

WS Hampshire
[Trespa® TopLab® and Athlon® Material Specifications](#)

Table A: General Specifications

Specification	
Modulus of Elasticity	1.5 Million PSI Minimum
Shear Strength	2,000 PSI Minimum
Compressive Strength	24,000 PSI Minimum
Weight	93 lbs/ft ³ Maximum
Flammability	Self Extinguishing
Water Absorption	3% Maximum
Maximum Operating Temperature	350°F (176.7°C)

Table B: 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. Call 1-800-4Trespa for samples. Generally with proper housekeeping (spills cleaned up immediately) most chemicals cause no detectable stain, loss of gloss or change in the work surface. TopLab's resistance is generally greater than Athlon's for spills not cleaned up immediately. The following chemicals showed a slight or noticeable stain on black Toplab after 24 hours:

98% Sulfuric Acid	65% Nitric Acid	Iodine Crystal	Iodine Solution 1%
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The following chemicals left no stains (colors may vary in resistance):

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

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Table C: Uniform Load* – Lbs (Kg)

Thickness	12" x 24"	12" x 36"	12" x 48"	24" x 36"
1/4" (6mm)	35 (15.9)	10 (4.5)	5 (2.3)	20 (9.1)
5/16" (8mm)	85 (38.6)	25 (11.3)	10 (4.5)	50 (22.7)
3/8" (10mm)	170 (77.1)	50 (22.7)	20 (9.1)	100 (45.4)
1/2" (13mm)	370 (167.8)	110 (49.9)	45 (20.4)	220 (99.8)
5/8" (16mm)	690 (313)	210 (95.3)	85 (38.6)	410 (186)
3/4" (20mm)	1400 (635)	400 (181.4)	170 (77.1)	800 (363)
1" (25mm)	2600 (1179)	780 (354)	330 (149.7)	1500 (680)

*Load that causes a 1/4" deflection at center (assuming shelves not fixed at either end, load based on E modulus of 2.0×10^6). Loads can be affected by temperature, humidity, time and other environmental factors. Users should test shelves in appropriate environment. It is assumed that deflection greater than 1/4" is undesirable aesthetically even though a rupture has not occurred.

Table D1: Screw Pullout 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

Table D2: Screw Pullout Resistance* – Kg

Screw Depth	#2	#4	#6	#8	#10	#12	1/4"	5/16"	3/8"	7/16"	1/2"
1/8" (3mm)	15.9	22.7	27.2								
3/16" (5mm)	25	34	40.8	49.9	59						
1/4" (6mm)	34	45.4	54.4	68	77.1	90.7	104.3				
5/16" (8mm)	43.1	59	72.6	86.2	95.3	108.9	127	158.8			
3/8" (10mm)	54.4	68	86.2	99.8	117.9	131.5	154.2	190.5	231.3		
7/16" (11mm)		81.7	99.8	117.9	136.1	154.2	181.4	222.3	267.6	313	
1/2" (13mm)			113.4	136.1	154.2	176.9	204.1	254	308.4	358.3	408.2
5/8" (16mm)			140.6	167.8	195	222.3	254	322.1	385.6	449.1	499
3/4" (20mm)					231.3	267.6	308.4	385.6	453.6	544.3	635

*Screw Pullout 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. Clearance of at least 1/8" (3mm) should be allowed (e.g. screw depth maximum of 3/8" (10mm) in 1/2" (13mm) panel).