

Aristech Surfaces LLC is the manufacturer of AcryClear<sup>™</sup>, AcryBright<sup>™</sup>, AcrySteel<sup>®</sup>, AcryGreen<sup>™</sup> Clear Cast Acrylic. Avonite Surfaces<sup>®</sup> Solid Surface and STUDIO Collection<sup>®</sup> Architectural Design Resin

The purpose of this guide is to assist the specifier in correctly identifying the Cast Acrylic, solid surface or architectural design resin panels and hardware for demountable partitions applications. The [SPECIFIER NOTE] throughout is identified to assist in selecting or providing the required information. The specifier needs to edit these guide specifications to fit the needs of each project. Contact an Aristech Regional Manager to assist in appropriate product selections and reach out to our Technical Service Team if further assistance is needed.

References have been made within the text of the specification to MasterFormat® Section numbers and titles; specifier needs to coordinate these numbers and titles with sections included for the specific project. Brackets []; "AND/OR"; and "OR" have been used to indicate when a selection is required. Some options may require additional lead-time, if this is a consideration, contact an Aristech Surfaces LLC representative for assistance.

# 2018 MasterFormat® SECTION 10 22 19 (102219) DEMOUNTABLE PARTITIONS

AcryClear<sup>™</sup>, AcryBright<sup>™</sup>, AcryGreen<sup>™</sup> AcrySteel<sup>®</sup> - Cast Acrylic Panels
Avonite Surfaces<sup>®</sup> Solid Surface Panels
STUDIO Collection<sup>®</sup> Architectural Design Resin Panels

Cast Acrylic Panels, Solid Surface and Architectural Design Resin by Aristech Surfaces LLC; Aluminum Frames, Trim and Hardware; Doors and Hardware by Other Manufacturers

## **PART 1 - GENERAL**

## 1.1 RELATED DOCUMENTS

 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

SECTION INCLUDES

[SPECIFIER NOTE: MAINTAIN types of applications that are specific to project.]

1. Site-Assembled Demountable Partitions

## 1.3 PREINSTALLATION MEETINGS

**[SPECIFIER NOTE**: Retain "Preinstallation Conference" Paragraph below if work of this section is extensive or complex enough to justify a conference.]



Preinstallation Conference: Conduct conference at [Project site] <Insert location>.

[SPECIFIER NOTE: If needed, insert list of conference participants not mentioned in Section 013100 "Project Management and Coordination."]

## 1.4 ACTION SUBMITTALS

Product Data: Submit manufacturer's current product literature for each product indicated

[SPECIFIER NOTE: Maintain appropriate LEED submittal requirements when project is to be LEED registered.]

- Sustainable Design Submittals: [AcryClear™ Cast Acrylic Panels] [AcryBright™ Cast Acrylic Panels] and/or [AcrySteel® Impact Modified Cast Acrylic Panels]
  - 1. Credit EQ 2, Low-emitting Materials. Provide manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.
- Sustainable Design Submittals: [AcryGreen<sup>TM</sup> 50% Recycled Content Cast Acrylic Panels]
  - 1. Credit MR 3, Building Product Disclosure & Optimization -- Sourcing of Raw Materials, Option 2. Provide manufacturer's third-party certification of recycled content.
  - 2. Credit EQ 2, Low-emitting Materials. Provide manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.
- Sustainable Design Submittals: [Avonite Surfaces® Solid Surface Panels] and/or [STUDIO Collection® Architectural Design Resin Panels]
  - 1. Credit MR 2, Building Product Disclosure & Optimization EPDs, Option 1. Provide manufacturer's Environmental Product Declaration.
  - 2. Credit MR 3, Building Product Disclosure & Optimization -- Sourcing of Raw Materials, Option 2. Provide manufacturer's third-party certification of recycled content.
  - 3. Credit MR 4, Building Product Disclosure & Optimization Material Ingredients, Option 1. Provide manufacturer's Health Product Declaration or Declare label.
  - 4. Credit EQ 2, Low-emitting Materials. Provide manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.
- Shop Drawings:
  - 1. Include plans, elevations, sections and attachment details at floors, columns, permanent partitions and ceilings, and method of erection and disassembly.

## **ISPECIFIER NOTE:** Retain subparagraph below if partitions include wiring raceways.]

- 2. Include diagrams for power-, signal-, and control-wiring raceways, and details of access to raceways.
- Samples:
  - 1. Provide four-inch square color and finish samples for acrylic products indicated.
  - 2. Provide four-inch square samples of any other face panel materials and doors.
  - 3. Provide samples of linear trim, hardware and accessories for color and finish selection.



## 1.5 INFORMATIONAL SUBMITTALS

[SPECIFIER NOTE: Retain "Coordination Drawings" Paragraph below for situations where limited space necessitates maximum utilization for efficient installation of different components or if coordination is required for installation of products and materials by separate installers. Coordinate paragraph with other Sections specifying products listed below. Preparation of coordination drawings requires the participation of each trade involved in installations within the limited space.]

- Coordination Drawings: Provide reflected ceiling plans and other details, using input from installers of these components:
  - 1. Suspended-ceiling components and grid layout.
  - 2. Locations of fixed doors and windows.
  - 3. Overhead structural members and bracing.
  - 4. Ductwork above ceiling.
- Qualification Data: Installer Certification. Submit a signed copy of the installer's certificate, acknowledging the employee has been trained and approved by manufacturer.
- Manufacturer Instructions: Provide manufacturer's written installation instructions. [www.aristechsurfaces.com]

## 1.6 CLOSEOUT SUBMITTALS

Maintenance Data: For demountable partitions to include in maintenance manuals.

#### 1.7 MAINTENANCE MATERIALS SUBMITTALS

 Furnish extra materials that match products installed and that are packaged with protective coating for storage and identified with labels describing contents.

## 1.8 QUALITY ASSURANCE

- Acrylic, Solid Surface and Architectural Design Resin sheets are to be cast, not extruded.
- Installer Qualifications: Manufacturer approved installer shall fabricate and install cast acrylic, solid surface and architectural design resin sheet products and demonstrate successful experience in installing metal trim and hardware and finished carpentry items similar in type and quality to those required for this project.
- Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation.

**[SPECIFIER NOTE**: Indicate portion of wall represented by mockup on Drawings or draw mockup as separate element. Paragraph 3 below is optional.]

- 1. Build mockups for demountable partitions including accessories. [Insert size and description of mockups].
- 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.



3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

## 1.9 FIELD CONDITIONS

- Coordination of work: Installation of suspended ceilings, flooring and wall finishes, lighting
  fixtures, HVAC equipment, painting and fire-suppression systems should be completed before
  installation of demountable partitions.
- Do not begin installation of demountable partitions until permanent HVAC systems are properly operating and building temperature and humidity have stabilized.

## **PART 2 - PRODUCTS**

[SPECIFIER NOTE: Product information is proprietary to Aristech Surfaces LLC. If additional products are required for competitive procurement, contact Aristech Surfaces LLC for assistance in listing competitive products that may be available.]

## 2.1 PERFORMANCE REQUIREMENTS

**[SPECIFIER NOTE**: Product information is proprietary to Aristech Surfaces LLC. If additional products are required for competitive procurement, contact Aristech Surfaces LLC for assistance in listing competitive products that may be available.]

[SPECIFIER NOTE: DELETE performance characteristics of materials that are not project specific.]

Cast Acrylic Panels

- Performance Characteristics based on 0.125-inch thickness: [AcryClear™ Continuous Cast Acrylic Sheet] [AcryBright™ Cell Cast Acrylic Sheet]
  - 1. Specific Gravity: 1.19 when tested in accordance with ASTM D792
  - 2. Rockwell Hardness: 90. when tested in accordance with ASTM D785
  - 3. Water Absorption after 24 hours: 0.35 %, when tested in accordance with ASTM D570
  - 4. Light Transmission: 92% when tested in accordance with ASTM D1003
  - 5. Haze: Less than 2.0% when tested in accordance with ASTM D1003
  - 6. Flexural Strength: 16,000 psi, when tested in accordance with ASTM D790
  - 7. Flexural Modulus: 4.6 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 8. Charpy Impact: 5.7 ft.lb/in, when tested in accordance with ASTM D256
  - 9. Coefficient of Linear Thermal Expansion, in/in/°F: 4.1 x 10<sup>-5</sup>, when tested in accordance with ASTM E831

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].



- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 11. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 0.125-inch thickness [AcryGreen™ Recycled Content Cell Cast Acrylic Sheet]
  - 1. Recycled Content: Minimum 50%
  - 2. Specific Gravity: 1.19 when tested in accordance with ASTM D792
  - 3. Rockwell Hardness: 90, when tested in accordance with ASTM D785
  - 4. Water Absorption after 24 hours: 0.35 %, when tested in accordance with ASTM D570
  - 5. Light Transmission: 91% when tested in accordance with ASTM D1003
  - 6. Haze: Less than 2.0% when tested in accordance with ASTM D1003
  - 7. Flexural Strength: 14,000 psi, when tested in accordance with ASTM D790
  - 8. Flexural Modulus: 4.5 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 9. Charpy Impact: 5.7 ft.lb/in, when tested in accordance with ASTM D256
  - 10. Coefficient of Linear Thermal Expansion, in/in/°F: 4.1 x 10-5, when tested in accordance with ASTM E831

- 11. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 12. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 0.177-inch thickness: [AcrySteel<sup>TM</sup> Impact Modified Continuous Cast Acrylic Sheet] [AcryBright<sup>TM</sup> Cell Cast Acrylic Sheet]
  - 1. Specific Gravity: 1.19 when tested in accordance with ASTM D792
  - 2. Rockwell Hardness: 88, when tested in accordance with ASTM D785
  - 3. Water Absorption after 24 hours: 0.30 %, when tested in accordance with ASTM D570
  - 4. Light Transmission: 93% when tested in accordance with ASTM D1003
  - 5. Haze: Less than 2.5% when tested in accordance with ASTM D1003
  - 6. Flexural Strength: 13,200 psi, when tested in accordance with ASTM D790
  - 7. Flexural Modulus: 3.25 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 8. Charpy Impact: 9.0 ft.lb/in, when tested in accordance with ASTM D6110
  - 9. Coefficient of Linear Thermal Expansion, in/in/oF: 4.2 x 10<sup>-5</sup>, when tested in accordance with ASTM E831

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 10. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 11. Flame-Spread Index of 20 when tested in accordance with ASTM E84.



## Solid Surface Panels

- Performance Characteristics based on 12mm, 9mm and 6mm thickness, solid colors: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.73 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 63, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.04 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 9,300 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 12.6 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 1.10 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.09 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

(SPECIFIER NOTE: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project.)

14. Recycled Content: Minimum 16%

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 15. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 16. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 12mm, 9mm and 6mm thickness, colors with small particulates: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.60 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 58, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.05 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 8,000 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 10.6 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 1.10 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

(SPECIFIER NOTE: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project.)



14. Recycled Content: Minimum 16%

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 15. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 16. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 12mm, 9mm and 6mm thickness, colors with medium particulates: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.62 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 59, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.05 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 7,150 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 10.5 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 0.85 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

(**SPECIFIER NOTE**: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project.)

14. Recycled Content: Minimum 16%

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 15. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 16. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 12mm, 9mm and 6mm thickness, colors with large particulates: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.63 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 60, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.05 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 6,850 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 11.7 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 0.80 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01



- 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
- 11. Food Zone use: Approved, when tested to NSF 51 Standard.
- 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
- 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 15. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 12mm, 9mm and 6mm thickness, translucent colors: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.60 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 55, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.05 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 4,450 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 10.2 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 1.12 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 15. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 3mm thickness, solid colors: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.60 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 50, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.13 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 10,300 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 8.8 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 1.95 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.



13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 15. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 3mm thickness, colors with particulates: [Avonite Solid Surface]
  - 1. Specific Gravity: 1.60 when tested in accordance with ASTM D792
  - 2. Barcol Hardness: 57, when tested in accordance with ASTM D2583
  - 3. Water Absorption after 24 hours: 0.08 %, when tested in accordance with ASTM D570
  - 4. Flexural Strength: 8,000 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 9.75 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Charpy Impact: 0.90 ft.lb/in, when tested in accordance with ASTM D6110
  - 7. Linear Thermal Expansion: 2.46 x 10<sup>-5</sup> in/in/°F, when tested in accordance with ASTM D696
  - 8. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 9. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 10. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 11. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 12. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 13. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 15. Flame-Spread Index of 20 when tested in accordance with ASTM E84.

# Architectural Design Resin Panels

- Performance Characteristics based on 12mm thickness: [STUDIO Collection® Architectural Resin Recycled] [STUDIO Collection® Architectural Resin Non-Translucent]
  - 1. Thickness: 12mm when tested in accordance with ASTM
  - 2. Specific Gravity: 99.89 lbs/ft3.
  - 3. Hardness: 53, when tested in accordance with ASTM D2583
  - 4. Flexural strength: 5,570 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 9.76 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Water Absorption after 24 hours: 0.05 %, when tested in accordance with ASTM D570
  - 7. Charpy Impact: 0.7 ft.lb/in, when tested in accordance with ASTM D6110
  - 8. Impact Resistance 1/2 Pound: No Fracture at a height > 150 in, when tested supported in accordance with NEMA LD3-3.3
  - Linear Thermal Expansion, in/in/°F: 2.1 x 10<sup>-5</sup>, when tested in accordance with ASTM D696



- 10. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
- 11. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
- 12. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
- 13. Weight per sq. ft., 12mm thickness: 3.93 pounds
- 14. Food Zone use: Approved, when tested to NSF 51 Standard.
- 15. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
- 16. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

(**SPECIFIER NOTE**: DELETE requirement for recycled content when selected product doesn't meet the criteria or when not required for project.)

17. Recycled Content: Minimum 40%

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 18. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 19. Flame-Spread Index of 20 when tested in accordance with ASTM E84.
- Performance Characteristics based on 12mm thickness [STUDIO Collection® Architectural Resin Translucent/Glass]
  - 1. Thickness: 12mm when tested in accordance with ASTM
  - 2. Specific Gravity: 81.12 lb/ft<sup>3</sup>.
  - 3. Hardness: 48, when tested in accordance with ASTM D2583
  - 4. Flexural strength 4,100 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 6.55 x 10<sup>5</sup> psi when tested in accordance with ASTM D790
  - 6. Water Absorption after 24 hours: 0.04 %, when tested in accordance with ASTM D570
  - 7. Charpy Impact: 0.5 ft.lb/in, when tested in accordance with ASTM D6110
  - 8. Impact Resistance 1/2 Pound: No Fracture at height > 150 in when tested supported in accordance with NEMA LD3-3.3
  - 9. Linear Thermal Expansion, in/in/°F: 2.9 x 10<sup>-5</sup>, when tested in accordance with ASTM D696
  - 10. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 11. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 12. Stain Resistance: No Effect, when tested in accordance with ANSI/ICPA SS-1
  - 13. Weight per sq. ft., 12mm thickness: 3.19 pounds
  - 14. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 15. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 16. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

**[SPECIFIER NOTE**: Revise Smoke-Developed Index and Flame-Spread Index Paragraphs below as required by governing code for partition location, occupancy classification and whether sprinklered or not].

- 17. Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 18. Flame-Spread Index of 180 when tested in accordance with ASTM E84.



- Performance Characteristics based on 6mm thickness [STUDIO Collection® Architectural Resin – Translucent/Glass]
  - Nominal Thickness: 6mm when tested in accordance with ASTM
  - 2. Specific Gravity: 78.6 lb/ft<sup>3</sup>.
  - 3. Hardness: 48, when tested in accordance with ASTM D2583
  - 4. Flexural strength 7,100 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 6.34 x 10<sup>5</sup> psi, when tested in accordance with ASTM D790
  - 6. Water Absorption after 24 hours: 0.08 %, when tested in accordance with ASTM D570
  - 7. Charpy Impact Foot Pounds per Inch: 0.78, when tested in accordance with ASTM D6110
  - 8. Impact Resistance 1/2 Pound: No Fracture at height 30 in when tested supported in accordance with NEMA LD3-3.8
  - Linear Thermal Expansion, in/in/°F: 2.9 x 10<sup>-5</sup>, when tested in accordance with ASTM D696
  - 10. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 11. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 12. Stain Resistance: Passes, when tested in accordance with ANSI/ICPA SS-1
  - 13. Weight per sq. ft., 6mm thickness: 1.55 pounds
  - 14. Food Zone use: Approved, when tested to NSF 51 Standard.
  - 15. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - 16. Fungi Resistance: No Growth, when tested in accordance with ASTM G21.

- 17. Smoke-Developed Index: 850 when tested in accordance with ASTM E84.
- 18. Flame-Spread Index of 90 when tested in accordance with ASTM E84.
- Performance Characteristics based on 6mm thickness [STUDIO Collection® Architectural Resin – Recycled/Non-Translucent]
  - 1. Nominal Thickness: 6mm when tested in accordance with ASTM
  - Specific Gravity: 99.3 lbs/ft³.
  - 3. Hardness: 57, when tested in accordance with ASTM D2583
  - 4. Flexural strength 7,500 psi, when tested in accordance with ASTM D790
  - 5. Flexural Modulus: 1.279 x 10<sup>6</sup> psi when tested in accordance with ASTM D790
  - 6. Water Absorption after 24 hours: 0.04 %, when tested in accordance with ASTM D570
  - 7. Charpy Impact Foot Pounds per Inch: 0.55, when tested in accordance with ASTM D6110
  - 8. Impact Resistance 1/2 Pound: No Fracture at height 36 in when tested supported in accordance with NEMA LD3-3.8
  - Linear Thermal Expansion, in/in/°F: 2.1 x 10<sup>-5</sup>, when tested in accordance with ASTM D696
  - 10. High Temperature Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 11. Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01
  - 12. Stain Resistance: Passes, when tested in accordance with ANSI/ICPA SS-1
  - 13. Weight per sq. ft., 6mm thickness: 1.95 pounds
  - 14. Food Zone use: Approved, when tested to NSF51 standards.
  - 15. Bacterial Resistance: No Growth, when tested in accordance with ASTM G22.
  - Fundi Resistance: No Growth, when tested in accordance with ASTM G21.



- Smoke-Developed Index: Comply with International Building Code (IBC) Section 2606 for light-transmitting plastics with Smoke-Developed Index not greater than 450 when tested in accordance with ASTM E84.
- 18. Flame-Spread Index of 5 when tested in accordance with ASTM E84.

## **Assembled Partitions**

• Structural Performance: Provide demountable partitions capable of withstanding the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

[SPECIFIER NOTE: Retain "Load-Bearing Capacity" Subparagraph below for demountable partitions that support applied loads including cabinetry, shelving, and manufacturers' systems furniture.]

1. Load-Bearing Capacity: Not less than [300-lb (136-kg) concentrated] [2.3-lb/linear inch (0.041-kg/linear mm) distributed] <Insert load> proof load when tested according to BIFMA X 5.6.

[SPECIFIER NOTE: Retain "Transverse-Load Capacity" Subparagraph below for site-assembled demountable partitions. Requirements are examples only; revise to suit Project. Verify compliance with authorities having jurisdiction.]

2. Transverse-Load Capacity: Lateral deflection of not more than [1/120] [1/240] of the overall span when tested under a uniformly distributed load of 5 lb./sq. ft. (24.4 kg/sq. m) according to ASTM E72.

## 2.2 SITE-ASSEMBLED DEMOUNTABLE PARTITIONS COMPONENTS

[SPECIFIER NOTE: Retain brands and types of continuous cast acrylic panels in paragraphs below that you wish to specify]

- Cast Acrylic Panels: AcryClear<sup>™</sup> Continuous Cast Acrylic Sheet by Aristech Surfaces LLC, 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; www.aristechsurfaces.com.
  - Description: A durable, hygienic and easy to clean material with excellent chemical- and scratch-resistance. Continuous cast acrylic is 50% lighter in weight than tempered glass and provides superior optical clarity. It exhibits UV stability and does not dramatically yellow over time like polycarbonate and other plastics. AcryClear™ is thermoformable and easily cut, shaped and fabricated with standard equipment.
  - 2. Thickness: [3mm/0.118in.] [0.177 in.] [0.220 in.] [6mm/0.236 in.] [0.354 in] [12mm /0.472 in.] [Other as specified]
  - 3. Color: [Clear 0000] [White 7328] [Grey 2515] [Other Color/CodeTo be selected by Architect] [As indicated on Drawings]
  - 4. Finish: [Gloss] [Frosted/Matte]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.



- Cast Acrylic Panels: AcrySteel® Impact Modified Continuous Cast Acrylic Sheet by Aristech Surfaces LLC, 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; www.aristechsurfaces.com.
  - Description: An impact modified acrylic designed to deliver high impact performance, five to six times higher than standard acrylics. It is a durable, hygienic and easy to clean material with excellent chemical- and scratch-resistance. AcrySteel is more rigid than polycarbonate and more easily fabricated. It exhibits UV stability and does not dramatically yellow over time like polycarbonate and other plastics. As a continuous cast acrylic, it is 50% lighter in weight than tempered glass and provides superior optical clarity. AcrySteel is thermoformable and easily cut, shaped and fabricated with standard equipment.
  - 2. Thickness: [3mm/0.118in.] [0.177 in.] [0.220 in.] [6mm/0.236 in.] [0.354 in] [12mm /0.472 in.] [Other as specified]
  - 3. Color: [Clear 0000] [White 7328] [Grey 2515] [To be selected by Architect] [As indicated on Drawings]
  - 4. Finish: [Gloss] [Frosted/Matte]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.
- Cast Acrylic Panels: AcryBright<sup>™</sup> Cell-Cast Acrylic Sheet by Aristech Surfaces LLC, 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; www.aristechsurfaces.com.
  - Description: A durable, hygienic and easy to clean material with excellent chemical- and scratch-resistance. AcryBright™ is ideal for sun-exposed installations, indoors and outdoors, because it exhibits UV stability and does not dramatically yellow over time like polycarbonate and other plastics. It is 50% lighter in weight than tempered glass and provides superior optical clarity. AcryBright™ is thermoformable and easily cut, shaped and fabricated with standard equipment.
  - 2. Thickness: [3mm/0.118in.] [0.177 in.] [0.220 in.] [6mm/0.236 in.] [0.354 in] [12mm /0.472 in.] [Other as specified]
  - 3. Color: [Clear 0000] [To be selected by Architect] [As indicated on Drawings]
  - 4. Finish: [Gloss] [Frosted/Matte]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.
- Cast Acrylic Panels: AcryGreen<sup>™</sup> 50% Recycled Content Cell-Cast Acrylic Sheet by Aristech Surfaces LLC, 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; www.aristechsurfaces.com.
  - Description: A cell-cast acrylic with 50% recycled content. A durable, hygienic and easy to clean material with excellent chemical- and scratch-resistance. AcryGreen™ is ideal for sun-exposed installations, indoors and outdoors, because it exhibits UV stability and does not dramatically yellow over time like polycarbonate and other plastics. It is 50% lighter in weight than tempered glass and provides superior optical clarity. AcryGreen™ is thermoformable and easily cut, shaped and fabricated with standard equipment.
  - 2. Thickness: [3mm/0.118in.] [0.177 in.] [0.220 in.] [6mm/0.236 in.] [0.354 in] [12mm/0.472 in.] [Other as specified]
  - 3. Color: [Clear 0000] [To be selected by Architect] [As indicated on Drawings]
  - 4. Finish: [Gloss] [Frosted/Matte]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.



- Solid Surface Panels: Avonite Surfaces<sup>®</sup> Solid Surface by Aristech Surfaces LLC, 7350 Empire Drive Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; www.aristechsurfaces.com.
  - Description: Avonite Surfaces® Solid Surface is a durable, hygienic, food-safe and easy to clean material with excellent chemical- and scratch-resistance. It is available in a broad palette of colors, designs and transparencies. The material is suitable for vertical and horizontal applications, may be fabricated in straight or curved lines or thermoformed into a myriad of shapes.
  - 2. Color: [Insert Avonite Surfaces® Color/Code]
  - 3. Finish: [Fabricated Finish Polished] [Fabricated Finish Satin] [Fabricated Finish Matte]
  - 4. Thickness: [3mm/0.118in.] [6mm/0.236 in.] [12mm /0.472 in.] [Other as specified]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.
- Architectural Design Resin Panels: STUDIO Collection® Architectural Design Resin
   [Translucent] [Non-Translucent] [Recycled] by Aristech Surfaces LLC, 7350 Empire Drive
   Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378;
   www.aristechsurfaces.com.
  - Description: STUDIO Collection® Architectural Design Resin offers a spectrum of design resins with brilliant chromas, natural neutrals and sparkling metallics. Crafted from a proprietary resin blend, the line blends transparent, translucent and opaque polymers to create many design possibilities. It is a durable, hygienic, food-safe and easy to clean material with excellent chemical- and scratch-resistance. It is especially well-suited for vertical and backlighted applications and can be easily fabricated and thermoformed.
  - 2. Color: [Insert STUDIO Collection® Color Code]
  - 3. Finish: [Fabricated Finish Polished] [Fabricated Finish Satin] [Fabricated Finish Matte]
  - 4. Thickness: [3mm/0.118in.] [6mm/0.236 in.] [12mm /0.472 in.] [Other as specified]
  - 5. Silicone Sealant: Mildew-resistant, FDA-compliant, 100% silicone sealant recommended by manufacturer.
- Aluminum Frames, Trim and Hardware: C.R. Laurence Company U.S. Aluminum Series 487 Office Partition Components, or CRL Area Divider Systems, or comparable.
  - Description: Extruded aluminum components accommodating 4-7/8-inch standard finished wall thickness and 6mm or 12mm cast acrylic glazing. Systems may utilize clip joinery or screw spline assembly.
  - 2. Standard finish as specified by Architect: [Insert Finish]
  - 3. Standard color as specified by Architect: [Insert Color]
- Doors
  - Material: [AcryClear™ Cast Acrylic] [AcrySteel™ Impact Modified Cast Acrylic]
     [AcryBright™ Cell-Cast Acrylic] [AcryGreen™ 50% Recycled Content Cell-Cast Acrylic]
     [Avonite Surfaces® Solid Surface] [STUDIO Collection® Architectural Design Resin][other brands] [Wood] [insert other]
  - 2. Door Operation: [Pivoting] [Sliding] [Swinging]
  - 3. Finish: [Insert Finish]
  - 4. Door Hardware as specified by Architect: [Insert Door Hardware description]

[SPECIFIER NOTE: Retain "Electrical Devices" Paragraph below if required; revise to suit Project. Insert specific terminal devices if required as part of demountable-partition assembly.]

• Electrical Devices: Integral, concealed raceways to serve electrical power and communication devices indicated on Drawings.



- 1. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- Accessories: [Insert description].

## 2.3 FABRICATION

- General: Fabricate demountable walls for installation with concealed fastening devices and
  pressure-fit members that will not damage ceiling or floor coverings. Fabricate systems for
  installation with continuous seals at floor, ceiling, and other locations where partitions about
  fixed construction.
- Partitions panels shall be finished and fabricated by an Aristech Surfaces LLC authorized fabricator.
- Any exposed finished edges of acrylic panels shall have a 1/16-inch radius.

## [SPECIFIER NOTE: Retain "Wiring" Paragraph below for prewired partitions.]

 Wiring: Conceal conductors and cables in raceways. Bundle, lace, and train conductors to terminal points with no excess and without exceeding manufacturer's limitations on bending radii.

## 2.4 GENERAL FINISH REQUIREMENTS

- Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- Appearance of Finished Work: Noticeable variations in same piece are not acceptable.
   Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## **PART 3 - EXECUTION**

# 3.1 EXAMINATION

- Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the work.
- Examine components before installation. Reject components that are wet, moisture damaged, mold damaged, broken, cracked, chipped, deformed, or unmatched.
- Examine roughing-in for electrical power to verify actual locations of power connections before partition installation.
- Proceed with installation only after unsatisfactory conditions have been corrected.



# 3.2 INSTALLATION

- Install demountable partitions after other finishing operations have been completed.
  - 1. Install partitions rigid, level, plumb, and aligned. Install seals at connections with floors, ceilings, fixed walls, and abutting surfaces to prevent light and sound transmission.
  - 2. Except for filler panels scribed to fixed walls or columns, do not modify manufacturer's standard components.

[SPECIFIER NOTE: Retain "Suspended-Ceiling System" Paragraph below for ceiling-height demountable partitions.]

- Suspended-Ceiling System: [Do not alter suspended-ceiling system] [Make alterations to suspended-ceiling system required by partition installation or to gain access to electrical or communication systems without affecting the structural integrity of suspended-ceiling system. Make alterations so they are not noticeable after panel installation] <Insert requirement>.
- Doors and Frames: Install door-and-frame [and glazing-and-glazing-frame] assemblies securely anchored to partitions and with doors aligned and fitted. Install and adjust door hardware for proper operation.
- Electrical Devices: Connect integral, concealed wiring to serve electrical power and communication devices indicated on Drawings.

## [SPECIFIER NOTE: Retain first subparagraph below for power receptacles.]

 Connect electrical service at junction-box locations according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

# [SPECIFIER NOTE: Retain subparagraph below for data ports.]

2. Connect data communication service at junction-box locations according to Section 271513 "Communications Copper Horizontal Cabling."

## 3.3 ERECTION TOLERANCES

• Install each demountable partition so surfaces vary not more than 1/8 inch (3 mm) from the plane formed by the faces of adjacent partitions.

## 3.4 ADJUSTING

- Inspect installation, correct misalignments, and tighten loose connections.
- Doors: Adjust doors to operate smoothly and easily, without binding or warping. Adjust hardware to function smoothly and lubricate as recommended by manufacturer. Verify that latches and locks engage accurately and securely without forcing or binding.
- Remove and replace defaced or damaged components [that cannot be satisfactorily repaired].



# 3.5 DEMONSTRATION

• [Engage a factory-authorized service representative to train] [Train] Owner's maintenance personnel to adjust, assemble, disassemble, and maintain demountable partitions.

**END OF SECTION 10 22 19**