



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

ADHESIVE, HOT MELT, HOT APPLIED, 190 - 220 °C

WSB-M2G359-A

1. SCOPE

The material defined by this specification is a heat activated synthetic resin type adhesive with good hot tack and good high and low temperature resistance.

2. APPLICATION

This specification was originally released for material used to bond heat resistant ABS to itself in instrument panel assemblies.

3. REQUIREMENTS

3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.4 COLOR

Amber or as
specified on
Engineering Drawing

3.5 SOLIDS, min (FLTM BV 150-10)

98 %

3.6 SPECIFIC GRAVITY (ASTM D 792)

1.01 +/- 0.05

3.7 SOFTENING RANGE (ASTM E 28, Ring and Ball Apparatus)

138 - 148 °C

3.8 VISCOSITY, mPa.s (ASTM D 4402, Brookfield RVT, Spindle No. 27)

200 +/- 2 °C, 20 rpm

2,500 – 6,000

Date	Action	Revisions
2003 02 28	Revised	Para 3.0 inserted; para 3.1, 3.2, 3.3, 3.13, 3.14, 4 deleted
1991 06 25	NB00I10043054103	Released D. Henrickson, L. Moriarty

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3.9 ADHESION, LAP SHEAR

(ASTM D 3163, Avg. of 5 tests at each condition, 13 mm/minute crosshead speed)

Normal, min
(Condition for 30 minutes at specified temperature prior to testing.)

3.9.1 Test at 23 +/- 2 °C 2.30 N/m²

3.9.2 Test at - 30 +/- 2 °C 1.00 N/m²

3.9.3 Test at 90 +/- 2 °C 0.10 N/m²

Environmental Aging, min
(After specified exposure, condition at 23 +/- 2 °C for 30 minutes prior to testing at 23 +/- 2 °C.)

3.9.4 1,000 h at 93 +/- 2 °C 1.05 N/m²

3.9.5 1,000 h at 38 +/- 2 °C and 98 +/- 2 % relative humidity 1.15 N/m²

3.9.6 1,000 h water immersion at 23 +/- 2 °C 0.35 N/m²

3.9.7 10 thermal cycles 0.20 N/m²
4 h at 90 +/- 2 °C,
4 h at 38 +/- 2 °C and
98 +/- 2 % relative humidity
16 h at - 30 +/- 2 °C

Sample Preparation:

- . Overlap 25 mm of two 100 x 25 x 3 mm coupons of the materials to be bonded using enough adhesive to completely fill the bond area and compress to a bondline thickness of 0.25 mm. Trim excess adhesive when cooled.
- . Allow bonded test coupons to cure for 24 h at 23 +/- 2 °C prior to testing at above conditions.
- . Record peak load at failure and indicate type of failure.