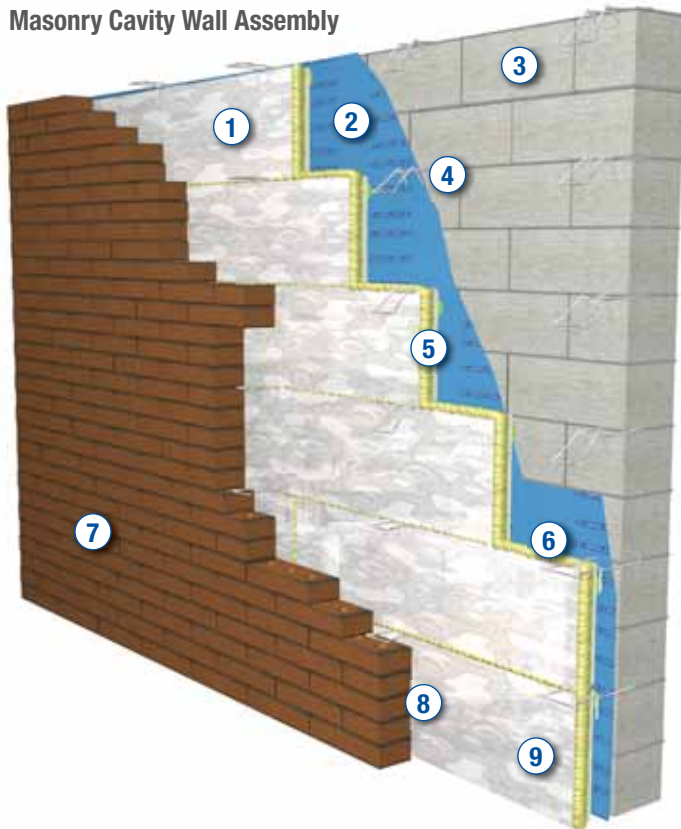
Typical Properties

Property	Method	Results – Grade 2	Results – Grade 3
Compressive Strength	ASTM D1621	20 psi	25 psi
Thermal Resistance (R-value) [units: °F•ft ² •h/ Btu]	Tested at 75°F mean temp as per ASTM C 518 according to the requirements of ASTM C 1289	1" – 6.5 1.5" – 10.0 2" – 13.3 2.5" – 17.0 3" – 20.3 3.5" – 24.0 4" – 27.0 4.5" – 30.0	
Flame Spread Index, Core	ASTM E84	<75	
Smoke Developed Index, Core	ASTM E84	<450	
Water Vapor Permeance (1" thick board)	ASTM E96	<0.05 Perm	
Water Absorption	ASTM C209	<0.05% volume	
Dimensional Stability	ASTM D2126	2% linear change (7 days)	
Mold Resistance	ASTM D3273	Passed (10)	
Edge	—	Square	
Service Temperature	—	-100°F to 250°F	

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SHOWN: R2+ SILVER 16" x 8' Boards in a Masonry Cavity Wall Assembly



- ① R2+ SILVER Foil-Faced Polyiso Insulation
- ② CCW Membrane Air Barrier
- ③ Concrete Masonry Unit (CMU)
- ④ Imbedded Veneer Anchors, Every 2nd Course of Block
- ⑤ Wire Tie (helps secure insulation)
- ⑥ Approved Foam Sealant Between Insulation Boards
- ⑦ Brick
- ⑧ Air Space
- ⑨ LM-800XL Insulation Adhesive (applied in dabs to back of each board)

Installation

Consult the R2+ Installation Guide for detailed information about installation of this product in various wall assemblies.

Limitations

- Not structural – R2+ SILVER cannot be used for bracing or adding shear strength to walls.
- Not for use as a nail base.
- Cladding must be attached through insulation to structure, NEVER directly attached to facer.
- Not intended as a wear-resistant or traffic-resistant surface – cover with approved cladding system.
- Combustible, not rated for permanent exposure on either the exterior or the interior side of the wall assembly. R2+ SILVER must be covered with approved cladding or thermal barrier.

- Do not use on exterior side of below-grade construction, on plaza decks or in areas where direct exposure to ponding water is expected.
- In termite-infested areas, maintain separation of R2+ SILVER from grade according to code requirements.
- Do not leave exposed to sunlight longer than 60 days.

Storage

Keep R2+ SILVER and accessory products clean and dry during storage to facilitate installation and to maintain legibility of labels. Store R2+ SILVER and accessory products in an area protected from moisture and direct sunlight. For outdoor storage in excess of 60 days, cover pallets with breathable, waterproof tarpaulins and elevate pallets above ground level a minimum of 4".

Packaging

R2+ SILVER is provided in 16" X 8' boards, 24" X 8' boards and 4' X 8' boards. Custom sizes from ½" to 4½" thicknesses are available on special order. CCW R2+ SILVER boards are stacked on 4' X 8' pallets and double-packaged in a UV-resistant polyethylene bag.

R2+ SILVER

Board Properties			16" X 8'	24" X 8'	4' X 8'	Pallet		
Thickness	R-value	Grade	PCS/Pallet	PCS/Pallet	PCS/Pallet	SQ FT/Pallet	BD FT/Pallet	Weight/Pallet
1"	6.5	20 or 25 psi	144	96	48	1,536	1,536	305.66
1.5"	10.0	20 or 25 psi	96	64	32	1,024	1,536	288.77
2"	13.3	20 or 25 psi	72	48	24	768	1,536	281.09
2.5"	17.0	20 or 25 psi	57	38	19	608	1,520	272.99
3"	20.3	20 or 25 psi	48	32	16	512	1,536	272.38
3.5"	24.0	20 or 25 psi	39	26	13	416	1,456	256.26
4"	27.0	20 or 25 psi	36	24	12	384	1536	268.42
4.5"	30.0	20 or 25 psi	30	20	10	384	1536	250.24

CCW FOIL-GRIP™ 1402 Tape

Heat and UV-resistant pressure-sensitive tape for sealing R2+ SILVER board joints and other surface defects.

Part Number	Roll Size	Rolls/ Carton
304095	4" x 100'	12
304096	6" x 100'	8

Aluma-Grip™ 701 Self-Adhered Flashing

Heat- and UV-resistant 30-mil butyl/foil flashing for wrapping R2+ SILVER corners and openings

Part Number	Roll Size	Rolls/ Carton
304221	4" x 50'	12
304223	6" x 50'	8
319525	9" x 50'	4
304225	12" x 50'	4

NOTE: Foil-Grip 1402 and Aluma-Grip 701 are only required if R2+ SILVER will be installed as an air/water-resistive barrier

LM-800XL

Solvent-based synthetic rubber adhesive/mastic for bonding R2+ SILVER to CCW membrane air barrier or to substrate. Can also be used for sealing R2+ SILVER gaps at terminations and penetrations.

Part Number	Package	Units/Carton
305261	29 fl. oz. cartridge	12
305263	5-gal pail	N/A

Flashing/Tape Primers

To promote adhesion of CCW FOIL-GRIP 1402 and Aluma-Grip 701.

Part Number	Product	Description	Packaging
305363	CCW-702	Solvent-based contact adhesive	5-gal pail
316148	CCW-702 LV*	VOC-compliant, solvent-based contact adhesive	5-gal pail
315109	CCW-702 WB	Water-based contact adhesive	5-gal pail
308599	Travel-Tack	Solvent-based aerosol contact adhesive	15 oz. spay can, 12/carton
305432	CAV-GRIP™	Solvent-based aerosol contact adhesive	40# pressurized cylinder filled with 30 lb. of adhesive
307490	CAV-GRIP Spray Gun	Pistol-grip gun with spray tip	1/box
304302	CAV-GRIP 6' Hose	Hose with fittings, 6' length	1/box
304303	CAV-GRIP 12' Hose	Hose with fittings, 12' length	1/box
304304	CAV-GRIP 18' Hose	Hose with fittings, 18' length	1/box

NOTE: CAV-GRIP or Travel-Tack can be used to tack R2+ SILVER in place during installation.

Fasteners

Use capped screws by others as recommended by CCW to secure R2+ SILVER. Consult the R2+ Installation Manual for detailed information about recommended fasteners and installation techniques.

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Codes and Compliances

- ASTM C 1289 Type I, Class 1 Grade 2 (20 psi) & Grade 3 (25 psi)
- 2012 International Energy Conservation Code Table C402.2 Opaque Thermal Envelope Requirements and Section C402.4.1.2.1 Air Barrier Materials
- International Building Code Chapter 26, Plastic Foam Insulation
- 2010 ASHRAE 90.1 Table 5.5.1 through Table 5.5.8 Building Envelope Requirements by Climate Zone and Section 5.4.3.1.3 Acceptable Air barrier Materials and Assemblies
- Passed NFPA 285 full wall burn tests. Summary of approved assemblies, based on testing, appears in Figure 3 and Table 1
- DRJ Engineering TER 1407-1. Suitable for Type I-IV construction

Figure 3

R2+ SILVER NPFA 285 Wall Assemblies

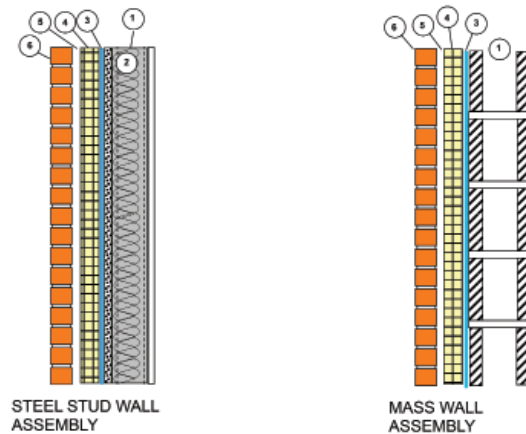


Table 1

NFPA 285 Walls: R2+ SILVER

Layer	Steel Stud Wall Assembly	Mass Wall Assembly
1. Base Wall System	Steel studs 16" or 24" o.c. 5/8" type X gypsum wallboard on interior and 1/2" or 5/8" gypsum sheathing on exterior	Concrete (tilt-up or cast-in-place) or concrete masonry unit (CMU)
2. Stud Cavity Insulation	Fiber glass, mineral wool, Bayer EcoBay™ CC or BASF Walltite® spray foam up to depth of stud or none	N/A
3. Membrane Air Barrier over Base Wall Assembly	Fire Resist 705FR-A, Fire Resist Barritech VP, Fire Resist Barritech NP, Fire Resist 705 VP OR none	
4. Exterior Insulation	R2+ SILVER maximum 3 1/2" thick. Joints between insulation can be taped with 4" FOIL-GRIP 1402 or sealed with fire-block can foam. Insulation can be secured with LM-800XL adhesive 3/8" x 3" dabs, 16" O.C.	
5. Air Space between Cladding and Insulation	Maximum 2"	
6. Exterior Cladding	Masonry (clay or concrete brick), limestone or other natural stone veneer minimum 2" thick, stucco minimum 3/4" thick exterior cement plaster & lath, artificial cast stone minimum 1-1/2" thick complying with ICC-ES AC-51 or terra cotta cladding minimum 1-1/4" thick.	

Note: Full list of NFPA 285 wall assemblies and components appears in CCW's Wall Assembly Design Guide.