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LISTING INFORMATION OF

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

SPEC ID: 20449

Mitsubishi Chemical Composites America Inc
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 |

| 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 |

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) |
| 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

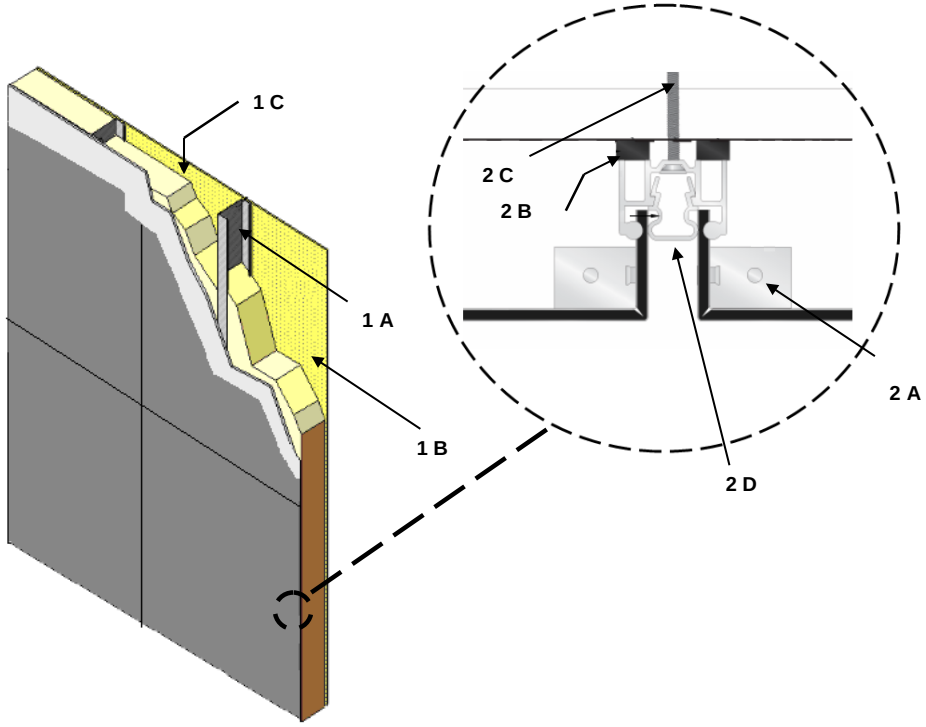
MCA-CWP 120-01
MCA-CWP 25-01
MCA-CWP 30-01
MCA-CWP 60-01

# 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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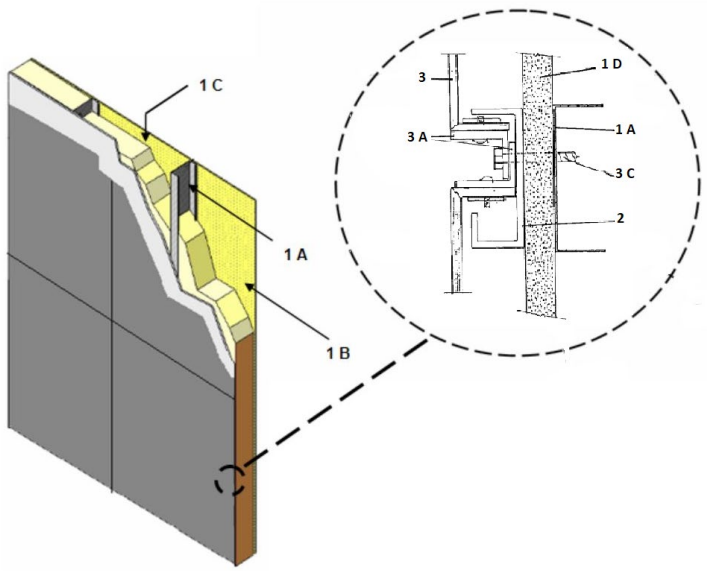
Division 07 – Thermal and Moisture Protection
07 42 00 Wall Panels
07 42 03 Composite Wall Panels

**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.

# MCA-CWP 25-01 (2 OF 2)



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.

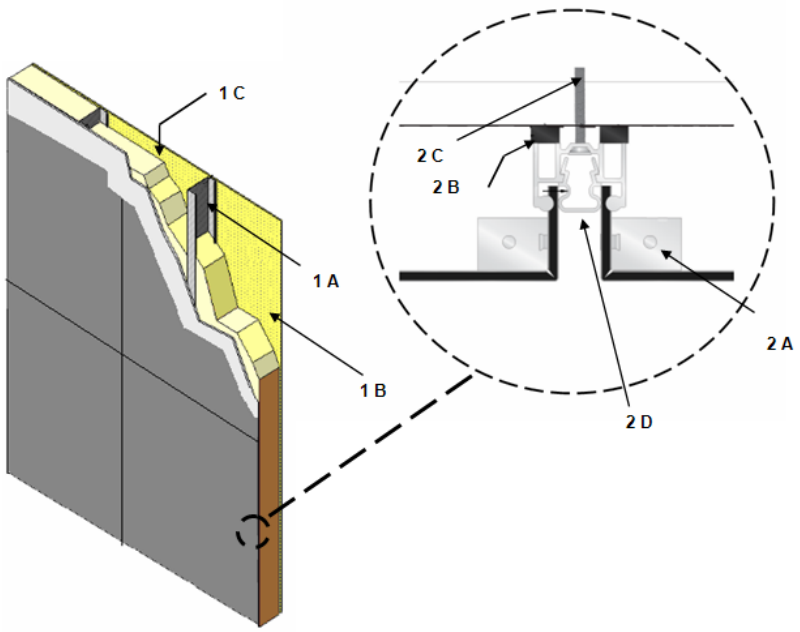
4. **OPENING:** (Not Shown) Install 2 in. × 6 in. × 16 GA galvanized steel flashing to the top of the window opening. Fit a horizontal strip of rockwool insulation 10 in. in height × 2 in. in depth into the air space between the wall and the inside surface of the panels 76 in. oc above the opening.

# MCA-CWP 30-01

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 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)

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



**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.

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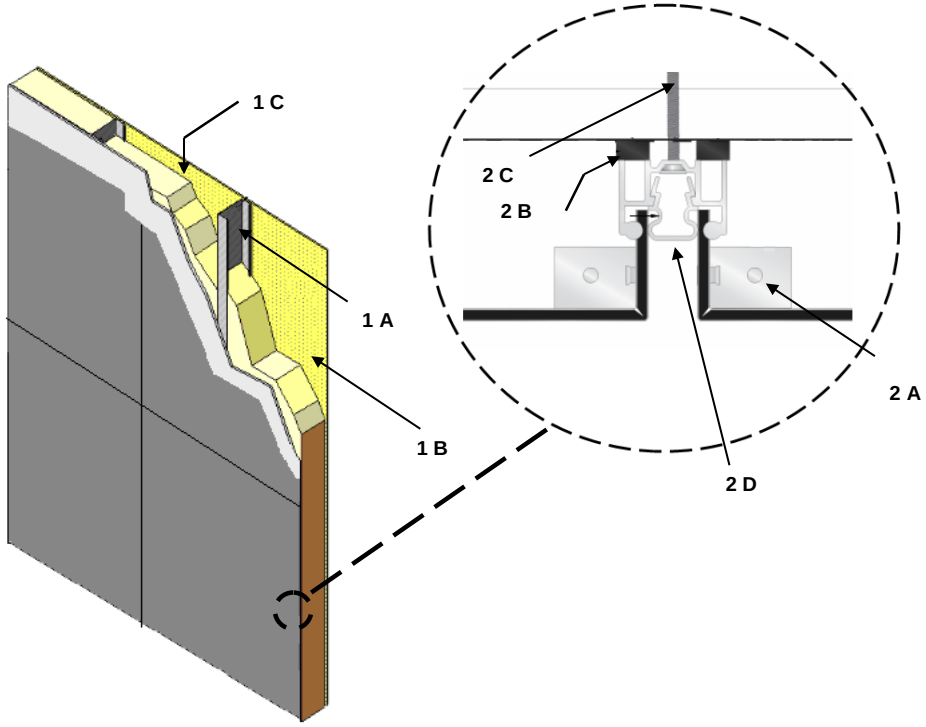
# MCA-CWP 60-01

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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# MCA-CWP 60-01 (2 OF 2)



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.