

## Trespa® Solid Composite Architectural Panel Guide Specification

### Part 1—GENERAL

#### 1.01 SUMMARY & SPECIFICATION

A. An architectural specification for Trespa panels used for work surfaces, countertops, shelves, pegboards, and reagent racks, toilet/shower partitions, lockers, etc.; for application information:

B. Surface and Thickness Availability:

Surface	Thickness						
	1" (25mm)	3/4" (19/20mm)	5/8" (16mm)	1/2" (13mm)	3/8" (10mm)	5/16" (8mm)	1/4" (6mm)
Toplab Plus® SSC	Yes	Yes	Yes	Yes	N/A	N/A	N/A
Athlon® DSC	Yes	Yes	Yes	Yes	Minimum Order	Minimum Order	Minimum Order
Athlon® DSQ	Yes	Yes	Yes	Yes	Yes	Yes	Yes

**Toplab Plus SSC:** Most chemically resistant, electron beam cured surface; Color & Crystal Matte finish (smooth, non-glare) on top side only for benchtops.

**Athlon DSC:** Good chemical resistance, better scratch resistance than Toplab; Color & Crystal Mat finish on both sides (smooth, non-glare) for benchtops, countertops, shelves, backsplashes, pegboards...

**Athlon DSQ:** Good chemical resistance, best scratch and wear resistance; Color & Quartz finish on both sides (slightly textured, non-glare) for toilet partitions, vanities, lockers, countertops...

C. Color \_\_\_\_\_ per Trespa colors currently available for particular grade selected.

**1.02 SUBMITTALS**—Submit for approval: samples, product data and specifications.

#### 1.03 QUALITY ASSURANCE

A. Comply with governing codes and regulations. Provide products of authorized manufacturers and use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

B. Components shall have uniform thickness and flatness ("0.03").

C. Colors shall be consistent for all tops, shelves, pegboards, doors, side panels and other components of like grade and surface texture.

## Part 2—MATERIALS: Trespa Toplab Plus and Athlon Material Specification

A. **Manufacturer.** Provide units fabricated of Trespa supplied by Trespa North America,

B. **Product Material Specification:**

1. Modulus of Elasticity, 1.5 Million psi minimum
2. Shear Strength, 2000 psi minimum
3. Compressive Strength, 24000 psi minimum
4. Weight 93 pounds per cubic foot maximum
5. Flammability: Self Extinguishing
6. Water Absorption 3% maximum
7. Use temperature 350F maximum
8. Non-porous surface and edges
9. Will not support fungus or bacteria
10. Uniform load deflection 1/4" maximum per Table A
11. Screw Pull-out Strength Minimum per Table B
12. Chemical Resistance per Table C

**Table A: Uniform Load (lbs) Which Causes 1/4" Deflection at Center (Shelves not fixed at either end, static load based on E modulus of  $2.0 \times 10^6$ ).**\*

<b>Uniform Load In Pounds</b>				
<b>Thickness</b>	<b>12" x 24"</b>	<b>12" x 36"</b>	<b>12" x 48"</b>	<b>24" x 36"</b>
<b>1/4" (6mm)</b>	35	10	5	20
<b>5/16" (8mm)</b>	85	25	10	50
<b>3/8" (10mm)</b>	170	50	20	100
<b>1/2" (13mm)</b>	370	110	45	220
<b>5/8" (16mm)</b>	690	210	85	410
<b>3/4" (20mm)</b>	1400	400	170	800
<b>1" (25mm)</b>	2600	780	330	1500

\*loads can be affected by temperature, humidity, time, & other environmental factors. Users should test shelves in appropriate environment. It is assumed that deflection greater than 1/4" is undesirable aesthetically even though rupture has not occurred.

**Table B: Screw Pull-out Resistance (lbs)\***

Screw Depth	#2	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"
1/8" (3mm)	35	50	60								
3/16" (5mm)	55	75	90	110	130						
1/4" (6mm)	75	100	120	150	170	200	230				
5/16" (8mm)	95	130	160	190	210	240	280	350			
3/8" (10mm)	120	150	190	220	260	290	340	420	510		
7/16" (11mm)		180	220	260	300	340	400	490	590	690	
1/2" (13mm)			250	300	340	390	450	560	680	790	900
5/8" (16mm)			310	370	430	490	560	710	850	990	1100
3/4" (20mm)					510	590	680	850	1000	1200	1400

\* Screw pull-out can be affected by temperature, humidity, time, and other environmental factors. In addition, dynamic forces are more severe and require substantial safety factors. Users should test under the worst anticipated conditions.

**Table C: Chemical Resistance**

Chemical resistance is affected by the type of chemical, its concentration, ambient temperature and humidity, and housekeeping practices; users should test Trespa in their own environments. Generally with proper housekeeping (spills cleaned immediately) the following chemicals cause no detectable stain, loss of gloss or change in work surface. Toplab's resistance is generally better than Athlon for spills not immediately cleaned up. After 24 hours, the following showed a slight or noticeable stain with Black Toplab: 98% Sulfuric, 65% Nitric, Iodine Crystal and Iodine solution 1%. The rest did not stain or stains could be cleaned leaving a normal surface. Colors may vary in resistance.

Hydrochloric Acid 10,37%	Sulfuric Acid 10, 33, 98%	Nitric Acid 10,30,65%
Nitric/HCL 65%/37%	Chromium Oxide 60%	Phosphoric Acid 85%
Perchloric Acid 70%	Glacial Acetic Acid 99%	Sodium Hydroxide 20%
Ammonium Hydroxide 28%	Silver Nitrate 1%	Ferric Chloride 10%
Potassium Permanganate 10%	Copper Sulfate 10%	Sodium Hypochlorite 13%
Sodium Chloride 10%	Potassium Iodide 10%	Iodine Crystal
Iodine Solution 1N	Formaldehyde 37%	Furfural
Developer (paper)	Developer (negative)	Fixation Bath
Bleaching Bath	Stabilizer B	Acetone
Acetonitrile	Ethyl Alcohol	Ethylene Glycol
Methylethylketone	Methylene Chloride	Ethyl Acetate
Acetic Anhydride	n-Butyl Acetate	n-Hexane 97%
Methyl Alcohol	Methyl Isobutyl Ketone	Tetrahydrofuran
Toluene	Trichlorethylene	Xylene
Acridine Orange 1%	Alizarin Complexone Dihydrate .5%	Aniline Blue water sol. 1%
Basic Fuchsin 1%	Carbol Fuchsin 1%	Carmine .5%
Congo Red 1%	Gentian Violet 1%	Eosin B 1%
Giemsa Stain 1%	Malachite Green Oxalate 1%	Methylene Blue 1%
Methyl Violet 2B 1%	Safranin O 1%	Sudan III 1%
Wright Stain	Cacaobutter	Proteins

### **Part 3 EXECUTION—Trespa Installation Guidelines (use experienced fabricators & installers)**

**Handling:** When moving Trespa, lift & carry. Do not slide. Keep large panels from flexing by carrying them vertically. Save packing material, e.g., foam or paper, for restacking unloaded panels. ***If you notice or suspect freight damage, do not refuse the shipment.*** Note the damage on the bill of lading and ask the driver to sign the bill to acknowledge your notations. Contact the freight company and determine if they want to inspect the shipment. If so, they may want you to leave all of the packing intact for their inspector to see. Call your Authorized Trespa fabricator/distributor at any time during this process.

**Storage:** Trespa should be stored inside in a dry, well ventilated area. When stacking panels horizontally, use styrofoam spacers to allow air to circulate. Toplab panels come with a protective film on the top; leave this film in place until the installation is complete to help protect the surface from incidental damage by other trades. Remove the film prior to client use.

**Fixing:** The most secure method of attaching Trespa is with blind fastening into the back or underside of the panel. Use #10, type A, sheet metal screws sized to stop at least 1/8" (3mm) short of the finished face. Pre-drill the Trespa with an 11/64" diameter high speed drill bit. Use a spacer block to ensure that the drill does not penetrate the finished surface. To prevent screws from binding, drill a 7/32" clearance hole in the cabinet, rail, cleat, etc. You should be able to drive the screws with a hand screw driver. If not, enlarge the 11/64" pilot hole. Do not use a subsurface (e.g., plywood or particle board).

**Seams:** Where minimal or almost no seam is desired, your Authorized Trespa fabricator can prepare the mating sections for Tight-Joint Fasteners and biscuits or splines and can advise you on installation of them; be sure to mention if high humidity will be encountered. Biscuits or splines help provide a level surface. Trespa can also be seamed using a two-part epoxy or polyurethane adhesive (e.g., Smooth-on®). Authorized Trespa fabricators carry adhesive and can ship it with the Trespa components. When using Smooth-on®, mix equal parts of A and B. Once mixed, the adhesive has a working time of about one hour; do not mix more than can be used in this time. Smooth-on is also water soluble. During this working time, excess adhesive can be easily removed with a putty knife and the area cleaned with a damp cloth. After one hour the epoxy sets up hard and cannot be readily removed, so clean each seam immediately! If you desire a more removable seam material, use a silicone adhesive sealant ( e.g., G. E. "Silpruf" or Dow 786). The least expensive seam is a simple butt joint with sealant or adhesive filling a nominal gap of 1/8"; this can be readily done with black surfaces.

**Sinks & Splashes:** Either undermount or drop-in sinks can be used with Trespa. Brackets should be fastened into predrilled pilot holes. See "Fixing" above. For undermount or flush drop-in sinks, your Authorized Trespa fabricator can properly prepare the cutouts. If it must be done in the field, see "Field Modification" below. Splashes can be attached with seam adhesive or screws (see fixing).

## Field Modification:

**Sawing:** For straight cuts use a 7-1/4" diameter 40 tooth, carbide, "triple chip grind" saw blade in a typical hand-held power saw. The teeth should plunge into the good surface.

**Routing:** Irregular cuts should be routed, not jigsawed! Use a 3/8" electric router with 3HP minimum. Router bits should be double straight fluted carbide or carbide insert. To prevent the router base from scratching the Trespa surface, preapply a 4" wide acrylic packaging tape. Remove the tape immediately after routing. Remove any tape residue with lacquer thinner which will not damage the Trespa panel.

**Drilling:** Small diameter holes can be drilled with an ordinary high-speed twist drill. For larger holes, a carbide hole saw is recommended. Drill into the good face.

**Edge Finishing:** Trespa edges can be easily sanded to produce a smooth finished appearance. Begin with an 80 grit paper to remove saw/router marks. Next go over the edge with 120 grit. The 80 and 120 grit applications may be made with an orbital power sander, belt sanders are not recommended. Next use 220 grit and hand sand parallel with the edge to remove 80 & 120 grit sanding swirls. Finally, a small amount of light gauge oil may be rubbed on the edge with a clean cloth and immediately wiped off to increase the sheen. Buffing with rouge may also be done.

**Top Finishing:** Trespa top surfaces have special factory finishes; do not dress, oil, wax or finish in any way. Trespa may be cleaned with non-abrasive liquid cleaners or disinfectants.

**Scratch Repair:** Edge scratches may be repaired as in "Edge Finishing." Top scratch repair and aesthetics depend on severity; discuss with your Authorized Trespa fabricator.

## END OF SECTION

Values shown are based on testing of laboratory test specimens and represent data that fall within the normal range of properties for typical material. Any determination of the suitability of the material for any use contemplated by the user and the manner of such use is the sole responsibility of the user, who must assure that the material as subsequently fabricated meets the needs of the particular product or use. To the best of our knowledge the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy or completeness of such information. We recommend that anyone intending to rely on any recommendations or to use any equipment, fabrication technique, or material mentioned in this publication should satisfy themselves that they can meet all the applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer or supplier's current instructions for handling each material they use. Infringement of any patents is the sole responsibility of the user. If this is being transmitted via e-mail or CD-ROM; users should be aware that losses may occur during transmission and that others may have modified it.