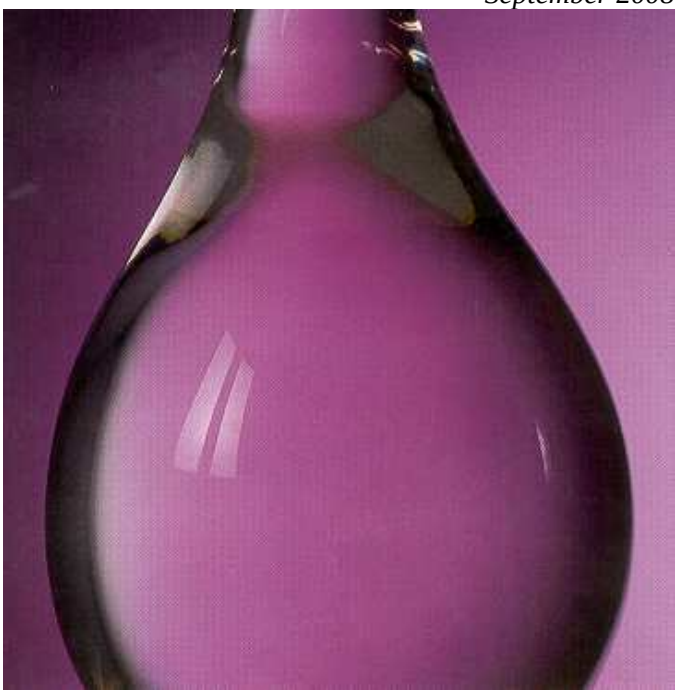
September 2008

Technical Data Sheet

1920

Liquid Adhesives



Product Description

Bostik adhesive 1920 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 with unprimed polyolefin foam.

Storage and Handling

Shelf life:	120 days (4 months) at 50 – 90°F (10 – 32°C)

Exposure to colder temperatures can sometimes 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:	Toluene or MEK
Clean-up:	MEK, Ethyl acetate or toluene when wet, MEK or toluene when dried
Transportation:	During transit, freezing and prolonged elevated temperatures should be avoided.

Typical Physical Properties (not for specification use)

Base:	Modified styrene rubber
Solvent:	Toluene, Naptha and MEK
Flash Point, °F:	50ºF, closed cup
Density, (lbs./gal.):	7.27
Specific Gravity:	0.87
Non-volatile Content, %:	22.0
Viscosity, (Brookfield):	200 - 400 cps (RVT, #2/20/25ºC)
Color:	Blue

Dry Film Properties

Appearance:	Blue film with good tack
Water, Solvent & Heat Resistance:	Excellent
Activation Temperature:	110 – 130ºF (ºC)

Further Information

Please refer to MSDS for complete details.

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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. LADH1920 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. LADH1920 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. LADH1920 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/m^2 wet weight. This adhesive coat weight should be applied to both substrates. For vacuum forming bonds, a coat weight of 150 g/m^2 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^oC 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 0.3 – 0.5 kg/cm^2. 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 43 – 54 ^oC (110 – 130 ^oF) 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 toluene when the material is wet. If the adhesive is dried, toluene or MEK is a better choice for cleaning.

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