

LAST-A-FOAM® WSF-1121 self-skinning, fire-retardant, flexible foams for aircraft interiors

The WSF-1121 is a tough integral-skin polyurethane foam system that can be pigmented and in-mold painted for a lasting finish. For added resiliency, both foam systems can be molded with Nomex® cloth reinforcement.

Properties	WSF-1121 Typical	Test Methods
Molded Density (pcf)	19.4-21.9	ASTM D1622
Load Deflection @ 50% (PSI)	60.3	ASTM D3574, Test C
Compression Set (%)	8.1	ASTM D3574, Test D
Solvent Resistance	Pass	*Method Described Below
Resilience (%)	31.7	ASTM D3574, Test H
Tensile:		
Strength	132.5	ASTM D3574, Test E
Elongation	178.0	
Puncture Resistance (kg force)	4.0	**Method Described Below
Flammability:		
Extinguish Time (sec.)	4.0	Chapter 1 of FAA Aircraft Materials Fire Test Handbook
Burn Length (in.)	1.7	
Drip Extinguish Time (sec.)	No Drips	
Properties After Steam Autoclave Aging		ASTM D3574, Test J1
Flammability:		
Extinguish Time (sec.)	4.0	Chapter 1 of FAA Aircraft Materials Fire Test Handbook
Burn Length (in.)	1.1	
Drip Extinguish Time (sec.)	No Drips	
Puncture Resistance (kg force)	5.0	**Method Described Below
Load Deflection @ 50% (PSI)	60.6	ASTM D3574, Test C
Appearance	Not Degraded	Visual
Properties After Dry Heat Aging		ASTM D2126
Flammability:		
Extinguish Time (sec.)	9.2	Chapter 1 of the FAA Aircraft Materials Fire Test Handbook
Burn Length (in.)	2.0	
Drip Extinguish Time (sec.)	No Drips	
Puncture Resistance (kg force)	4.0	**Method Described Below
Load Deflection @ 50% (PSI)	72.5	ASTM D3574, Test C
Appearance	Not Degraded	Visual

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*** SOLVENT RESISTANCE:**

Wet a clean white cotton gauze with aliphatic naphtha and make twenty five double passes over 2" by 4" sample surface. Use light hand pressure of approx. 2 psi. Cotton gauze shall not show any coloring or staining.

**** PUNCTURE RESISTANCE:**

- a. Prepare three specimens measuring approx. 4" by 4" by 0.5".
- b. Apparatus shall consist of a pull/push style force gage which measures up to 5 Kg, and a 0.15 ± 0.01" diameter stainless steel rod, with a tip diameter of 0.030 ± 0.005".
- c. Test each specimen by pushing the tip into the foam skin at 90 ± 2 degrees to the surface. Start with a force of 0.50 ± 0.05 Kg and increase by increments of 0.25 ± 0.05 Kg until a puncture failure is determined. Repeat process 4 times on each specimen, with each test point a minimum of 0.5 inches from any other test point. Allow the foam to recover.
- d. To verify a puncture use one of the following methods:
 - (1) Examine the puncture under a microscope at 15X nominal magnification. If the skin is torn, this shall indicate a puncture.
 - (2) Apply a drop of ink to the puncture point, allow to soak for minimum 30 seconds, removing the excess by blotting. Check for surface puncture, using a microscope at 15X nominal magnification if necessary.

Manufacturer of LAST-A-FOAM® high-density rigid and flexible polyurethane foams and fabricators of plastic sheets for aircraft, industrial, construction, marine, nuclear, shipping and modeling.