

SECTION 10171

SOLID SURFACE TOILET PARTITIONS

PART 1 — GENERAL

1.1 RELATED DOCUMENTS

- A. 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 vertical solid surface product types:
 - 1. Toilet partitions.
 - 2. Trim.
 - 3. Urinal Screens
- B. Related Sections include the following:
 - 1. Division 1 Section "LEED Requirements" for additional LEED requirements.
 - 2. Division 6 Section "Rough Carpentry" for Blocking.
 - 3. Division 10 Section "Toilet and Bath Accessories."

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, attachments, etc.
 - b. Provide drawings showing location for adequate steel reinforcements or wood blocking in walls to be provided by others for proper securement of the finished work.
 - c. Show locations and sizes of cutouts and holes for plumbing fixtures, soap holders and other items installed in solid surface.
 - 2. Related work specified elsewhere shall include accessories and anchorage/blocking for attachment of partitions.
 - 3. Manufacturer's Installation Instructions: Provide details of hardware locations and drilling dimensions.
- C. Samples:
 - 1. For each type of product indicated.
 - a. Submit minimum 6-inch by 6-inch sample in specified color and finish.
 - 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. LEED submittals:
 - 1. Credit EQ 4.1:
 - a. Manufacturer's product data for installation adhesives, including printed statement of VOC content and material safety data sheets.

2. Credits MR 5.1:
 - a. Product data indicating that materials are regionally manufactured and within 500 miles of the project site.
- G. Fabricator/installer qualifications:
 1. Provide copy of certification number.
- H. Manufacturer certificates:
 1. Signed by manufacturers certifying that they comply with requirements.
- I. Maintenance data:
 1. Submit manufacturer's care and maintenance data, including repair and cleaning instructions.
 2. Include in project closeout documents.

1.5 QUALITY ASSURANCE

- A. Installer qualifications:
 1. Work of this section shall be by a certified installer, certified in writing by the manufacturer.
- B. 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)
 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.
- C. Pre-installation conference:
 1. Conduct conference at project site to comply with requirements in Division 1.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver no components to project site until areas are ready for installation.
- B. Store components indoors prior to installation.
- C. Handle materials to prevent damage to finished surfaces.
 1. Provide protective coverings to prevent physical damage or staining following installation for duration of project.

1.7 WARRANTY

- A. Provide manufacturer's warranty against defects in materials.
 1. Warranty shall provide material and labor to repair or replace defective materials.
 2. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted.

PART 2 — PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers:
 1. Subject to compliance with requirements, provide products by one of the following:
 - a. Champion Partitions 800-984-7050: Corian® Surfaces from the DuPont company line.

- b. Champion Partitions 800-984-7050: FOUNDATIONS™ Surfaces from the Aristech Acrylics LLC company line.
- c. Champion Partitions 800-984-7050: Gibraltar® Surfaces from the Wilsonart International company line.

2.2 MATERIALS

- A. Solid polymer components
 - 1. Cast, nonporous, filled polymer, not coated, laminated or of composite construction 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 0.010 inch (0.25 mm) shall be repairable by sanding and/or polishing.
- B. Toilet partitions:
 - 1. Pilasters of 1-inch solid surface material:
 - 2. Doors of ½-thick, with a 1" builddown on each side.
 - 3. Panels of 1/2-inch solid surface material:
 - a. Floor mounted overhead braced.
- C. Urinal screens:
 - 1. Panels of 1-inch solid surface material to be wall mounted.
- D. Thickness:
 - 1. 1/2 inch
 - 2. 1 inch

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
	56	ASTM D 785
		Barcol Impressor
		ASTM D 2583
Thermal Expansion	3.02×10^{-5} in./in./°C (1.80×10^{-5} in./in./°F)	ASTM D 696
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 (Notched Specimen)	0.28 ft.-lbs./in. of notch	ASTM D 256 (Method A)
Ball Impact Resistance: Sheets	No fracture—1/2 lb. ball: 1/4" slab—36" drop 1/2" slab—144" drop	NEMA LD 3-2000 Method 3.8

Weatherability	$\Delta E^*_{94} < 5$ in 1,000 hrs.	ASTM G 155
Specific Gravity †	1.7	
Water Absorption	Long-term 0.4% (3/4") 0.6% (1/2") 0.8% (1/4")	ASTM D 570
Toxicity	99 (solid colors) 66 (patterned colors)	Pittsburgh Protocol Test ("LC50" Test)
Flammability	All colors (Class I and Class A)	ASTM E 84, NFPA 255 & UL 723
Flame Spread Index	<25	
Smoke Developed Index	<25	

† Approximate weight per square foot: 1" (24.6 mm) 8.8 lbs., 1/2" (12.3 mm) 4.4 lbs.
Shapes meet or exceed the ANSI Z124.3 and ANSI Z124.6 standards for plastic sinks and lavatories.

NEMA results based on the NEMA LD 3-2000

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.

C. Hardware:

1. Manufacturer's standard door pull.

2.4 FACTORY FABRICATION

A. Shop assembly

1. Provide factory cutouts for plumbing fittings and bath accessories as required or as indicated on the drawings.

2.5 FINISHES

A. Select from the manufacturer's standard color chart.

B. Finish:

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

2.6 HARDWARE

A. Hinges:

1. Manufacturer's standard surface self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees.

B. Latch and keeper:

1. Manufacturer's standard surface-mounted latch unit designed for emergency access and with strike separate keeper.
 - a. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be accessible to people with disabilities.

C. Coat hook:

1. Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.

- D. Door bumper:
 - 1. Manufacturer's standard rubber-tipped bumper at out-swinging doors and entrance screen doors.
- E. All hardware is supplied by fabricator and it's integrally mounted into the partitions at the time of manufacture.
- F. Exposed hardware:
 - 1. All shall be anodized aluminum.
- G. Urinal screens:
 - 1. No visible mounting hardware is acceptable.
 - 2. Concealed hardware:
 - a. Shall be anodized aluminum

PART 3 — EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, 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. Cut and finish component edges with clean, sharp returns.
 - 3. Rout radii and contours to accessories or specifications provided template.
 - 4. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

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.