

A1

12-01-21

**SECTION 06 61 16**  
**SOLID SURFACING FABRICATIONS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This guide specification covers the requirements for solid polymer fabrication.

**1.2 SYSTEM DESCRIPTION**

- A. Work under this section includes Shower pans, shower surrounds, countertops, window sills, shelves, and other items utilizing solid surfacing material fabrications as indicated on the drawings and as described in this specification. Do not change the source of supply for materials after work has started, if the appearance of finished work would be affected.
- B. In most instances, installation of solid surfacing material fabricate components and assemblies requires strong correctly located structural support provided by other trades. To provide a stable, sound, secure installation, close coordination is required between the solid surfacing material fabricator/installer and other trades to ensure that necessary structural wall support, cabinet counter top structural support, proper clearances, and other supporting components are provided for the installation of wall panels, counter tops, shelving, and all other solid surfacing material fabrications to the degree and extent recommended by the solid surfacing material manufacturer.
- C. Provide appropriate staging areas for solid surfacing material fabrications. Allow variation in component size and location of openings of plus or minus 3 mm 1/8 inch.

**1.3 SUBMITTALS**

- A. Submit in accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. SD-02 Shop Drawings
  - 1. Detail Fabrication Drawings
  - 2. Installation
- C. SD-03 Product Data
  - 1. Solid Polymer
  - 2. Indoor air quality for solid surface seam and sealant products
- D. SD-04 Samples

1. Material
2. Counter Tops
- E. SD-06 Test Reports
  1. Test Report Results
- F. SD-07 Certificates
  1. Qualifications
  2. Indoor Air Quality for solid surface fabrication products
- G. SD-10 Operation and Maintenance Data
  1. Solid Polymer, Data Package 1
- H. Manufacturer warranty.

#### **1.4 QUALITY ASSURANCE**

- A. Qualifications: To ensure warranty coverage, provide manufacturer certified solid surfacing fabricators to fabricate the solid surfacing material being utilized. Mark all fabrications with the fabricator's certification label affixed in an inconspicuous location. Minimum of 5 years of experience working with solid surfacing materials is required of fabricators. Submit solid surfacing material manufacturer's certification attesting to fabricator qualification approval
- B. Mock-Ups
  1. Submit Detail Fabrication Drawings indicating locations, dimensions, component sizes, fabrication and joint details, attachment provisions, installation details, and coordination requirements with adjacent work.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Do not deliver materials to project site until areas are ready for installation. Deliver components and materials to the site undamaged, in containers clearly marked and labeled with manufacturer's name. Store materials indoors and take adequate precautions to prevent damage to finished surfaces. Provide protective coverings to prevent physical damage or staining following installation, for duration of project.

#### **1.6 WARRANTY**

- A. Construction Warranty: Comply with FAR clause 52.246-21 "Warranty of Construction".
- B. Provide manufacturer's warranty to repair or replace defective materials, excluding damages caused by physical or chemical abuse or excessive heat,

and workmanship for a period of 10 years from date of final acceptance of the work.

#### 1.7 APPLICABLE PUBLICATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by basic designation only.
- B. ASTM International (ASTM):
- ASTM C920 .....(2018) Standard Specification for Elastomeric Joint Sealants
- ASTM D570 .....(1998; E 2010; R 2010) Standard Test Method for Water Absorption of Plastics
- ASTM D638 .....(2014) Standard Test Method for Tensile Properties of Plastics
- ASTM D696 .....(2016) Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C With a Vitreous Silica Dilatometer
- ASTM D790 .....(2017) Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- ASTM D2583 .....(2013a) Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
- ASTM E84 .....(2020) Standard Test Method for Surface Burning Characteristics of Building Materials
- ASTM G21 .....(2015; R 2021; E 2021) Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
- C. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)
- CDPH SECTION 01350 .....(2010; Version 1.1) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers
- D. CSA GROUP (CSA)
- CSA B45.5-17/IAPMO Z124 (2017; Errata 2017; Errata 2018) Plastic Plumbing Fixtures
- E. INTERNATIONAL CAST POLYMER ASSOCIATION (ICPA)

ICPA SS-1 .....(2001) Performance Standard for Solid Surface  
Materials

F. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

ANSI/NEMA LD 3 .....(2005) Standard for High-Pressure Decorative  
Laminates

G. NSF INTERNATIONAL (NSF)

NSF/ANSI 51 .....(2021) Food Equipment Materials

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

A. Submit detail fabrication drawings and installation drawings of each solid surfacing fabrication indicated. Include elevations, dimensions, clearances, details of construction and anchorage, and details of joints and connections.

1. Submit manufacturers' descriptive product data for [each type of] solid polymer fabrication [and quartz agglomerate fabrication] indicated. Include manufacturers' literature, finishes, profiles and thicknesses of materials.

2. Submit manufacturers' operations and maintenance data for [each type of] solid polymer fabrication [and quartz agglomerate material fabrication] in accordance with Section 01 78 23 OPERATIONS AND MAINTENANCE DATA.

B. Solid Surfacing Material

1. Provide solid polymer that is a homogeneous filled solid polymer; not coated, laminated or of a composite construction, complying with ICPA SS-1[ and ICPA SS-1 for quartz agglomerate, except for composition]. Provide material that meets or exceeds the minimum physical and performance properties specified.

2. Superficial damage to a depth of 0.25 mm 0.01 inch must be repairable by sanding or polishing. Material thickness is as indicated below; required minimum thickness is 6 mm 1/4 inch.

3. Submit a minimum 102 by 102 mm 4 inch by 4 inch sample of each color and pattern for approval; include full range of color and pattern variation. Retain approved samples as a standard for this work. Submit test report results from an independent testing laboratory attesting that the submitted solid surfacing materials meet or exceed each of the specified performance requirements

- a. Horizontal Surfaces: 3/4 inch thick material
  - b. Provide materials that meet the emissions requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide certification or validation of indoor air quality for solid surface fabrication products.
- C. Cast, 100 Percent Acrylic Polymer Solid Surfacing Material.
- D. Material Patterns and Colors.  
Provide pattern and color for all solid surfacing material components and fabrications as scheduled in Drawings; colors listed are not intended to limit the selection of equal colors from other manufacturers. Provide products with consistent patterned color throughout thickness of the product.
- E. Surface Finish
- 1. Provide a uniform appearance on exposed finished surfaces and edges.  
Exposed surface finish is matte; gloss rating of 5-20

## **2.2 ACCESSORY PRODUCTS**

Provide accessory products, as specified below, as manufactured by the solid surfacing material manufacturer or as approved by the solid surfacing material manufacturer for use with the solid surfacing materials being specified.

- A. Adhesives
- 1. Provide a two-part seam adhesive kit to create permanent, inconspicuous, non-porous, hard seams and joints by chemical bond between solid surfacing materials and components to create a monolithic appearance of the fabrication. Provide adhesive approved by the solid surfacing material manufacturer. Color-match adhesive to the surfaces being bonded where solid-colored, solid surfacing materials are being bonded together.
  - 2. Provide clear or color matched seam adhesive where particulate patterned, solid surfacing materials are being bonded together.
- B. Seam and Sealant Emissions
- 1. Provide seam and other accessory materials that meet the emissions
  - 2. requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide

- validation of indoor air quality for solid surface seam and sealant products.
- C. Silicone Sealant
    - 1. Provide silicone sealant, mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, acid-curing; ASTM C920, Type S, Grade NS, Class 25, Use NT; clear formulation; approved for use by the solid surfacing material manufacturer.
  - D. Conductive Tape
    - 1. Provide manufacturer's standard conductive foil tape, 0.1 mm 4 mils thick, applied around the edges of cut outs containing hot or cold appliances.
  - E. Insulating Tape
    - 1. Provide manufacturer's standard insulating tape for use with drop-in food wells used in commercial food service applications to insulate solid surfacing material from hot or cold appliances.
  - F. Heat Reflective Tape
    - 1. Provide heat reflective tape as recommended by the solid surfacing material manufacturer for use with cutouts for heat sources.
  - G. Mounting Hardware
    - 1. Provide mounting hardware, including sink/bowl clips, inserts and fasteners for attachment of undermount sinks and lavatories.

### **2.3 FABRICATIONS**

Provide factory or shop fabricate components to sizes and shapes indicated, to the greatest extent practical, in accordance with approved Shop Drawings and manufacturer's requirements. Provide factory cutouts for sinks, lavatories, and plumbing fixtures where indicated on the drawings. Contours and radii must be routed to template, with edges smooth. Defective and inaccurate work will be rejected. Submit product data indicating product description, fabrication information, and compliance with specified performance requirements for solid surfacing material, joint adhesive, sealants, and heat reflective tape.

- A. Joints and Seams
  - 1. Form joints and seams between solid surfacing material components using manufacturer's approved seam adhesive. Provide inconspicuous joints in appearance without voids to create a monolithic appearance.
- B. Edge Finishing

1. Rout and finish component edges to a smooth, uniform appearance and finish. Provide edge shapes and treatments, including any inserts, as detailed on the drawings. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.

C. Counter Top Splashes

1. Fabricate backsplashes and end splashes from 13 mm 1/2 inch thick solid surfacing material to be 102 mm 4 inches high in conformance with dimensions and shapes as indicated. Provide backsplashes and end splashes at locations indicated. Shop fabricate backsplashes and provide loose, to be field attached.
  - a. End Splashes: Provide end splashes loose for installation at the jobsite after horizontal surfaces to which they are to be attached have been installed.

- D. Counter Tops: Fabricate all solid surfacing material, counter top components from 19 mm 3/4 inch thick material. Indicate details, dimensions, locations, and quantities on the drawings. Provide counter tops with 102 mm 4 inch high loose as indicated. Attach 51 mm 2 inch wide reinforcing strip of solid surfacing material under each horizontal counter top seam. Submit a minimum 305 mm 1 foot wide by 152 mm 6 inch deep, full size sample for each type of counter top shown on the project drawings; include the edge profile and backsplash as detailed on the drawings and at least one seam. Retain approved sample as standard for this work. Provide bullnose edge profile.

a. Counter Tops with Sinks

- 1) Provide stainless steel or vitreous china sink; include cutouts to template for counter tops with sinks as furnished by the sink manufacturer. Provide manufacturer's standard sink mounting hardware for stainless steel rimless installation. Seal between sink and counter top with specified silicone sealant. Provide sink, faucet, and plumbing requirements in accordance with Section 22 00 00 PLUMBING.

- E. Shower base and Wall Panel System: Provide shower wall enclosures with a system of solid surfacing material components to include: panels, corner trim, soap dish, shampoo shelf, panel edge trim; dimensions of all components are as indicated. Form wall panels from manufacturer's standard 6 mm 1/4 inch and base from 13 mm 1/2 inch thick sheet product.

Provide panels full width and height with seams occurring only at the inside corners of the enclosure. Provide soap dish and shampoo shelf of configuration, shape, and location as indicated as standard with the manufacturer's system.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Components: Install all components and fabricated units plumb, level, and rigid. Make field joints between solid surfacing material components using solid surfacing material manufacturer's approved seam adhesives, to provide a monolithic appearance with joints inconspicuous in the finished work. Attach metal or vitreous china sinks and lavatory bowls to counter tops using solid surfacing material manufacturer's recommended clear silicone sealant and mounting hardware. Install solid polymer sinks and bowls using a color-matched seam adhesive.
1. Loose Counter Top Splashes: Mount loose splashes in the locations noted on the drawings. Adhere loose splashes to the counter top with a color matched silicone sealant when the solid surfacing material components are solid colors. Use a clear silicone sealant to provide adhesion of particulate patterned solid surfacing material splashes to counter tops.
  2. Wall Panels & Panel Systems: Installation of wall panels and system components to substrates must include the use of a specified panel adhesive. Use specified seam adhesive to adhere all solid surfacing material components to each other with the exception of expansion joints and inside corners. All inside corners and expansion joints between solid surfacing material components must be joined with specified silicone sealant. All joints between solid surfacing material components and non-solid polymer surfaces must be sealed with specified silicone sealant.
- B. Silicone Sealant: Use specified silicone sealant to seal all expansion joints between solid surfacing material components and all joints between solid surfacing material components and other adjacent surfaces such as walls, floors, ceiling, and plumbing fixtures. Provide sealant bead smooth and uniform in appearance and minimum size necessary to bridge any gaps between the solid surfacing material and the adjacent surface.



Provide continuous bead and run the entire length of the joint being sealed.

- C. Plumbing: Make plumbing connections to sinks and lavatories in accordance with Section 22 00 00 PLUMBING.

**3.2 CLEAN-UP**

- A. Components must be cleaned after installation and covered to protect against damage during completion of the remaining project items. Damaged components must be repaired or replaced at the Contractor's sole expense.

- - - E N D - - -