Laminating Adhesive 8132LE

Product Data Sheet

Updated : July 2000
Supersedes : August 1997

Physical Properties
Not for specification purposes

Liner	4.0 thou (100micron) 94g/m² 58# Polycoated Kraft
Adhesive	2.0 thou (51 micron) #300 LSE “Hi-Strength” Acrylic Adhesive
Liner	6.5 thou (163 micron) 140g/m^2 86# Polycoated Kraft
Shelf Life	24 months from date of manufacture by 3M if stored at room temperature condition in cool, dry and sun protected room.

Features:

- 300 LSE“ Hi-Strength” Acrylic Adhesive provides very high bond strength to most surfaces, including low surface energy plastics.
- Thickness range of 51 microns, 88 microns, for use on smooth or rough.
- Extremely smooth, non-fibred adhesive for excellent graphic appearance.
- Excellent bond to plastics and low surface energy coatings such as, polypropylene and
- powder coated paints, combined with high shear for excellent temperature resistance.
- Excellent adhesion to surfaces contaminated lightly with oil typically used with machine parts.
- Double linered for selective die-cutting.

Applications

- Plastic nameplates or graphic overlays for use on low surface energy plastics.
- Waste removed nameplates on a common sheet for ease of application.
- Graphic overlays with selectively removed adhesives.
- Attaching membrane switch assemblies to powder coated surfaces and low surface energy plastics
- Graphic application to surfaces such as wood, fabric, plastic, where very high bond strength is required.
- Bonding a variety of foam substrates to metal and plastic surfaces.
- Attaching identification material to oily surfaces typical of machine parts.

Adhesion Properties

Not for specification purposes

Peel Adhesion ASTM-D3330, modified 90° Peel 51 micron aluminium backing.

	15 minute - Room Temp. N/10mm	72 hour - Room Temp. N/10mm
Stainless Steel	7.8	8.2
ABS	7.7	8.6
Polypropylene	7.5	8.1

Environmental Performance

The properties defined are based on the attachment of impervious faceplate materials (such as aluminium) to a stainless steel test surface.

Bond Build Up	The bond strength of Scotch #300LSE High Strength acrylic adhesive increases as a function of time and temperature, and has very high initial adhesion.
Chemical Resistance	When properly applied, nameplate and decorative trim parts will hold securely after exposure to numerous chemicals including oil, mild acids and alkalis.
Water Resistance	Immersion in water has no appreciable effect on the bond strength. After 100 hours at room temperature, the high bond strength is maintained.
Humidity Resistance	High humidity has minimal effect on adhesive performance. No significant reduction in bond strength is observed after exposure for 7 days at 32°C and 90% relative humidity.
U.V. Resistance	When properly applied, nameplates and decorative trim parts are not adversely affected by exposure.
Temperature Cycling Resistance	High Bond strength is maintained after cycling four times through:- 4 hours at 70ºC 4 hours at -29ºC 16 hours at 22ºC
Temperature Resistance	The #300LSE “Hi-Strength” adhesive is usable for short periods (minutes, hours) at room temperatures up to 148ºC, and for intermittent longer periods of time (days, weeks) up to 93ºC.
Low Service Temperature	- 40ºC

Processing

Slitting & Die-Cutting:
This adhesive is very aggressive and may be difficult to die cut. Chilling the adhesive to between 2°C and 10º C will improve the processability. In addition, dies can be lubricated with Laminoleum evaporative stamping oil.

Roll Laminating:
A combination of metal and rubber rollers with moderate pressure is recommended.

Note: Please refer to the **3M Slitting/Die-Cutting Technical Bulletin** for further details.

Special Considerations

For maximum bond strength the surface should be thoroughly cleaned and dried. Typical cleaning solvents are heptane or isopropyl alcohol. Consult solvent manufacturer's Material Safety Data Sheet for proper handling and storage instructions.

Bond strength can also be improved with firm application pressure and moderate heat, from 38°C to 54°C, causing the adhesive to develop intimate contact with the bonding surface.

Ideal tape application range is 21°C to 38°C. Initial tape application to surfaces at temperatures below 10°C is not recommended for most pressure sensitive adhesives because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.

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Values presented have been determined by standard test methods and are average values not to be used for specification purposes.
Our recommendations on the use of our products are based on tests believed to be reliable but we would ask that you conduct your own tests to determine their suitability for your applications.
This is because 3M cannot accept any responsibility or liability direct or consequential for loss or damage caused as a result of our recommendations.

Tapes & Adhesives Group

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3M United Kingdom PLC
3M House, PO Box 1,
Market Place,
Bracknell, Berkshire,
RG12 1JU

Product Information :

Tel 0870 60 800 50
Fax 0870 60 700 99

3M Ireland
3M House, Adelphi Centre,
Upper Georges Street,
Dun Laoghaire, Co. Dublin,
Ireland

Customer Service :

Tel (01) 280 3555
Fax (01) 280 3509