



L&L BOND L-5005F

Crash-Toughened Structural Pressure Sensitive Adhesive.

L&L Bond L-5005F is a heat-activated structural adhesive. Initially a pressure sensitive adhesive tape, the material cures to become a rigid structural adhesive to bond metallic substrates. This material enables a reduction in costly welding operations and mechanical fasteners.

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L&L BOND L-5005F Structural Pressure Sensitive Adhesive.

The unique formulation has been developed to exhibit superior strength and environmental exposure (i.e., humidity and salt spray) resistance. The material has been developed to have similar or better physical properties as compared to vehicle body assembly structural adhesives and can therefore serve as a substitute in locations where application of paste adhesive is inconvenient or not feasible.

The structural adhesive tapes are 0.5 to 3.0 mm in thickness prior to curing, have a variety of expansion rates, and can be supplied in tape form or die-cut.



In this demonstration, L&L Bond L-5005F lifts a weight of over 10,000 lbs.



KEY PRODUCT ATTRIBUTES



HIGH STRENGTH

- Superior initial (uncured) adhesion to a wide range of substrates
- High peel strength and wedge impact peel strength
- Does not weaken substrates



DESIGN FLEXIBILITY

- Bonds dissimilar metals
- Pliable and ductile prior to curing



PROCESS OPTIMIZATION

- Solid, dry-to-touch with permanent film on top
- Pressure sensitive
- Enables a reduction in welding operations and mechanical fasteners



ECONOMICAL

- Quick & easy manual application of tapes

KEY FEATURES

- Developed to resist heat and humidity changes in green state.
- Enable the reduction of spot, MIG and stitch welds.

0%

Volumetric Expansion

30 MPa

Lap Shear Strength¹
ISO 4587

1800 MPa

Tensile Modulus²
ISO 527

34 MPa

Tensile Strength²
ISO 527

9%

Tensile Elongation²
ISO 527

8.6 N/mm

T-Peel Strength³
ISO 11339

30 N/mm

Wedge Impact Peel Strength⁴

- 1) 1.6mm clean EG-60, 3mm bond line, 25.4mm overlap, 50.8 mm/min test rate - cured at 160°C for 30 min.
- 2) JISK 6301 shape dumbbell, 3 mm cured thickness, 5 mm/min test rate - cured at 160°C for 30 min.
- 3) 0.8 mm clean EG-60, 1.5 mm bond line, 25.4 mm width, 50.8 mm/min test rate.
- 4) 0.8 mm EG-60 0.25 mm bondline, 25 kg drop weight, 2 m/s impact spread



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