

SECTION 12 36 50
LABORATORY WORK SURFACE TOPS
(SOLID PHENOLIC LABORATORY TOPS)

Part 1 – General

1.01 Summary

Specifier Note: This product guide specification must be reviewed and edited to meet the project requirements, building codes, and to select product options. This section includes Solid Phenolic Laboratory work surfaces (countertops) fabricated by Spec-Rite Designs, LLC.

A. Section includes:

1. Solid Phenolic Composite Laboratory Work Surfaces.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CS/ *MasterFormat™* and specifier's practice.

B. Related Sections:

1. Documents affecting work in this section includes but is not limited to the General Conditions, Supplementary Conditions, and Sections in Division 1 – General Requirements of these Specifications.
2. Finish Carpentry: Division 6 Finish Carpentry Section.
3. Specialties: Division 10 Locker Section. Design-Tec® Lockers 105100.
4. Specialty Casework: Division 12. DesignLine® Cabinets 123553.
5. Sinks Inserted in Solid Phenolic Laboratory Tops: Division 15 Plumbing Fixture Section

1.02 References

- A. Scientific Equipment and Furniture Association (SEFA):**
 1. SEFA 3 Work Surfaces
- B. Woodwork Institute (WI)**
- C. Architectural Woodwork Institute (AWI):**
 1. AWI Quality Manual

1.03 Submittals

- A. **General:** Submit listed submittals in accordance Conditions of the Contract and Division 1 Submittal Procedure Section.
- B. **Shop Drawings:** Submit shop drawings indicating room sizes, layout, cabinet dimensions, material thickness, size and location of fixture holes, utility, and sink cut outs.
- C. **Product Data:** Submit manufacturer's technical data for materials, fabrication, finishing, fastenings, hardware, and installation details.
- D. **Samples:** Submit selection and verification samples for edge details, colors, patterns, finishes, and textures.
- E. **Closeout Documents:** Submit the following:
 - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty: Warranty documents specified herein.

1.04 Quality Assurance

A. Qualifications:

- 1. Fabricator shall have 10 years or more experience in fabrication of solid phenolic materials and shall be experienced in performing work of similar size and scope.
 - 2. Installer shall be approved by the manufacturer and be experienced in performing work of similar size and scope.
- B. **Pre-installation Meeting:** Conduct pre-installation meeting [2] [_____] weeks prior to installation to verify project requirements and conditions.

1.05 Delivery, Storage and Handling

- A. **General:** Comply with Division 1 Product Requirements Sections.
- B. **Ordering:** Comply with supplier's ordering and lead-time guidelines to avoid delays.
- C. **Delivery:** Deliver materials in the manufacturer's original protective packaging.
- D. **Storage and Handling:** Store materials in an enclosed shelter providing protection from damage, temperature, humidity, and exposure to the elements.

1.06 Coordination and Project Conditions

- A. **Field Measurements:** Before material fabrication, verify actual field measurements/openings. Show actual recorded measurements on shop drawings.
- B. **Coordination:** Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

1.07 Warranty

- A. Submit executed copy of Spec-Rite Designs, LLC 10-year warranty against defects in material and 2 years against workmanship signed by an authorized representative of Spec-Rite Designs.

Part 2 - Products

2.01 Solid Phenolic Laboratory Work Surfaces:

Specifier Note: Solid phenolic TopLab Plus is manufactured by Trespa® North America. TopLab^{Plus}® is a self-supporting flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibers and manufactured under high pressure. The panels have a pigmented resin, decorative surface that is electron-beam cured. TopLab^{Plus} provides high aesthetics and a quality appearance for sterile and chemically resistant surfaces.

Specifier Note: Solid phenolic Athlon® is manufactured by Trespa North America. Athlon is a self-supporting flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibers and manufactured under high pressure. The panels have decorative papers impregnated with melamine resin on faces with a clear protective overcoat and integrally compression molded within a core consisting of solid phenolic impregnated kraft papers.

- A. **Basis of Design:** Drawings and specifications are based on Solid Phenolic Composite Work surfaces.

- B. **Fabricated by:**

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- C. **Manufacturer:** Trespa® North America

- D. **Proprietary Product(s):** [Trespa Athlon®] [Trespa TopLab^{Plus}®]

2.02 Material Properties

Specifier Note: TopLab^{Plus} is the choice where chemical resistance and sanitation is of concern. Athlon is a more economical choice where chemical resistance is not of the highest concern.

- A. Work surfaces shall be constructed of solid phenolic composite [Athlon] [TopLab] panels with black core.
- B. Thickness shall be as specified on drawings and shall be [1/2" (13mm)] [5/8" (16mm)] [3/4" (19mm)] [1" (25mm)].

Specifier Note: Panels are available in a wide range of colors and thickness at extended lead-time. A standard stocking range is available in shorter lead-time. Consult with manufacturer to avoid construction delays.

- C. Colors: [Manufacturer's color collection color range] [Manufacturer's full color range extended lead-time color collection].
- D. Finish: Matte sheen
- E. Modulus of Elasticity: 1,500,000 psi minimum
- F. Shear Strength: 2000 psi minimum
- G. Compressive Strength: 24,000 psi minimum.
- H. Weight: 93 pcf maximum.
- I. Fire Performance: Maximum flame-spread of 25 per ASTM E84 (Class 1, Class A) for panels 5/8" thick and greater.
- J. Porosity: Nonporous surface and edges.
- K. Microbial Characteristics: Will not support micro organic growth.
- L. Chemical Resistance: Provide panel with minimum performance in accordance with chemical resistance test per SEFA 8.

2.03 Accessories

- A. Laboratory Shelving: Provide solid phenolic laboratory shelving as indicated. Shelving shall be [Athlon] [TopLab] in [1/2" (13mm)] [5/8"] [3/4"] [1"] thickness.
- B. Pegboards (Drying Racks): Provide solid phenolic pegboards as indicated. Pegboards shall be [Athlon] [TopLab] in [3/4"] [1"] thickness.
- C. Reagent Racks: Provide solid phenolic reagent rack as indicated. Reagent racks shall be [Athlon]

[TopLab] in [3/4"] [1"] thickness.

- D. Window Sills: Provide solid phenolic window sills as indicated. Window sills shall be [Athlon] [TobLab] in [1/2"] [5/8"] [3/4"] [1"] thickness.
- E. Installation Materials: Provide joint adhesive, panel adhesive, and sealants as required to suit project conditions.

2.04 Fabrication

- A. All exposed edges of tops to be sanded or machine polished to a smooth finish and, except as indicated below, shall be rounded to a 1/8" radius at the front top edges and at vertical corners.
- B. Backsplashes and shelves shall be square edged.
- C. Seam joinery shall be [tight joint fastening] [biscuit joints] [butt joints].
- D. Cutouts for drop-in epoxy sinks shall be routed to form openings to mount (minimum 3/8" deep supporting flanges) flush to the work surface.
- E. Cutouts for under-mounted sinks shall be routed and sanded or machine polished to form smooth edged openings with the top edge radius of 1/8". The bottom edge of the sink opening shall be finished smooth with the edge broken to prevent sharpness.
- F. Corners of sink cutouts shall be radius of not less than 1/4".
- E. Provide drip groove if indicated.

Part 3 – Execution

3.01 Installation

- A. Install work surfaces as manufactured by this specification as per approved shop drawings.
- B. Under-mounted sinks may be supported by brackets blind-fixed to the underside of the work surface or supported by casework cradles.
- C. Fix work surface panels with blind fastenings into the back or underside of the panel. Use #10, type A sheet metal screws sized to stop at least 1/8" short of the finished face. Drill panels with 11/64" diameter high speed drill bit aligned with 7/32" clearance holes in the supporting structure.
- D. Epoxy drop-in sinks shall be set in beds of epoxy adhesive. Drop-in stainless steel and polypropylene

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sinks shall be set in beds of silicone sealant.

- E. Form field joints using manufacturer's recommended adhesive. Form inconspicuous and nonporous joints.

3.02 Cleaning

- A. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to Owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.03 Protection

- A. After installation, the General Contractor shall protect the work surfaces from damage. They shall be kept free from paint, plaster, cement scratches, or any other destructive forces.

End of Section