(**Specifier Note**: Aristech Surfaces LLC is the manufacturer of the Avonite acrylic solid surface.

The purpose of this guide specification is to assist the specifier in correctly specifying solid surface wall cladding, shower pans and shower accessories for shower and tub enclosures. The wet wall assembly includes color coordinated components including fabricated accessories and color matching trim. Through the use of wide sheet size material, batten strips and seam blocks are not required, minimizing the opportunity for water intrusion and mold, mildew and bacteria growth.

The specifier needs to edit these guide specifications to fit the needs of each specific project. Contact an Aristech Surfaces LLC representative to assist in appropriate product selections. Throughout the guide specification, there are Specifier Notes to assist in the editing of the file.

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.)

**SECTION 09 72 61**

**SOLID SURFACE WET WALL ASSEMBLY AND SHOWER BASE**

AVONITE® Acrylic Solid Surface

1. GENERAL
	* + 1. SECTION INCLUDES

*(****Specifier Note****: Solid surface products used for wet applications. Include walls around tubs, shower walls and other areas susceptible to mold, mildew and bacteria.)*

* + - * 1. Vertical, solid surface wall cladding for wet applications.
				2. Shower Bases
				3. Accessories
			1. REFERENCES
				1. ASTM International

ASTM D256; Impact Resistance of Plastics and Electrical Insulating Materials.

ASTM D570; Water Absorption of Plastics.

ASTM D638; Tensile Properties of Plastics.

ASTM D696; Coefficient of Linear Thermal Expansion of Plastics.

ASTM D790; Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

ASTM D2583; Indentation Hardness of Rigid Plastics by Means of a Barcol Impresser.

ASTM E84; Surface Burning Characteristics of Building Materials.

ANSI A137.1; Tile Slip Test

* + - * 1. International Association of Plumbing and Mechanical Officials.

IAPMO/ANSI Standard Z124.1.2: Plastic Bathtub and Shower Units

* + - * 1. National Electrical Manufacturers Association (NEMA) LD.3 High Pressure Decorative Laminates.
			1. SUBMITTALS
				1. Refer to Section [01 33 00 Submittal Procedures] [Insert section number and title].
				2. Product Data: Submit manufacturer’s current product literature for each product indicated, including maintenance instructions.
				3. Samples: [Provide manufacturer’s color sample for products indicated.] [Provide color literature showing colors of material specified]
				4. Shop Drawings: Include details, and attachments to other work.

Submit shop drawings showing seams, termination points, and details of edges.

Submit coordination drawings indicating electrical and plumbing work.

* + - * 1. LEED Submittal:

*(****Specifier Note****: Retain subparagraph below if low-emitting materials are required for LEED-NC or LEED-CI Credit EQ 4.1 and adhesive is specified for installing panels.)*

Credit EQ 4.1 Indoor Air Quality

 Manufacturer’s product data for installation adhesives, including printed statement of VOC content and material safety data sheets.

Credit MR 5 Regional Materials.

 Product data indicating that materials are regionally manufactured within 500 miles.

Credit ID 1-4 Innovative Design

 Solis surface products are extremely durable with an extensive life cycle and can be reused in new applications. Selecting custom sized products can lower costs and reduce waste.

* + - * 1. Manufacturer Instructions: Provide manufacturer’s written installation instructions.
				2. Installer Certification: Submit a signed copy of the installer’s certificate, acknowledging the employee has been trained and approved by manufacturer.
				3. Closeout Submittals

Refer to Section [01 78 00 Closeout Submittals] [Insert section number and title].

* + - 1. QUALITY ASSURANCE
				1. Installer Qualifications: Manufacturer authorized installer shall fabricate and install solid surface products, and demonstrate successful experience in installing finished carpentry items similar in type and quality to those required for this project.
			2. DELIVERY, STORAGE AND HANDLING
				1. Refer to Section [01 60 00 Product Requirements] [Insert section number and title].
				2. Deliver sheets, fabricated items, materials and components in manufacturer’s original, unopened, undamaged containers with identification labels intact.
				3. Store solid surface products and accessories as recommended by manufacturer.
			3. WARRANTY
				1. Provide manufacturer’s limited ten-year warranty against defective material and workmanship.
1. 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.)*

* + - 1. MANUFACTURER
				1. Avonite® acrylic solid surface is manufactured by Aristech Surfaces LLC; 7350 Empire Drive, Florence, KY 41042, USA; Phone 1.800.354.9858 or 859.283.1501, fax 859.283.7378; website [www.aristechsurfaces.com](http://www.aristechsurfaces.com).
			2. WET WALL PANEL SYSTEM
				1. Provide wet wall panel system of solid polymer components to include: [panels] [inside corner trim] [outside finish trim]. Dimensions of all components shall be standard manufacturer's dimensions to be field cut to fit. Panels shall be formed from manufacturer's standard 6mm (~1/4 inch) thick sheet product. Panels shall be full width and height with seams occurring only at the inside corners of the enclosure.
			3. PANEL MATERIALS

*(****Specifier Note****: Using a basis of design is acceptable when writing a proprietary specification or when including accepted equivalent products.)*

* + - * 1. Basis of Design: Avonite® Acrylic Solid Surface
				2. Description: Non-porous, homogeneous material maintaining the same composition throughout the part with a composition of polyester or acrylic polymer, aluminum trihydrate filler and pigment.

*(****Specifier Note****: Most standard solid surface materials are only available in 30 and 36-inch wide sheets. These sheet sizes may produce enormous amounts of waste. Through the use of Avonite® Wide Sheet Size products, waste is minimized and joints are eliminated. For large jobs, Avonite® Right-Size Sheet Program assists the designer and contractor in cutting costs, reducing waste and saving time. Other manufacturers may offer wide and custom sheet size options for project requiring competitive pricing. Verify availability.)*

* + - * 1. Sheet Size: [36” x 96”] [48” x 96”] [60” x 96”] [ Insert Custom Sheet Size]
				2. Colors: [ Insert Avonite Standard Color]

 *(****Specifier Note****: Listed characteristics are minimum standards for the solid surface industry.)*

* + - * 1. Vertical Wet Wall Characteristics: (solid colors)

Thickness: 6mm

Barcol Hardness: 59, when tested in accordance with ASTM D2583

Elongation: 2.2%, when tested in accordance with ASTM D638

Tensile strength: 3,800psi, when tested in accordance with ASTM D638

Tensile Modulus: 11 x 105, when tested in accordance with ASTM D638

Water Absorption after 24 hours: .07%, when tested in accordance with ASTM D570

Charpy Impact (Foot Pounds/Inch): 1.5, when tested in accordance with ASTM D6110

Impact Resistance 1/2 Pound: No Fracture, when tested in accordance with NEMA LD3-3.8

Linear Thermal Expansion: 2.0 x 10-5, when tested in accordance with ASTM D696

High Temperature Resistance: Slight Effect, when tested in accordance with NEMA LD3-3.6

Boiling Water Resistance: No Effect, when tested in accordance with ISFA 2-01

Stain Resistance: No Effect, when tested in accordance with NEMA LD3-3.4

Weight per sq. ft., 6mm thickness: 2.2 pounds

* + - * 1. Cast Shower Bases

Basis of Design: Aristech Acrylics

Description: Solid cast polyester / acrylic blend homogeneous resin base with side walls and drain. Specified drain location possible on fabricated models. Non-skid floor surface with water channels directing water to the drain at a 2- degree slope (1/4” per foot).

Conform to the requirements of IAPMO/ANSI Standard Z124.1.2

Slip Resistance Coefficient: 0.65 minimum as tested in accordance with ANSI A137.1

Color: [Insert standard Avonite color]

Size: [Insert standard size base] [As specified by Architect]

* + - * 1. Shower Base Characteristics:

Tensile Strength: 4,800 psi, when tested in accordance with ASTM D638

Flexural strength: 8,300 psi, when tested in accordance with ASTM D790

Modulus of Elasticity: 1.2 x 10⁶ psi per ASTM D790

High Temperature Resistance: No Effect, when tested in accordance with NEMA LD3-3.6

Stain Resistance: Passes, when tested in accordance with ANSI Z124

Flame Spread: Class A, when tested in accordance with ASTM E84

* + - 1. TRIM ACCESSORIES
				1. Provide matching [inside corner trim] [and] [outside finish trim] to conceal corner sealant and provide transition from shower to wall covering.
			2. OPTIONAL SOAP/SHAMPOO COMPONENTS
				1. Provide matching [3/4” thick corner shelf soap dish] [multi-level solid cast corner shampoo and soap holder]
				2. Provide matching cast [recessed shampoo/soap holder] [double recessed shampoo and soap holder]
			3. INSTALLATION ACCESSORIES

*(****Specifier Note****: Verify solid surface manufacturer’s recommendations for adhesives. The use of low-VOC adhesive and sealants may be necessary, coordinate products with requirements as necessary.)*

* + - * 1. Panel Adhesive: Manufacturer recommended color matched adhesive
				2. Silicone Sealant: Mildew-resistant, FDA compliant, 100% clear silicone sealant

FABRICATION

* + - * 1. Solid surface shall be factory fabricated by an authorized fabricator.

*(****Specifier Note****: For continuous walls over 15 feet incorporate an expansion joint using silicone joint sealant.)*

* + - * 1. Solid surface paneling and shower/tub enclosures shall be fabricated of 6mm (~1/4”) thick material unless otherwise indicated.
				2. Solid surface shall be fabricated to field measurements.
				3. Cut and finish component edges with clean, sharp returns.
				4. Finished edges shall have a 1/16” radius
1. EXECUTION
	* + 1. GENERAL
				1. Install solid surfaces in accordance with manufacturer’s installation guidelines and recommendations.
			2. EXAMINATION
				1. Inspect materials and location of installation for conditions affecting performance of work in accordance with shop drawings.
				2. Proceed with installation only after unsatisfactory conditions have been corrected.
			3. SHOWER PAN INSTALLATION
				1. Install shower pan, plumb and level
				2. Coordinate plumbing with work of Division 22.
			4. PANEL INSTALLATION
				1. Panels shall be provided to heights shown on the drawings with no horizontal seaming.
				2. Panels shall utilize the maximum panel dimension available to minimize vertical seams.
				3. Panels shall be full width and height with seams only at inside corners of enclosure.
				4. Field cut panels as required for plumbing fixtures and bath accessories.
				5. Apply quarter size dots of silicone adhesive approximately 1” inside of perimeter of solid surface panels. Apply additional dots of silicone every 8-10” apart over remaining surface. Apply hot melt glue to back of panel for temporary adhesion of panels to substrate while adhesive cures.
				6. Allow panels to cure for 24 hours, minimum, before exposure to moisture or pressure.

*(****Specifier Note****: Use of wide and custom sheet sizes will minimize the need for vertical wall panel joints, for continuous walls over 15 feet, and for corner applications, incorporate an expansion joint using silicone sealant.)*

* + - * 1. Corner and vertical joints: Form 1/8-inch-wide joints, sealed with clear 100% silicone sealant.
			1. CLEANING AND PROTECTION
				1. Remove adhesives, sealants and other stains.
				2. Protect shower/bath enclosure from damage. Repair or replace damaged work, to Architect’s satisfaction.

END OF SECTION