

SECTION 12 36 53 & 55

SOLID PHENOLIC LABORATORY WORK SURFACE TOPS

PART 1 – GENERAL REQUIREMENTS

1.1. SUMMARY

- A. Section Includes: Fabrication and installation of Laboratory Work Surface Tops including field applied back and end splash accessories as indicated, specified, and required for installation.

1.2. SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required. Include manufacturer's written fabrication and installation instructions.
- B. Shop Drawings: Dimensioned and detailed plans, elevations, and large-scale details.
 - 1. Show locations of each component.
 - 2. Show materials, finishes, edge and splash profiles, and methods of joining.
 - 3. Show locations and sizes of cutouts and holes for plumbing fixtures, accessories and other items installed in countertops.
 - 4. Show attachment devices and other components to be incorporated into work.
- C. Samples for Verification: Nominal 4 inch x 6 inch sample of selected material, in specified texture, field cut into 2 pieces and then joined together to represent an inconspicuous seam; indicate full range of color and pattern.
- D. Maintenance Data:
 - 1. For inclusion in maintenance manual required by Divisions 01 and 12.
 - 2. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use.
 - 3. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.

1.3. QUALITY ASSURANCE

- A. Mock-Up: Before beginning work of this Section, build mock-up to verify selections made under submittals and to demonstrate aesthetic effects and work execution. Approval does not constitute approval of deviations from Contract Documents, unless such deviations are specifically approved by Architect in writing. Build mock-up approximately 12 inches long by 12 inches deep.
 - 1. Use same Subcontractors, including supervisors, which will perform work on Project.
 - 2. Install products and materials according to specified requirements.
 - 3. Work on mock-up shall be representative of those to be expected for work.
 - 4. Finish various components to show maximum variation that will exist in work.
 - 5. Obtain Architect's approval before starting work of this Section.
 - 6. Maintain mock-up during construction in an undisturbed condition as a standard for

judging completed work.

7. Do not demolish, alter, or remove mock-up until acceptable to Owner and Architect.
8. When directed, demolish and remove mock-up from Project.

1.4. FIELD CONDITIONS

A. Field Measurements:

1. Where components are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings.

1.5. DELIVERY, STORAGE AND HANDLING

- A. Delivery: Do not deliver components until painting and similar activities have been completed in installation areas.
- B. Storage: Prior to installation, store in areas in which material will be installed.
- C. Handling: Handle components to prevent damage to finished surfaces.

1.6. WARRANTY

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

PART 2 - PRODUCTS - Solid Phenolic Work Surfaces

2.1. MANUFACTURERS

- A. Available Manufacturers or Supplier's: Subject to compliance with requirements of Contract Documents, manufacturers offering products that may be incorporated into work include, but are not limited to, those named alphabetically below.
 1. Breezy Street, LLC
 2. 7708 E Calle de las Brisas Scottsdale, AZ 85255
 3. Ph: (888) 488-3665
 4. Email: sales@FunderMaxNA.com

2.2. Fundermax Max Resistance 2 - SOLID PHENOLIC SHEET MATERIAL:

Description: Fundermax Max Resistance 2 solid phenolic is manufactured by FunderMax GmbH. Max Resistance 2 is a self-supporting flat panel based on thermosetting phenolic resins, homogeneously reinforced with kraft paper fibers and manufactured under high heat and pressure to form a solid phenolic SPC compact countertop material. The panels have a pigmented resin, decorative surface with a scientifically developed, double-cured polyurethane acrylic coating.

Tested in accordance with chemical resistance test procedure per SEFA 8 and other international norms.

1. Chemical resistance tested at 24 hours using international test methods.

2. Fundermax Max Resistance 2 provides high aesthetics and a quality appearance for applications for sterile and chemically resistant laboratory work surfaces. Completely compatible with epoxy resin, polyethylene or stainless steel sinks.

3. Basis of Design Selection and Supply:

- a) Fundermax Max Resistance 2 - Lab Grade countertops - work surfaces
- b) Fabricator & Supplier: BreezyStreet, Inc
- c) Color: As indicated in Interior Finish Legend on Drawings.
Deep Black (industry standard) - Code: 0082 RE
- d) Finish: Matte.
- e) Thickness: 1" (25 mm) (Industry Standard); 3/4" (19/20 mm) suitable alternative.
- f) Edges and Corners: 1/8" (3.175 mm) machined beveled top edge with blended bevel corners.
- g) Surface: Flat only with finished exposed edges (Industry Standard)

2.3. ACCESSORIES

A. Joint Adhesives:

1. Description: No-added urea formaldehyde, 1 or 2 part adhesive capable of creating inconspicuous, non-porous seams; acceptable to material manufacturer.

B. Fasteners and Mounting Hardware: Device type and size required sufficient to correctly attach or anchor specified item to casework or support brackets indicated without failure.

2.4. FABRICATION

A. Fabrication Quality Standards: In addition to standards listed by manufacturer, comply with following, unless otherwise specified:

1. Material quality standards: Material shall be a solid, hard and made of wood- based fibers of kraft papers with thermosetting phenolic resin pressed under high heat and pressure to form a composite material formulated to provide a work surface with chemical and heat resistance characteristics. The combination of asbestos free inert filler material, kraft fibers and phenolic resin shall be press cured in order to achieve maximum chemical resistance and physical strength and stability. Surfaces shall have a uniform low-sheen matte crystal smooth surface finish and the material shall be extremely hard and resistant to heat, chemical attack, self- extinguishing and non-absorptive in nature.

1. Approved submittals.
2. Contract Documents.

B. Warpage:

1. Inspect work surface for warpage before fabrication or installation. Measure in unrestrained condition. Work surface will be accepted for use if there is no gap exceeding 1/16" (1.59 mm) in a 36" (914 mm / 0.9 mtr) span or 3/16" (4.5 mm) in 96" (2438 mm) span.

C. Fabrication:

1. Provide in longest practical lengths, 96" (2438 mm); 108" (2745 mm) or 120" (3048 mm) being maximum available. All seam joints shall be bonded with a highly chemical and corrosion resistant 2 part epoxy adhesive or chemical resistant silicone. Provide 1/8" (3.17 mm) drip groove on front underside of exposed edges set back 1/2" (12.5 mm) from edge at all sink areas and where shown on drawings. All exposed edges and corners to be finished.

D. Slab Sizes for field fabrication:

1. Oversized 64" x 108.09" (1630 x 3745.60 mm), factory or field fabricated, cut to sizes required per drawings; 60.24" x 120.08" nominal 5' x 10' (1530 x 3050 mm) and 73.23" x 100.40" nominal 6' x 8'. (1860 x 2550 mm).
2. Thickness Tolerances: Each top corner shall not deviate more than plus / minus 1/16" (1.59 mm) from nominal.
3. Size Tolerances: Length, plus / minus 1/8" Width (3.17 mm), plus / minus 1/16" (1.59 mm).
4. Squareness: Compare the diagonal corner-to-corner measurements across the width of each work surface. The diagonal measurements must be within 1/16" (1.59 mm).

D. Penetrations:

1. Location of cutouts and drillings: Plus / minus 1/8" (3.17 mm). Cutout sizes and drillings: Plus / minus 1/16" (1.59 mm).

E. Fastening Tops to Base Cabinets:

1. Secure solid phenolic Max Resistance 2 to cabinets with silicone adhesive, applied at each corner and with a continuous bead along perimeter edges.
2. Maximum penetration of #10 self tapping screws into underside of solid phenolic countertops shall not be installed closer than 1/4" (6 mm) below the top surface, unless instructed otherwise by countertop manufacturer.
3. Abut solid phenolic top and edge surfaces in one true plane with flush hairline joints or with 1/16" to 1/8" (1.58 mm to 3.17 mm) seam, filled with either epoxy resin adhesive or silicone.

F. Shop Assembly:

1. Fabricate shapes in sizes and profiles indicated according to approved shop drawings and manufacturer's instructions.
2. Where necessary for fitting at Project, provide ample allowance for scribing, trimming, and fitting.

G. Seams:

1. Form inconspicuous joints between components.
2. Reinforce on concealed side with strip of surfacing material not less than 1 inch on either side of joint by same thickness as components being joined.
3. Locate more than 3 inches from cutouts.

H. Cutouts:

1. Use router to make openings according to templates and finish with clean and smooth edges.
2. Provide not less than 1/8 inch clearance between cutout edges and appliance or plumbing fixture.
3. Remove nicks and scratches.

I. Certification:

1. Products of Solid Phenolic to be certified for the following: PEFC and FSC
Certified Low VOC off-gasing: 0.22 mg/(mm³) or 220 g/l or 0.22 mg/m³

PART 3 - EXECUTION

3.1. EXAMINATION

A. Acceptance of Surfaces and Conditions:

1. Examine substrates to which surfacing components will be applied for compliance with requirements and other conditions affecting performance.
2. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents.
3. Starting work within a particular area will be construed as acceptance of surface conditions.

3.2. INSTALLATION

A. Seams:

1. Clean surfaces to be seamed to remove oil, dirt, and dust.
2. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's instructions.
3. Clamp until fully cured.
4. Curbs to be bonded to counters with recommended adhesives.
5. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
6. Clean surface with acetone or mineral spirits to produce a smooth, clean, uniform seamless surface.

3.3. CLEANING

A. Surface Finish:

1. Remove stains or peel coat coatings according to manufacturer's instructions.

3.4. PROTECTION

- A. Coverings: Cover installed components to prevent physical damage or staining until substantial completion.

END OF SECTION