



PHENOLIC RESIN LABORATORY COUNTERTOP SPECIFICATIONS
TopLab^{PLUS}

Part I – Specifications for Phenolic Resin

Material is a self-supporting flat panel based on thermosetting resins, homogeneously reinforced with cellulose fibers, manufactured under high pressure. Panels have an integrated, decorative surface based on pigmented, electron beam cured resins.

Part 2 – Properties

Properties	Value	Unit	Standard
Specific Gravity	87.5 (+/- 1400)	lb/ft ³ (Kg/m ³)	ASTM-D 792-91
Weight Thickness 1/2" (13mm)	3.8 (18.5)	lb/ft ² (Kg/m ²)	
Weight Thickness 5/8" (16mm)	4.6 (22.5)	lb/ft ² (Kg/m ²)	
Weight Thickness 3/4" (20mm)	5.7 (28.0)	lb/ft ² (Kg/m ²)	
Weight Thickness 1" (25mm)	7.2 (35.0)	lb/ft ² (Kg/m ²)	

Panel Tolerance

Length	0.0/+0.2" (-0.0/+5)	(mm)
Width	0.0/+0.2" (-0.0/+5)	(mm)
Thickness	+/- 0.024" for 1/2", 3/8" (+/-0.6 for 13, 16)	(mm)
	+/-0.028" for 3/4" (+/-0.7 for 20)	(mm)
	+/-0.032" for 1" (+/-0.8 for 25)	(mm)

Optical Properties

Changes when subjected to dry heat (maximum temperature of 355 degrees F)		EN 438-2 (8)
Gloss	No changes	
Color	No changes	
Cracking	No changes	

Mechanical Properties

Modulus of elasticity	≥ 1.200.000 (>8.000)	psi (N/mm ²)	DIN 53457
Tensile strength	≥ 13.000 (>90)	psi (N/mm ²)	DIN 53455
Flexural strength	≥ 14.500 (>100)	psi (N/mm ²)	DIN 53452
Impact resistance	indexnr.4 [≥11] (≥50)	lbf (N)	EN 438-2:11
Scratch resistance*	indexnr.4 [≥1] (≥5)	lbf (N)	EN 438-2:14
Wear resistance*	indexnr.3 [≥600rev.]	(revolutions)	EN 438-2:6

Thermal Properties

Application temperature		
Constant	-40 / = 285 (-40/+140)	°F (°C)
Peak, max. 20 min.	+355 (+180)	°F (°C)

*depending on color and print



Chemical Resistance

Test Procedure

The test was conducted by applying 5 drops of each reagent on the surface, covered with a watchglass (except those marked **). Chemicals marked ** were tested with a saturated cotton ball covered by a bottle. The chemicals were tested at room temperature for a period of 24 hours, rinsed off with water and evaluated.

		No effect	Excellent	Good	Fair	Failure
Acids						
Hydrochloric acid	10%	X				
Hydrochloric acid	37%	X				
Sulphuric acid	33%	X				
Sulphuric acid	98%		X			
Nitric acid	30%	X				
Nitric acid	65%		X			
Phosphoric acid	85%	X				
Acetic acid	99%	X				
Hydrofluoric acid	48%					X
Chromic acid	60%	X				
Bases						
Ammonium Hydroxide	28%	X				
Sodiumhydroxide	20%			X		
Salt						
Silver nitrate	1%	X				
Potassium permanganate	10%	X				
Feric (III) chloride	10%	X				
Copper sulphate	10%	X				
Sodium hypochlorite	13%	X				
Sodium chloride	10%	X				
Organic Chemicals						
Formaldehyde	36%	X				
Furfural			X			
Solvents**						
Acetone		X				
Ethylalcohol		X				
Ethylene glycol		X				
Methylethylketone		X				
Dichloromethane		X				
Ethylacetate		X				
Acetic anhydride		X				
n-Butyl acetate		X				
n-Hexane		X				
Methylalcohol		X				



Methylisobutylketone		X				
Tetrahydrofurane		X				
Toluene		X				
Trichloroethylene		X				
Xylene		X				
Biological Stains	1%	X				
Acridine orange	1%	X				
Basic fuchsin	1%	X				
Carbol fuchsin	1%	X				
Malachite green oxalate	1%	X				
Methylene blue	1%	X				
Methyl violet 2B	1%	X				
Wright starin	1%	X				
Genetian Violet (dye)	1%	X				
Most conventional cleaning agents		X				

Test Results

No effect

No detectable stain, loss of gloss or change in work surface material

Excellent

Slight stain or loss of gloss, but no change to the function, smoothness or life of the work surface material

Good

A clearly discernible stain or loss of gloss, but no change to the function, smoothness or life of the work surface material.

Fair

Unacceptable staining or discernible deterioration or etching of the work surface material

Failure

Severe stain or moderate deterioration, pitting, cratering, or etching of work surface material

All information is based on our current state of knowledge. It is intended as information concerning our products and their application possibilities, and is therefore not intended as any form of guarantee with regard to any specific product characteristic. Test results differ per color.

A detailed list of chemicals tested to SEFA 8-1999 standards is available upon request.