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LISTING INFORMATION OF

Mitsubishi Chemical Alpolic® FR and Alpolic® PE Exterior / Interior wall Panels

SPEC ID: 20449

Mitsubishi Chemical America, Inc., Apolic Division
401 Volvo Parkway
Chesapeake, VA 23320
United States

LISTING INFORMATION

Alpolic FR Wall Panels are aluminum composite wall panels manufactured in two nominal thicknesses: 4 mm and 6 mm (0.16 and 0.23 in. respectively). The panels consist of two nominally 0.020 in. thick (0.5 mm) aluminum skins bonded to both surfaces of a polyethylene based core (nominal density of 93 pcf) that contains inorganic fillers. The panel skins have a factory applied painted finish. The nominal thickness of the core material is 0.118 in. (3 mm) for the 4 mm thick wall panels and 0.197 (5.0 mm) for the 6 mm thick wall panels. The wall panels are available in widths from 30 in. (762 mm) to 62 in. (1575 mm). Lengths are available from 4 ft. (1219 mm) to 24 ft. (7315 mm). Installation details and product specifications are available within this listing specification.

ALPOLIC® PE Exterior and Interior Wall Panels are sandwich panels which are manufactured in 3, 4, and 6 mm thicknesses. The panels consist of 2 aluminum skins laminated to both sides of a polyethylene core. Between each aluminum skin and the core, there is a 0.0381 mm thick “Dry Laminating Film” to facilitate the lamination process. The PE panels are designated as ALPOLIC® AP, ALPOLIC® AT or ALPOLIC® AN. ALPOLIC® AP panels have 0.5mm thick aluminum for the front and back skins, ALPOLIC® AT panels have 0.5mm thick aluminum for the front skin and 0.3mm thick aluminum for the back skin, and ALPOLIC® AN are anodized and have 0.5 mm thick aluminum for the front and back skins.

RATINGS

ASTM E84 – Surface Burning Characteristics		
PRODUCT	**FLAME SPREAD INDEX**	**SMOKE DEVELOP INDEX**
4 mm Alpolic® FR Panels	< 25	< 450
6 mm Alpolic® FR Panels	< 25	< 450
3 mm Alpolic® PE Panels	< 25	< 450
4 mm Alpolic® PE Panels	< 25	< 450
6 mm Alpolic® PE Panels	< 25	< 450

CAN/ULC S102 – Surface Burning Characteristics		
PRODUCT	**FLAME SPREAD INDEX**	**SMOKE DEVELOP INDEX**
4 mm Alpolic® FR Panels	< 25	< 450
6 mm Alpolic® FR Panels	< 25	< 450
3 mm Alpolic® PE Panels	< 25	< 450
4 mm Alpolic® PE Panels	< 25	< 450
6 mm Alpolic® PE Panels	< 25	< 450

PRODUCT	STANDARD	RATING	DESIGN LISTING
4 and 6 mm Alpolic® FR Panels	ASTM E119	One-hour, non-load bearing	MCA-CWP 60-01
	ASTM E119	Two-hour, non-load bearing	MCA-CWP 120-01
	NFPA 285	Met the conditions of acceptance	MCA-CWP 30-01

	CAN/ULC S134	Met the conditions of acceptance	MCA-CWP 25-01 MCA-CWP 25-02

Alpolic panels are also under Intertek's QA program for the following evaluation reports:

Product	Product Approval No.
Alpolic® FR Panels	ESR-2653
ALPOLIC® PE Panels	ESR-3704

FLORIDA PRODCUT APPROVAL

Product	Product Approval No.
ALPOLIC /ALPOLIC fr using the ACCU-TRACR SYSTEM by Altech Panel Systems,L.L.C.	FL No. 12087
Alpolic and Alpolic/FR Aluminum Composite Wall Panel Systems - Series 44	FL No. 17186
Alpolic and Alpolic/FR Aluminum Composite Wall Panel Systems - Series 20	FL No. 17186

Attribute	Value
Criteria	CAN / ULC S134-92 (R1998)
Criteria	CAN / ULC S102 (2010)
Criteria	ASTM E119 (2012)
Criteria	NFPA 285 (2012)
Criteria	ASTM E84 (2013a)
Criteria	CAN / ULC S134 (2013) (R2018)
Criteria	CAN / ULC S102 (2018)
CSI Code	07 42 63 Fabricated Wall Panel Assemblies
Intertek Services	Certification
Intertek Services	Quality Assurance
Listed or Inspected	LISTED
Listing Section	BUILDING MATERIALS WITH SURFACE BURNING CHARACTERISTICS
Listing Section	OTHER PRODUCTS
Spec ID	20449

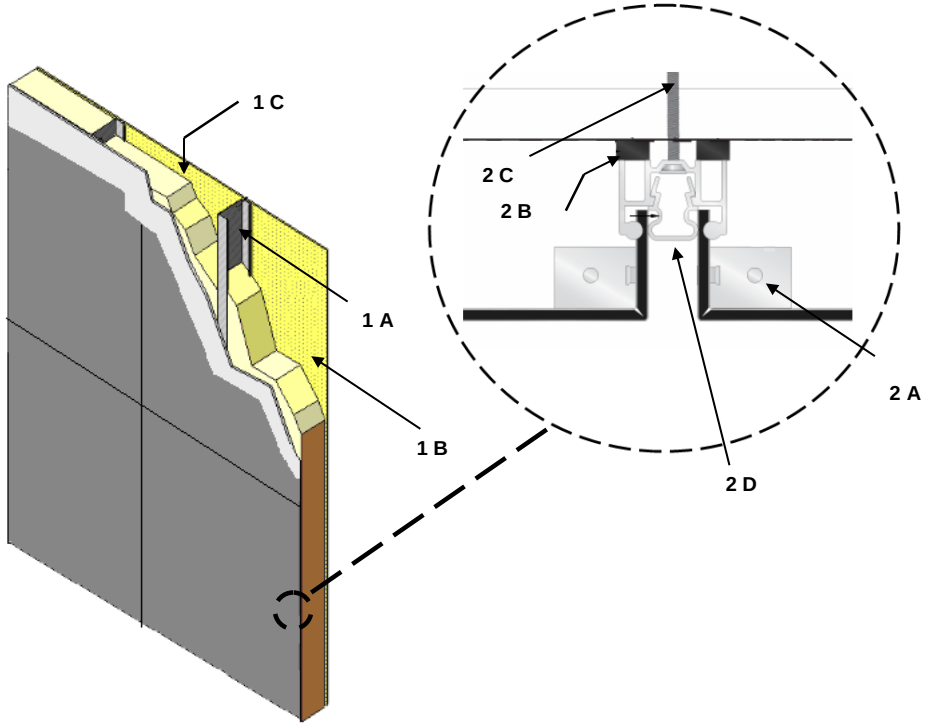
DRAWING INDEX

MCA-CWP 120-01
MCA-CWP 25-01
MCA-CWP 25-02
MCA-CWP 30-01
MCA-CWP 60-01

MCA-CWP 120-01

Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 43 Composite Wall Panels

Mitsubishi Chemical Composites America, Inc.
Design No. MCA/CWP 120-01
4mm and 6mm Alpolic® fr Wall Panels
Non-load Bearing Fire Resistance Rated Wall Assemblies
ASTM E119
Rating: 2 Hour



1. GYPSUM WALL ASSEMBLY: Use a two hour fire-rated wall assembly meeting the min. construction requirements shown below and any additional requirements specified by the supporting Design Listing:

A. STEEL STUDS – Install min. 18 GA steel studs, with 3-5/8 in. depth, at max. spacing of 16 in. on center (oc).

B. GYPSUM BOARD – Attach one layer of 5/8 in. thick Type X gypsum board on each face of steel studs (Item 1A). Fasten the face layer of gypsum board with 1-5/8 in. long, Type "S" drywall screws spaced 8 in. oc along the perimeter and joints, and 12 in. oc in the field of the sheathing.

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MCA-CWP 120-01 (2 OF 2)

For a two hour rating, install a second layer of 5/8 in. thick Type X gypsum board over the studs using 2-1/4 in. long, Type "S" drywall screws spaced 8 in. oc along the perimeter and joint, and 12 in. oc in the field of the sheathing.

The most exterior layer of gypsum sheathing joints must be taped and treated with joint compounds complying with ASTM C474 and ASTM C475/C475M.

C. INSULATION – Fill stud cavities with 3-1/2 in., R-13, fiberglass insulation.

2. **EXTERIOR WALL COVERING:** Incorporate the following construction features:

CERTIFIED MANUFACTURER: Mitsubishi Chemical Composites America, Inc.

CERTIFIED PRODUCT: Composite Wall Panels

MODEL: 4mm and 6mm thick Alpolic® fr Wall Panels.

EXTERIOR CLADDING SYSTEM: Construct "Rout and Return" Universe Corporation, Universe®2000R Dry-set Wall System using Alpolic® fr Wall Panels. Install in accordance with the wall system manufacturer's specifications and the following requirements:

A. SPLINE ANGLES – Angles are shop attached at corners with F.H Pop Rivets.

B. PLASTIC SHIM – Use 1/8 in. + 1/16 in. plastic shim.

C. EXTRUSION FASTENER – #10 × 1-3/4 in. H.W.H Head, spaced 16 in. oc for the first layer of gypsum board (Item 1B), and #10 × 2-1/2 in. H.W.H Head, 16 in. oc for the second layer of Gypsum board.

D. ALUMINUM EXTRUSION RETAINER – Use 5/8 in. aluminum retainers between vertical and horizontal joints.

E. PANEL STIFFENERS (Not Shown) – Attach aluminum stiffeners at a max. spacing of 24 in. with structural silicone sealant.

MCA-CWP 25-01

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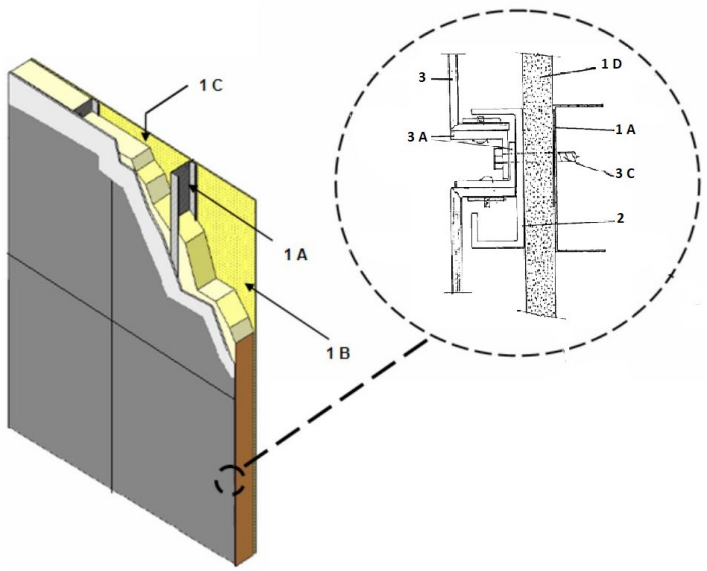
Mitsubishi Chemical Composites America, Inc.
Design No. MCA/CWP 25-01
Exterior Cladding
4 mm Alpolic® FR Wall Panels
CAN/ULC S134
Rating: Meets Conditions of Acceptance



1. SUPPORTING WALL CONSTRUCTION: The supporting wall to be constructed per the applicable Building Code, and per the following provisions of this Design Listing:

A. STUDS – 18 GA nominal 2 in. × 4 in. × 1-3/4 in. steel studs located 24 in. on center (oc), fastened to 18 GA tracks using two 1/2 in. self-tapping wafer-head sheet metal screws at each end. Fasten additional backing strips made from 18 GA track at each stud intersection with one 1/2 in. self-tapping wafer-head sheet metal screw to accommodate the fastening of the horizontal drain channel extrusions.

B. INTERIOR GYPSUM BOARD – Attach conventional 1/2 in. gypsum wallboard, oriented horizontally, and fasten with 1-3/8 in. Type S gypsum wallboard screws located 12 in. oc.

C. INSULATION – Fill stud cavities with nominal 3-1/2 in. fiberglass batt insulation.

D. EXTERIOR SHEATHING – Attach 1/2 in. conventional exterior gypsum sheathing to the exterior side of steel studs, oriented horizontally, and fasten with 1-3/8 in. Type S screws located 12 in. oc.

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Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
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2. **CHANNEL EXTRUSION:** Install horizontal and vertical aluminum channel extrusions for water drainage. Fasten extrusions to the steel studs and horizontal backing strips (Item 1) in the wall using 1-1/2 in. long, 3/16 in. diameter, self-drilling, self-tapping hex-head screws every 24 in. vertically and at each joist intersection horizontally.

3. **CERTIFIED MANUFACTURER:** Mitsubishi Chemical Composites America, Inc.

   CERTIFIED PRODUCT: Composite Wall Panels

   CERTIFIED MODEL: 4 mm thick Alpolic® FR Wall Panels

   Place panels starting from the bottom, such that the perimeter mounting angles are centered in the drain channels, and fasten using 1-1/4 in. long self-drilling, self-tapping hex-head screws located at each joist intersection in horizontal joints and every 12 in. on vertical joints; overlap perimeter extrusions of adjacent panels.

   EXTERIOR CLADDING SYSTEM: Construct "Route and Return" Universe Corporation, Universe®2000R Dry-set Wall System using Alpolic® FR Wall Panels. Install in accordance with the wall system manufacturer's specifications and the following requirements:

   A. ALUMINUM MOUNT EXTRUSIONS – Angles are shop attached at corners with self-tapping screws 10 in. to 12 in. oc.

   B. PLASTIC SHIM (Not Shown) – Use 1/8 in. + 1/16 in. plastic shim.

   C. EXTRUSION FASTENER – Self-drilling and self-tapping screws located 10 in. to 12 in. oc.

   D. ALUMINUM EXTURSION RETAINER (Not Shown) – Use 5/8 in. aluminum retainers between vertical and horizontal joints.

   E. PANEL STIFFENERS (Not Shown) – Attach aluminum stiffeners at a max. spacing of 24 in. with structural silicone sealant.

4. **OPENING:** (Not Shown) Install 2 in. × 6 in. × 16 GA galvanized steel flashing to the top of the window opening. Fit a horizontal strip of rockwool insulation 10 in. in height × 2 in. in depth into the air space between the wall and the inside surface of the panels 76 in. oc above the opening.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

MCA-CWP 25-02

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Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 43 Composite Wall Panels

Mitsubishi Chemical Composites America, Inc.
Design No. MCA/CWP 25-02
Exterior Cladding
4 mm Alpolic® FR ACM Wall Panels
CAN/ULC S134
Rating: Meets Conditions of Acceptance

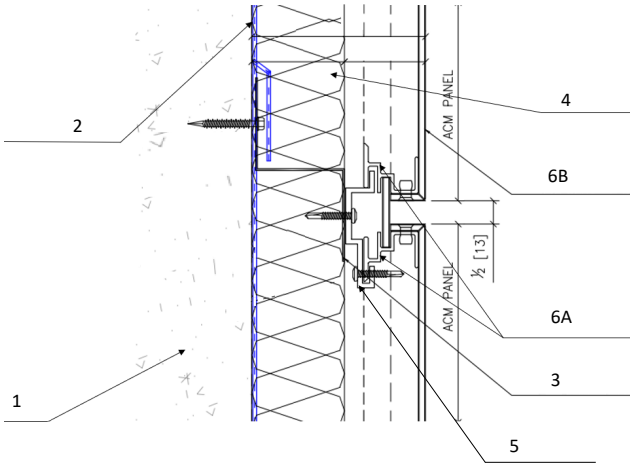

Figure 1. Wall Assembly

1. **SUPPORTING WALL CONSTRUCTION:** The supporting wall must be constructed per the applicable Building Code requirements for noncombustible construction.

2. **WEATHER BARRIER**: Adhere one layer of Henry® BlueskinVP® 160 installed per manufacturer's instructions.

3. **Z-GIRTS:** 2 in. x 2 in. x 2 in. 18 GA Aluminum Z-girts installed horizontally. Z-girts are spaced 36-1/2 in. apart starting from the top of the window opening. The spacing varies depending on the height of the panels. Z-grits are secured with 3/16 in. x 1-3/4 in. concrete fasteners spaced 16 in. on center (oc).

4. **INSULATION:** Install nominal 2 in. Semi-Rigid Rockwool CavityRock insulation between the weather barrier and the ACM panels. The insulation is friction fitted between the Z-girts. The density of the insulation is 4.3 lb/ft^3.

5. **WALL CLIPS:** Install 2-1/2 in. Cladco C2000 System 6063 T6 aluminum wall clips to the Z-girts, spaced at 16 in. oc using 1/4 in. x 1 in. self-drilling fasteners.

6. **EXTERIOR CLADDING SYSTEM:**

   CERTIFIED PRODUCT: Mitsubishi Chemical Composites America, Inc., 4 mm Alpolic® FR ACM Wall Panels.

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Install the panels using the following Cladco C2000 Extrusion System components:

A. PRE-INSTALLED ALUMINUM EXTRUSIONS – Aluminum extrusions are riveted into the panel on each corner using Aluminum Huck Magna-Lok MGL100-B6-6 Rivets.

B. COMPOSITE PANEL – Secure the 4mm Alpolic® FR ACM panels to the wall clips using 1/4 in. x 1 in. self-drilling fasteners, spaced at 16 in. oc through the pre-installed aluminum extrusions around the perimeter of the panels. The panels are installed in a manner to leave a 1/2 in. gap between panel edges, vertically and horizontally.

7. **OPENING FLASHING:** (Not Shown) Install the panels using the following components:

A. U-GIRTS – 2 in. 18 GA aluminum U-girts installed at the lowest part of the wall, at the header of the window opening, and at the top section of the wall. U-girts are secured with 3/16 x 1-3/4 concrete fasteners spaced 16 in. oc.

B. L-GIRTS – 2 in. x 1-1/2 in. 18 GA aluminum L-girt is installed at the bottom edge of the window opening. The L-girt is secured with 3/16 x 1-3/4 concrete fasteners spaced 16 in. oc.

C. J-STARTER – Install continuous 6063 T6 aluminum J-starter above the window opening.

D. L-TRIM – Install 1/2 in. x 3 in. ACM L-trim with drainage to the header of the window opening and without drainage to the bottom edge of the window opening.

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

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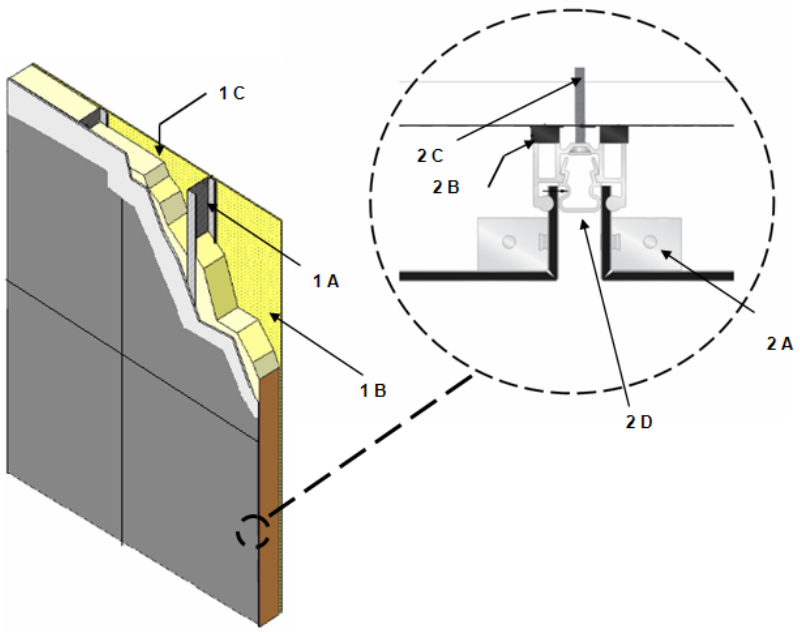
Mitsubishi Chemical Composites America, Inc.
Design No. MCA/CWP 30-01
4mm and 6mm Alpolic® fr Wall Panels
NFPA 285
Rating: Meets the Conditions of Acceptance



1. **GYPSUM WALL ASSEMBLY:** Use a one hour fire-rated wall assembly meeting the min. construction requirements shown below and any additional requirements specified by the supporting Design Listing:

   A. STEEL STUDS – Install min. 18 GA steel studs, with 3-5/8 in. depth, at max. spacing of 16 in. on center (oc).

   B. GYPSUM BOARD – Attach one layer of 5/8 in. thick Type X gypsum board on each face of steel studs (Item 1A). Fasten the face layer of gypsum board with 1-5/8 in. long, Type "S" drywall screws spaced 8 in. on oc along the perimeter and joints, and 12 in. oc in the field of the sheathing.

   The gypsum board joints must be taped and treated with joint compounds complying with ASTM C474 and ASTM C475/C475M.

   C. INSULATION – Fill stud cavities with 3-1/2 in., R-11, fiberglass insulation.

2. **EXTERIOR WALL COVERING:** Incorporate the following construction features:

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MCA-CWP 30-01 (2 OF 2)

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07 42 00 Wall Panels
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CERTIFIED MANUFACTURER: Mitsubishi Chemical Composites America, Inc.

CERTIFIED PRODUCT: Composite Wall Panels

MODEL: 4mm and 6mm thick Alpolic® fr Wall Panels.

EXTERIOR CLADDING SYSTEM: Construct "Rout and Return" Universe Corporation, Universe®2000R Dry-set Wall System using Alpolic® fr Wall Panels. Install in accordance with the wall system manufacturer's specifications and the following requirements:

A. SPLINE ANGLES – Angles are shop attached at corners with F.H Pop Rivets.

B. PLASTIC SHIM – Use 1/8 in. + 1/16 in. plastic shim.

C. EXTRUSION FASTENER – #10 × 1-3/4 in. H.W.H Head, spaced 16 in. oc for the first layer of gypsum board (Item 1B), and #10 × 2-1/2 in. H.W.H Head, 16 in. oc for the second layer of gypsum board.

D. ALUMINUM EXTRUSION RETAINER – Use 5/8 in. aluminum retainers between vertical and horizontal joints.

E. PANEL STIFFENERS (Not Shown) – Attach aluminum stiffeners at a max. spacing of 24 in. with structural silicone sealant.

Date Revised: June 20, 2017
Project No. G101463488

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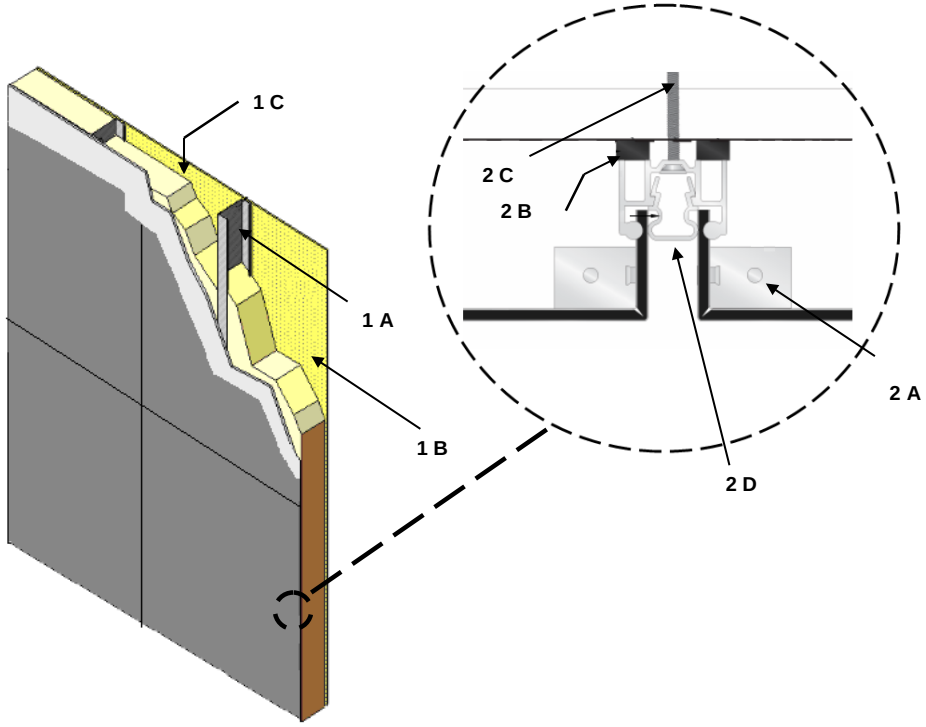
MCA-CWP 60-01

Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 43 Composite Wall Panels

Mitsubishi Chemical Composites America, Inc.
Design No. MCA/CWP 60-01
4mm and 6mm Alpolic® fr Wall Panels
Non-load Bearing Fire Resistance Rated Wall Assemblies
ASTM E119
Rating: 1 Hour



1. GYPSUM WALL ASSEMBLY: Use a one hour fire-rated wall assembly meeting the min. construction requirements shown below and any additional requirements specified by the supporting Design Listing:

A. STEEL STUDS – Install min. 18 GA steel studs, with 3-5/8 in. depth, at max. spacing of 16 in. on center (oc).

B. GYPSUM BOARD – Attach one layer of 5/8 in. thick Type X gypsum board on each face of steel studs (Item 1A). Fasten the face layer of gypsum board with 1-5/8 in. long, Type "S" drywall screws spaced 8 in. oc along the perimeter and joints, and 12 in. oc in the field of the sheathing.

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Project No. G101463488

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The most exterior layer of gypsum sheathing joints must be taped and treated with joint compounds complying with ASTM C474 and ASTM C475/C475M.

C. INSULATION – Fill stud cavities with 3-1/2 in., R-13, fiberglass insulation.

2. **EXTERIOR WALL COVERING:** Incorporate the following construction features:

CERTIFIED MANUFACTURER: Mitsubishi Chemical Composites America, Inc.

CERTIFIED PRODUCT: Composite Wall Panels

MODEL: 4mm and 6mm thick Alpolic® fr Wall Panels.

EXTERIOR CLADDING SYSTEM: Construct "Rout and Return" Universe Corporation, Universe®2000R Dry-set Wall System using Alpolic® fr Wall Panels. Install in accordance with the wall system manufacturer's specifications and the following requirements:

A. SPLINE ANGLES – Angles are shop attached at corners with F.H Pop Rivets.

B. PLASTIC SHIM – Use 1/8 in. + 1/16 in. plastic shim.

C. EXTRUSION FASTENER – #10 × 1-3/4 in. H.W.H Head, spaced 16 in. oc for the first layer of gypsum board (Item 1B), and #10 × 2-1/2 in. H.W.H Head, 16 in. oc for the second layer of gypsum board.

D. ALUMINUM EXTRUSION RETAINER – Use 5/8 in. aluminum retainers between vertical and horizontal joints.

E. PANEL STIFFENERS (Not Shown) – Attach aluminum stiffeners at a max. spacing of 24 in. with structural silicone sealant.