

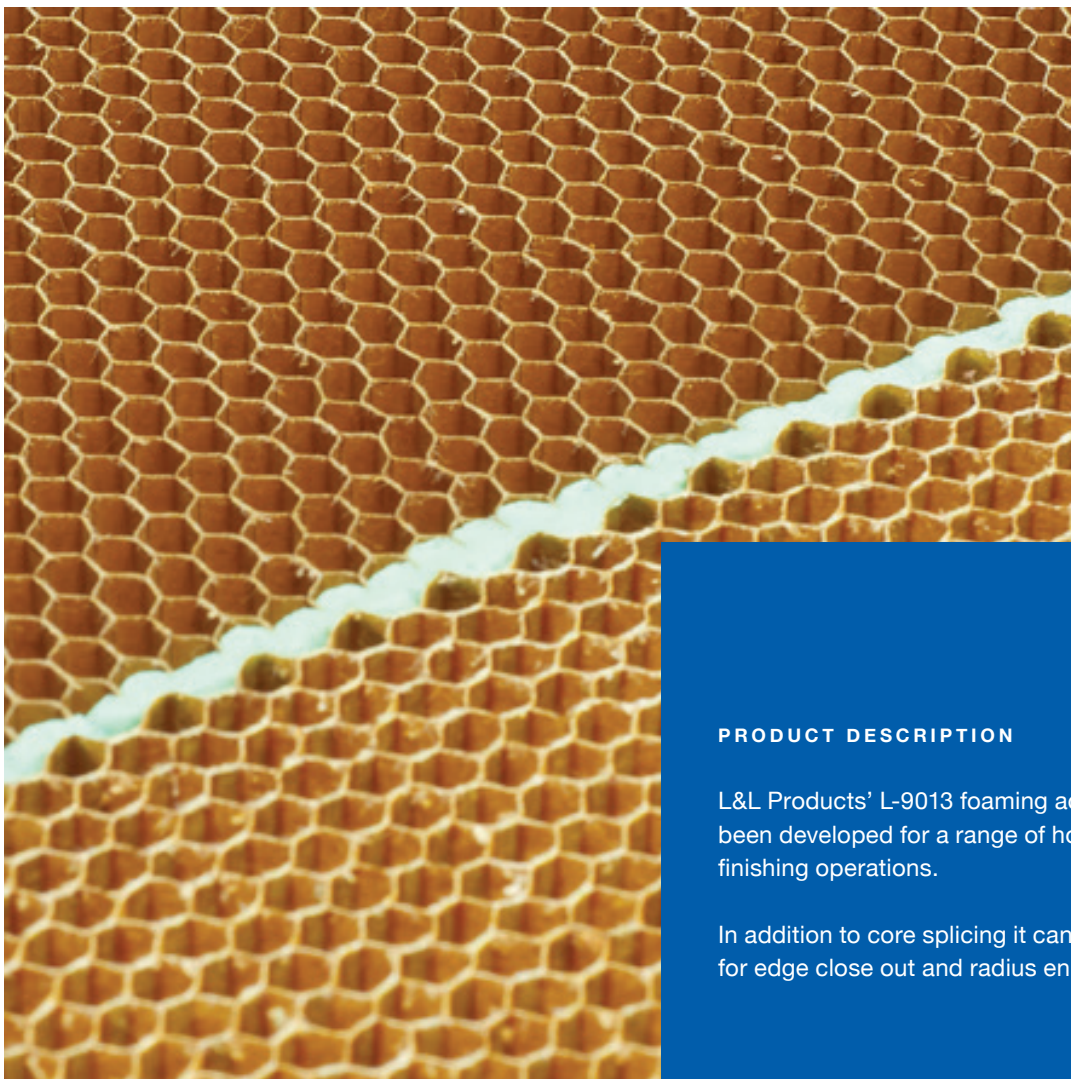


**SOLUTION**  
L&L Bond

**VERSION**  
January 2022

# L-9013

## FST Foaming Adhesive Technology.



### PRODUCT DESCRIPTION

L&L Products' L-9013 foaming adhesive has been developed for a range of honeycomb core finishing operations.

In addition to core splicing it can be readily used for edge close out and radius enhancement.

## Product Description

L&L Products' foaming adhesives have been developed for a range of honeycomb core finishing operations. In addition to core splicing they can be readily used for edge close out and radius enhancement.

Different formulations are available to provide full compatibility with the processing methods (autoclave, oven and press) and the cure cycles used in the manufacture of aircraft interiors.

Depending on the cure schedule chosen, L-9013 will expand up to 500%.

L&L foaming adhesives are available in both sheet form and as extruded beads.

It can be supplied in both sheet form and as extruded beads. The sheet material can be supplied in thicknesses from 1 to 10 mm (0.05 in. – 0.4 in.). The extruded material is available in round or square cross sections in order to more accurately meet any specific geometry parameters. Their tacky nature means that no additional adhesive is required to pre-bond to the honeycomb.

## Key Product Attributes

- FST regulations compliant - FAR 25,853, ABD0031
- Lightweight
- Smooth curing, reduced post processing machining
- Thermo-foaming materials
- Multiple final densities available
- Compatible with a broad range of honeycombs, phenolic and epoxy prepregs
- Pressure sensitive adhesive

## Typical Application Areas

- Core splicing
- Edge close out
- Local edge reinforcement
- Radius enhancement
- Void filling

## Technical Data

The following information and data should be considered typical and should not be used for specification.

	Cure Cycle	L-9013	Test Method
Physical Properties	Color	Purple	
	Uncured Density	1.2 g/cc / 77 lbs/ft <sup>3</sup>	
	Expansion	120°C - 175°C [250°F - 350°F]	up to 500%
Mechanical Properties	Compressive Strength [RT]	20 min@120°C [250°F]	8.3 MPa [1,00 psi] — ASTM D695
	Compressive Modulus [RT]	20 min@120°C [250°F]	0.25 GPa [36.3 ksi]
	Tube Shear [RT]	60 min@125°C [257°F]	7 MPa [1,015 psi] — DIN EN2667-2
Fire Properties	Vertical Burn 60 s	Pass	FAR 25.853(a), App. F part I(a)(1)(i)
	Smoke Density	Pass	FAR 25.853(d) App. F part V(b)
	Smoke Toxicity	Pass	ABD0031
Qualifications		CDM212-00 / HMS-A1-001	

## Optimal Curing Cycles

**Press Cure:** 160°C (320°F) for 15 min.

**Other curing cycles:** please contact us (expansion rate can vary depending curing cycle).

## Shelf Life & Storage Conditions

**Shelf Life:** 2 years from date of manufacture when stored at at 0°C (32°F) or below.

Handle with care at low temperature as the material can be brittle. Before use, let the material reach room temperature in its sealed packaging to avoid moisture uptake. Best handling around room temperature.

## Health & Safety

Consult product specific Safety Data Sheet.

All of our products are developed with REACH compliance.