

ALPOLIC®

MATERIALS

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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM), including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies aluminum composite panels for interior cladding of walls, ceilings, columns, partitions and displays in commercial and high-traffic applications. These products are manufactured by Mitsubishi Chemical FP America, Inc. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

**SECTION 06 64 00
 PLASTIC PANELING**

PART 1 GENERAL

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 01 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section.

1.01 REFERENCES

- A. ASTM International (ASTM):
1. ASTM D648 Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
 2. ASTM D696 Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C With a Vitreous Silica Dilatometer.
 3. ASTM E8 Standard Test Methods for Tension Testing of Metallic Materials.
 4. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor either before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 01 Submittal Procedures Section.

1.02 PERFORMANCE REQUIREMENTS

- A. Fire Performance:
1. Surface burning characteristics when tested in accordance ASTM E84:
 - a. Flamespread: 25, maximum.
 - b. Smoke Developed: 450, maximum.

1.03 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 01 Submittal Procedures

Section.

- B. Product Data: Submit product data, including manufacturer's SPEC-DATA® sheet, for specified products.
- C. Samples: Submit selection and verification samples of finishes, colors and textures.
- D. Test Reports: Certified test reports showing compliance with specified performance requirements.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 01 Quality Assurance Section.

1.04 QUALITY ASSURANCE

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Conditions of the Contract and Division 01 Regulatory Requirements Section. Repetitive statements should be avoided.

- A. Regulatory Requirements and Approvals: [Specify applicable requirements of regulatory agencies].
 - 1. [Code agency name].
 - a. [Report or approval number].

Specifier Note: Article below should include special and unique requirements. Coordinate article below with Division 01 Product Requirements Section.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 01 Product Requirements Section.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 COMPOSITE PANELS

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

- A. Manufacturer: Mitsubishi Plastics Composites America, Inc.
 - 1. Contact: 401 Volvo Parkway, Chesapeake, VA 23320; Telephone: (800) 422-7270; Fax: (757) 436-1896; E-mail: info@alpolic.com; website: www.alpolic-northamerica.com.

Specifier Note: Edit Paragraph below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 01 Project Requirements (Product Substitutions Procedures) Section.

- B. Substitutions: No substitutions permitted.

2.02 MANUFACTURED UNITS

Specifier Note: Refer to manufacturer's SPEC-DATA sheet for substrates to which this membrane can be applied.

- A. ALPOLIC Aluminum Composite Panels:
 - 1. Coefficient of Expansion: 13×10^{-6} (1/°F) (24×10^{-6} (1/°C)) when tested in accordance with ASTM D696.
 - 2. Deflection Temperature: 230 degrees F (110 degrees C) when tested in accordance with ASTM D648.

Specifier Note: Heat transmission criteria below applies only to fr/LT panel.

3. Heat Transmission: Total R-value of not less than 0.25 (calculated).

Specifier Note: Size below is standard; custom sizes up to 62 inches (1575 mm) wide and 196 inches (4978 mm) long are available. Matte finishes are available on 48 inch and 50 inch (1219 and 1270 mm) widths only. A minimum of 30 pieces is required for each custom size.

4. Size: 48 inches (1219 mm) wide x 96 inches (2438 mm) long.

B. ALPOLIC fr/LT:

1. Thickness: 0.12 inch (3 mm).

Specifier Note: Custom sizes are available ranging from 48 inches - 62 inches (1219 - 1575 mm) wide and 72 inches - 196 inches (1829 - 4978 mm) in length.

2. Weight: 1.13 psf (5.5 kg/m²).
3. Specific Gravity: 1.84.
4. Tensile Strength: Not less than 4352 psi when tested in accordance with ASTM E8.

C. ALPOLIC pe/LT:

Specifier Note: Select thickness below.

1. Thickness: [0.08 inch (2 mm)] [0.12 inch (3 mm)] [0.16 inch (4 mm)].

Specifier Note: Select weight below to correspond to thickness selected above.

2. Weight: [0.56 psf (2.7 kg/m²)] [0.75 psf (3.7 kg/m²)] [0.96 psf (4.7 kg/m²)].

Specifier Note: Select specific gravity below to correspond to thickness selected above.

3. Specific Gravity: [0.56] [0.75] [0.93].

Specifier Note: Select tensile strength below to correspond to thickness selected above.

4. Tensile Strength: Not less than [7487] [5761] [4480] psi when tested in accordance with ASTM E8.

2.03 FABRICATION

A. Factory Finishing:

Specifier Note: Select coating and color(s) below to conform to project requirements. Polyester is standard. If more than one color is selected, create designators and coordinate with the drawings.

1. Coating: Manufacturer's standard [Polyester] [Fluorocarbon] [High cross-link polyester].
2. Color: [N1-Pure White/Anodized Silver Reversible] [N2-White/Champagne Metallic Reversible] [N3-Light Beige/Silver Metallic] [N4-Black/Grey Reversible] [N5-Off White (Matte)] [N6-Grey Metallic (Matte)] [S1-Black Granite] [S2-White Granite] [S3-Red Granite] [S4-Pink Granite] [S5-White Marble] [S6-Venetian Marble] [S7-Sandstone (Matte)] [T1-Maple (Matte)] [T2-Walnut (Matte)].

B. Tolerances:

1. Width: ± 2 mm.
2. Length: ± 4 mm.
3. Thickness: ± 0.008 inch (0.2 mm).
4. Bow: Not more than 0.5% of length or width.
5. Squareness: Not more than 0.2 inch (5 mm) out of square.
6. Edges: Square and trimmed with no displacement of aluminum sheets or protrusion of core material.

PART 3 EXECUTION

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify that substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.

3.03 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.04 INSTALLATION

Specifier Note: Tolerance below is manufacturer's standard; revise if required to conform to project requirements.

- A. Tolerances: Not more than a 0.25 inch (6.4 mm) in 20 feet (6 m) deviation in horizontal and vertical alignment, noncumulative.

END OF SECTION