

SECTION 12 36 51

LABORATORY WORK SURFACES

Trespa North America Ltd. provides guidelines and all testing, code and design data for informational purposes only and strongly advises that the customer, project owner and architect seek independent advice from a certified construction professional and/or engineer regarding application and installation as well as compliance with design requirements, applicable codes, laws, regulations and test standards.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Panels for [laboratory][clean room][hospital][Insert Use] work surfaces.

1.2 RELATED SECTIONS

- A. Section 06 20 00 - Finish Carpentry.
- B. Section 12 35 00 - Specialty Casework.
- C. Section 12 36 00 – Countertops.
- D. Section 12 56 53 - Institutional Furniture.

1.3 REFERENCES

- A. European Standards (EN):
 - 1. EN 438-2 - High-pressure decorative laminates (HPL) - Determination of properties.
- B. International Organization for Standardization (ISO):
 - 1. ISO 178 - Determination of Flexural Properties.
 - 2. ISO 527-2 - Determination of Tensile Properties.
 - 3. ISO 1183 - Determination of Density.
 - 4. ISO 9001 - Quality Management System
 - 5. ISO 14001 - Environmental Management Systems
- C. Scientific Equipment & Furniture Associate (SEFA) Laboratory Work Surfaces Recommended Practices.
 - 1. Chemical Resistance: Third-party evaluation of chemical resistance is based on SEFA 3 - 2010 Laboratory Work Surfaces. Standard list of 49 chemicals (volatile and non-volatile). Result: Pass.
- D. ISEGA Certification:

1. Certificate of Compliance for contact with food.
- E. UL (Underwriters Laboratories) certifications:
1. GREENGUARD and GREENGUARD GOLD certification for chemical emissions.
- F. Forestry Stewardship Council (FSC™).
- G. Product Environmental Product Declaration (EPD) in accordance with ISO 14025, EN 15804 and ISO 21930:2017.
- H. Fraunhofer IPA Cleanroom certifications:
1. Evaluation of chemical resistance based on 24 hours immersion test.
 2. Riboflavin test: Assessment of cleanability of surfaces.
 3. Determination of outgassing behavior of materials: VOC/SVOC, anions, ammoniac and ammonium nitrate compounds.
 4. Resistance to vaporized hydrogen peroxide sterilization.
- I. Health Product Declaration (HPD) according to HPD Open Standard v2.3 third party verified by Green Seal.
- J. USDA (United States Department of Agriculture) certified biobased content.
- 1.4 SUBMITTALS
- A. Product Data: Manufacturer's product data, including:
1. Material Property Datasheet (MPD).
 2. Machining general guidelines.
 3. Storage and handling recommendations.
 4. Cleaning recommendations.
- B. Verification Samples: For each finish product specified, samples of a minimum of 3.5 inches by 3.5 inches (90 mm by 90 mm) representing actual product, color, and patterns. Sample edges and thickness may vary from field panel edges.
- C. SEFA Certificate of Analysis by third party approved SEFA laboratory.
- D. UL GREENGUARD and GREENGUARD GOLD certificates.
- E. ISEGA Certificate of Compliance for contact with food.
- F. Product-specific Environmental Product Declaration (EPD).
- G. Fraunhofer Cleanroom Certificates.
- H. Health product declaration (HPD) third party verified.
- I. USDA (United States Department of Agriculture) certified biobased content.
- J. 10 years warranty.
- K. Third party disinfection reports.

1.5 SUSTAINABLE DESIGN SUBMITTALS

- A. General: Products in this section may also be required to comply with sustainability requirements described in Division 01 General Requirements including, but not limited to, the following:
 - 1. GREENGUARD Certification.
 - 2. TVOC (Total Volatile Organic Compounds).
 - 3. Total Aldehydes.
 - 4. Formaldehyde.
- B. Environmental Product Declaration and Health Product Declaration.
- C. LEED Rating System Requirements:
 - 1. Potential Credits:
 - a. MRc Building product disclosure and optimization - Sourcing of raw materials. Product data and chain-of-custody certificates for products containing certified wood.
 - b. EQc Low-emitting materials.
 - c. MRc Building Product disclosure and Optimization – EPD, option 1.
 - d. MRc Building Product disclosure and Optimization – Material ingredients, option 1.
 - e. MRc Environmentally preferable products, option 2

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: All panel products specified in this section will be supplied by a single manufacturer with 60 years of experience and with the following certifications:
 - 1. ISO 9001.
 - 2. ISO 14001.
- B. Installer Qualifications: All products listed in this section are to be installed by an installing firm who can prove evidence of installing laboratory surfaces.

1.7 TRANSPORT, STORAGE AND HANDLING

- A. Transport:
 - 1. Transport panels using machinery recommended by manufacturer or having sufficient capacity and features to meet manufacturer's recommendations.
 - 2. Secure and provide protective materials for transport of panels in accordance with manufacturer's recommendations.
- B. Storage: Store panels horizontally in protective, suitable environmental conditions as recommended by manufacturer.
- C. Handling: Handle panels according to manufacturer's recommendations.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. Warranty: Formica warrants to the buyer to which Formica has sold its Panel(s) (the “Buyer”), for a period of ten (10) years after the date of delivery of the Panel(s) to the Buyer, that the Panel(s) conform to the specifications stated in the Material Properties Datasheet for the Panel(s) published on the date of delivery.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: 1) Trespa International B.V., Wetering 20, 6002 SM Weert, The Netherlands. 2) Formica Canada Inc; 25 Rue Mercier, Saint-Jean-sur-Richelieu, QC J3B 6E9, Canada.
- B. Manufacturer’s Representative: Formica Corporation, 10155 Reading Road, Cincinnati, OH, 45241, United States.

2.2 PRODUCTS

- A. Basis of Design Product: Trespa® TopLab® PLUS.
 1. No substitutions permitted.
 2. Description: Compact, homogeneous high-pressure laminate sheets (also known as phenolic resin panels) consisting of layers of natural fibers (wood) impregnated with phenolic resins and acrylic-based surface layer(s) on one or both sides, having decorative colors or designs, acrylic clear surface coat, and cured with manufacturer’s Electron Beam Curing (EBC) method.
 3. Panel Attributes:
 - a. Easy machineability.
 - b. Scratch resistance.
 - c. Impact resistance.
 - d. Chemical resistance.
 - e. Resistance to many aggressive cleaning chemicals.
 - f. Does not support bacterial growth.
 - g. Suitable for hygienic applications.
 - h. Suitable for contact with food
 4. Panel Core: Manufacturer’s standard black core.
 5. Panel Facing: Manufacturer’s standard acrylic-based décor with acrylic clear coat, cured with manufacturer’s proprietary Electron Beam Curing method.
 6. Panel Size: **Panel Size: [1860 by 2550 mm (~6 by 8 feet)][1530 by 3050 mm (~5 by 10 feet)][3650 by 1860 mm (~12 by 6 feet)].**
 7. Panel Thickness: **[13mm (1/2 inch)][16mm (5/8 inch)][20mm (7/8 inch)][25mm (1 inch)].**
 8. Panel Type: **[Single sided][Double sided][Duocolor].**

9. Panel Decor: Selected from manufacturer's range of Crystal Matt finish.

2.3 PERFORMANCE

- A. See Manufacturer's latest certifications and Material Product Datasheet for properties and performance on www.trespa.info.

2.4 FABRICATION

- A. Fabricate solid phenolic panels according to manufacturer's recommendations and approved submittals.
- B. Fabricate panels, edges, drip grooves, and other shapes to design profiles on Drawings.
- C. Form tight-fitting butt joints in the work surface using two part epoxy adhesive, or mechanical fasteners positioned to be concealed after installation.
- D. Bond and seal curbs to the top of the work surface to form a square joint.
- E. Cutouts for sinks, fixtures, or other purposes per the item manufacturer's recommendation and panel manufacturer recommendations.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Acclimate panels according to manufacturer's written instructions prior to fabrication.
- B. Prior to beginning installation of work surfaces, inspect and verify that no irregularities in jobsite conditions exist that would affect quality of execution of the work as specified.

3.2 INSTALLATION

- A. Install work tops on frames or base cabinets per specification, as shown on shop drawings, and per manufacturer's recommendations.
- B. Install material so as to satisfy all warranty requirements.
- C. Install in accordance with manufacturer's recommendations. It is also possible to refer to SEFA 2 -2010 Installation and AWS Standards Edition 2, Section 11.
- D. Coordination: Coordinate the work of this Section with the schedule and requirements of other work being performed in the area at the same time including, but not limited to, general construction work, mechanical and electrical connections to and in the fume hoods and other similar or related work.
- E. During the construction phase, surface protection is advised (method determined by Architect).

3.3 CLEANING

A. Clean surfaces of Trespa TopLab PLUS as recommended by manufacturer, and as follows:

1. General: For general cleaning of standard worktops, the surface of Trespa TopLab PLUS can be easily cleaned with household cleaners or water and soap. Wipe damp surfaces with an absorbent cloth. It is not recommended to use concentrated acid, caustics, abrasives, or polishing agents.
2. Severe Soiling: Hot water and an interior detergent- or soap-based cleaning agent, applied with a sponge or soft nylon brush. Apply the diluted cleaning agent to the surface and leave it to soak. Then rinse off with clean water and dry with an absorbent cloth. It may be necessary to remove old stains or very stubborn marks with bleach. Wash the surface down thoroughly afterwards with clean water and dry with an absorbent cloth.
3. Special Staining: Solvent-based varnishes and adhesives should be removed with organic solvents such as acetone, white spirit, turpentine or petroleum.

3.4 DISINFECTING

A. Disinfect surfaces as recommended by manufacturer, such as the following:

1. Alcohol, preferably 60-70 % solution in water.
2. Peroxide compounds (hydrogen peroxide and organic peracids) or quaternary ammonia compounds.

END OF SECTION