



LADH1211

MOISTURE CURING SOLVENT-BASED ADHESIVE

KEY FEATURES

- Good adhesion at a wide range of temperatures
- Excellent for vacuum forming applications for foam bonding
- Antifogging

DESCRIPTION

LADH1211 is a solvent-based one-component moisture curing adhesive designed for the assembly of interior trim components of automobiles. It is a medium viscosity blue liquid adhesive designed to be spray applied to a variety of substrates, particularly unprimed PP. It is suitable for vacuum forming and pressure bonding with unprimed polyolefin foam, typically as a contact adhesive. LADH1211 meets requirements for Japanese VOC regulations, as it does not contain the regulated solvents (such as toluene or xylene).

BENEFITS

- Excellent processing and application consistency
- Excellent for foam bonding on low surface energy substrates
- Good shelf life stability
- Antifogging

PACKAGING

LADH1211 is available in 54 gallon drums and 5 gallon pails.

SHELF LIFE

The shelf life of LADH1211 is 120 days (4 months) when stored between 50-90°F (10-32°C). Exposure to colder temperatures can be reversed by warming the adhesive slowly to room temperature and agitating the material well. Exposure to higher temperatures for a prolonged time can cause premature aging, shortening the shelf life of the product. Viscosity increase caused by heat exposure is irreversible.

DILUENT

MEK or cyclohexane

CLEAN-UP

MEK, ethyl acetate or methylcyclohexane when wet, MEK or methylcyclohexane when dried.



AUTOMOTIVE INTERIOR TRIM

VACUUM FORMING

TYPICAL PHYSICAL PROPERTIES

Description	Results
Appearance	Blue Liquid
Base Polymer	Modified Styrene Rubber
Solvent	Methylcyclohexane, Cyclohexane, and MEK
Flash Point (Closed Cup)	50°F (10°C)
Density	6.80 lbs/gallon (0.816 g/cm ³)
Non-Volatile Content	22%
Viscosity (Brookfield, RVT, #2/20)	200 cP @ 77°F (25°C)

DRY FILM PROPERTIES

Appearance	Blue Film with Good Tack
Water & Heat Resistance	Excellent

TRANSPORTATION

During transit, prolonged elevated temperatures should be avoided.

APPLICATION INFORMATION

1. Adhesive should be gently agitated prior to use (gentle agitation consists of mixing the adhesive with a speed that allows a small vortex to be produced around the prop shaft that does not pull air into the adhesive. Vigorous mixing of the adhesive will draw air into the product, which will introduce moisture and cause solvent evaporation). Adhesive should be mixed for at least 10 minutes to ensure the material is homogeneous. It should not be mixed more than 30 minutes. LADH1211 is flammable. Take appropriate precautions when handling open containers. Containers should be grounded, equipment should be explosion proof and proper ventilation should be used. Keep container tightly closed when not in use. LADH1211 is a moisture reactive material. It is important to minimize exposure to moisture when handling the liquid product. Exposure to ambient moisture will cause the material to begin to react. Reaction prior to the application of the adhesive will yield lower performing bonds. This adhesive will begin to gel if exposed to ambient moisture for more than 3 days. Care must be taken not to leave adhesive in spray equipment for extended lengths of time as adhesive will gel. Use of dry make-up air can decrease this affect by limiting the exposure to ambient moisture. Agitation may be done by drum roller. The container should be rolled for at least 30 minutes and no more than 3 hours.
2. Substrates to be bonded should be clean and free from moisture, dirt, oil and other contaminants. Exposure to oils and plasticizers at the bondline can cause degradation of the bond over time. LADH1211 is styrene based, making it susceptible to plasticizer migration.
3. The adhesive should be applied by conventional spray equipment. An orifice of at least 1.4 mm should be used for the fluid tip / needle. The air cap should have a minimum number of holes, to prevent clogging and make easier clean-up.
4. For contact bonds, coat weight should be 150 g/m² wet weight. This adhesive coat weight should be applied to both substrates. For vacuum forming bonds, a coat weight of 150 g/m² wet weight should be applied to the rigid side only.
5. Allow the material to dry properly prior to bonding. Forced drying with circulating air oven is recommended to eliminate the variability seen with drying at plant ambient conditions. Recommended drying is 80°C for 1 - 3 minutes. The optimum condition varies depending on oven choice, the amount of air flow over the part and the amount of air exchange within the unit itself. The adhesive is flammable. Take appropriate cautions to handle material to prevent fires and explosions (use proper ventilation and grounding techniques with both liquid and vapors).
6. Bonds can be made once the adhesive is dried. Open time (from the point that the adhesive is dry until it is bonded) should be minimized for optimum bonding. Open times of less than 15 minutes are recommended. Prolonged open time will allow the adhesive to begin reacting, making bonding difficult.
7. Position pieces carefully. Strong bond is made upon contact,

limiting repositioning the part.

8. For contact bonds, press parts together for 10-15 seconds at 5-7 psi (0.3 - 0.5 kg/cm²). Press and dwell time are critical to contact bonding. Individual users may determine conditions appropriate to their specific application. For vacuum forming, a bondline temperature of 110-130°F (43-54°C) should be achieved. The bondline temperature refers to the amount of heat transferred from the flexible substrates to the adhesive surface. Vacuum pressure should be 600 mm Hg for at least 10 seconds.
9. Adhesive should have adequate green strength for handling immediately. Full bond strength will develop over 96 hours at room temperature. Approximately 90% of the cure is achieved within the first 24 hours.
10. Clean up of material can be done with ethyl acetate, MEK or methylcyclohexane when the material is wet. If the adhesive is dried, MEK or methylcyclohexane is a better choice for cleaning.

HEALTH AND SAFETY PRECAUTIONS

Please refer to SDS for complete detail

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BOSTIK HOTLINE

Smart help
1-800-726-7845

Bostik, Inc.
11320 W Watertown Plank Road
Wauwatosa, WI 53226
www.bostik.com/us



This document supersedes all previously published literature.
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