

SECTION 06 65 10
SOLID SURFACE FABRICATIONS

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

Drawings and general provisions of the contract, including general and supplementary conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following horizontal and trim solid surface product types:
 - 1. Countertops and countertops with sinks.
 - 2. Window stools.
- B. Related Sections include the following:
 - 1. Blocking and supports for countertops: Section 06 10 00 "Rough Carpentry".
 - 2. Plumbing Fixtures: Section 22 40 00 "Plumbing Fixtures".

1.3 DEFINITION

- A. Solid surface is defined as nonporous, homogeneous material maintaining the same composition throughout the part with a composition of acrylic polymer, aluminum trihydrate filler and pigment.

1.4 SUBMITTALS

- A. Product data:
 - 1. For each type of product indicated.
- B. Shop drawings:
 - 1. Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices and other components.
 - a. Show full-size details, edge details, thermoforming requirements, attachments, etc.
 - b. Show locations and sizes of furring, blocking, including concealed blocking and reinforcement specified in other Sections.
 - c. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, waste receptacle and other items installed in solid surface.
- C. Samples:
 - 1. For each type of product indicated.

- a. Submit minimum 100 mm by 100 mm (4 inch by 4 inch) sample in specified gloss.
- b. Cut sample and seam together for representation of inconspicuous seam.
- c. Indicate full range of color and pattern variation.
2. Approved samples will be retained as a standard for work.
- D. Product data:
 1. Indicate product description, fabrication information and compliance with specified performance requirements.
- E. Manufacturer certificates:
 1. Signed by manufacturers certifying that they comply with requirements.
- F. Maintenance data:
 1. Submit manufacturer's care and maintenance data, including repair and cleaning instructions.
 - a. Maintenance kit for finishes shall be submitted.

1.5 QUALITY ASSURANCE

- A. Qualifications:
 1. Shop that employs skilled workers who custom fabricate products similar to those required for this project and whose products have a record of successful in-service performance.
- B. Fabricator/installer qualifications:
 1. Work of this section shall be by a certified fabricator/installer, certified in writing by the manufacturer.
- C. Applicable standards:
 1. Standards of the following, as referenced herein:
 - a. American National Standards Institute (ANSI)
 - b. American Society for Testing and Materials (ASTM)
 - c. National Electrical Manufacturers Association (NEMA)
 - d. NSF International
 2. Fire test response characteristics:
 - a. Provide with the following Class A (Class I) surface burning characteristics as determined by testing identical products per UL 723 (ASTM E84) or another testing and inspecting agency acceptable to authorities having jurisdiction:

- 1) Flame Spread Index: 25 or less.
- 2) Smoke Developed Index: 450 or less.

1.6 MAINTENANCE

- A. Provide maintenance requirements as specified by the manufacturer.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Solid polymer components
 1. Cast, nonporous, filled polymer, with through body colors meeting ANSI Z124.3 or ANSI Z124.6, having minimum physical and performance properties specified.
 2. Superficial damage to a depth of 0.25 mm (0.010 inch) shall be repairable by sanding and/or polishing.
- B. Thickness: 12.7 mm (1/2 inch)
- C. Edge treatment: As indicated
- D. Integral oval sink: 419 mm (16 1/2 inches) by 330 mm (13 inches) by 140 mm (5 1/2 inches) deep clear inside dimension.
 1. Mounting: Seamed undermount.
 2. Basis-of-Design: DuPont Corian – Lavatory Sink #810 or approved equal.
- E. Backsplash: as indicated on Drawings.
- F. Sidesplash: Coved.
- G. Performance characteristics:

Property	Typical Result	Test
Tensile Strength	6,000 psi	ASTM D 638
Tensile Modulus	1.5×10^{-6} psi	ASTM D 638
Tensile Elongation	0.4% min.	ASTM D 638
Flexural Strength	10,000 psi	ASTM D 790
Flexural Modulus	1.2×10^{-6} psi	ASTM D 790
Hardness	>85	Rockwell "M" Scale
		ASTM D 785
	56	Barcol Impressor
		ASTM D 2583
Thermal Expansion	3.02×10^{-5} in./in./°C	ASTM D 696
	$(1.80 \times 10^{-5}$ in./in./°F)	
Gloss (60° Gardner)	5-75 (matte-highly polished)	ANSI Z124
Light Resistance	(Xenon Arc) No effect	NEMA LD 3-2000

		Method 3.3
Wear and Cleanability	Passes	ANSI Z124.3 &
	Z124.6	
Stain Resistance: Sheets	Passes	ANSI Z124.3 &
		Z124.6
Fungus and Bacteria Resistance	Does not support microbial growth	ASTM G21&G22
Boiling Water Resistance	No visible change	NEMA LD 3-2000
		Method 3.5
High Temperature Resistance	No change	NEMA LD 3-2000
		Method 3.6
Izod Impact	0.28 ft.-lbs./in. of notch	ASTM D 256
(Notched Specimen)		(Method A)
Ball Impact	No fracture-1½ lb. ball:	NEMA LD 3-2000
Resistance: Sheets	1¼" slab-36" drop	Method 3.8
	1½" slab-144" drop	
Weatherability	ΔE* ₉₄ <5 in 1,000 hrs.	ASTM G 155
Specific Gravity †	1.7	
Water Absorption	Long-term	ASTM D 570
	0.4% (¾")	
	0.6% (1½")	
	0.8% (1¼")	
Toxicity	99 (solid colors)	Pittsburgh Protocol
	66 (patterned colors)	Test ("LC50"Test)
Flammability	All colors	ASTM E 84,
	(Class I and Class A)	NFPA 255 & UL723
Flame Spread Index	<25	
Smoke Developed Index	<25	

2.3 ACCESSORIES

A. Joint adhesive:

1. Manufacturer's standard one or two-part adhesive kit to create inconspicuous, nonporous joints.

B. Sealant:

1. Manufacturer's standard mildew-resistant, FDA-compliant, NSF 51-compliant (food zone – any type), UL-listed silicone sealant in colors matching components.

C. Sink/lavatory mounting hardware:

1. Manufacturer's standard bowl clips, panel inserts and fasteners for attachment of undermount sinks/lavatories.

D. Conductive tape:

1. Manufacturer's standard aluminum foil tape, with required thickness, for use with cutouts near heat sources.

E. Insulating felt tape:

1. Manufacturer's standard for use with conductive tape in insulating solid surface material from adjacent heat source.

2.4 FACTORY FABRICATION

A. Shop assembly

1. Fabricate components to greatest extent practical to sizes and shapes indicated, in accordance with approved shop drawings and manufacturer's printed instructions and technical bulletins.
2. Form joints between components using manufacturer's standard joint adhesive without conspicuous joints.
 - a. Reinforce with strip of solid polymer material, 50 mm (2 inches) wide.
3. Provide factory cutouts for plumbing fittings and bath accessories as indicated on the drawings.
4. Rout and finish component edges with clean, sharp returns.
 - a. Rout cutouts, radii and contours to template.
 - b. Smooth edges.
 - c. Repair or reject defective and inaccurate work.

2.5 FINISHES

A. Finish:

1. Provide surfaces with a uniform matte finish; gloss range of 5-20.

PART 3 — EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install components plumb, level and rigid, scribed to adjacent finishes, in accordance with approved shop drawings and product data.
 1. Provide product in the largest pieces available.
 2. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work.
 - a. Exposed joints/seams shall not be allowed.

3. Reinforce field joints with solid surface strips extending a minimum of 25 mm (1 inch) on either side of the seam with the strip being the same thickness as the top.
 4. Cut and finish component edges with clean, sharp returns.
 5. Rout radii and contours to template.
 6. Anchor securely to base cabinets or other supports.
 7. Align adjacent countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop.
 8. Carefully dress joints smooth, remove surface scratches and clean entire surface.
 9. Install countertops with no more than 3 mm (1/8 inch) sag, bow or other variation from a straight line.
- B. Coved backsplashes and sidesplashes:
1. Provide coved backsplashes and sidesplashes where indicated in drawings.
 2. Fabricate radius cove at intersection of counters with backsplashes to dimensions shown on the drawings.
 3. Adhere to countertops using manufacturer's standard color-matched Joint Adhesive.
- C. Integral sinks:
1. Provide solid surface materials bowls and/or lavatories sinks with overflows in locations shown on the drawings.
 2. Secure sinks and lavatory bowls to tops using manufacturer's recommended sealant, adhesive and mounting hardware to maintain warranty.

3.3 REPAIR

- A. Repair or replace damaged work which cannot be repaired to architect's satisfaction.

3.4 CLEANING AND PROTECTION

- A. Keep components clean during installation.
- B. Remove adhesives, sealants and other stains.

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