

**TAPE, ACRYLIC FOAM, PRESSURE SENSITIVE
ADHESIVE ONE SIDE, HEAT BONDABLE
ADHESIVE ONE SIDE****WSS-M3G168-B****1. SCOPE**

The material defined by this specification is an acrylic foam tape coated on one side with an acrylic, pressure sensitive adhesive and coated on the other side with a heat bondable adhesive. The tape is protected by polyethylene copolymer release liners.

2. APPLICATION

This specification was released originally for material used to retain exterior EDPM weatherstrips and thermoplastic polyolefin elastomers used for gimp applications.

NOTE: Material defined by WSS-M3G168-B replaces the former ESB-M3G168-A and ESB-M3G168-A2. Existing drawings specifying ESB-M3G168-A or ESB-M3G168-A2 do not require revision to reflect this new classification.

This specification does not describe initial adhesive bonding conditions. The procedures for part assembly shall be prescribed in accordance with adhesive manufacturer and part supplier recommendations.

Materials meeting this specification do not guarantee that the adhesive will function in all potential applications on a vehicle. The specific design condition should be evaluated by a plant trial or laboratory simulation prior to release of the material.

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 TAPE DIMENSION

As specified on the
engineering drawing

3.5 PHYSICAL TAPE REQUIREMENTS

3.5.1 Thickness
(ASTM D 412, 2 mm diameter foot, 57 g wt)

Tape Plus Adhesive +/- 0.15 mm

Tape plus adhesive thickness shall be specified on the engineering drawing. The tolerance for any one supplier shall be +/- 0.15 mm, based on the recorded thickness of their originally approved production sample.

Release Liner 0.09 - 0.11 mm

Date	Action	Revisions
2006 01 18	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.15, 4
1996 03 22	Activated	

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Documents

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3.5.2 Color

Tape color shall be specified on the engineering drawing.
(Reference para 5.4)

3.5.3 Density

The density tolerance for any one supplier shall be +/- 12%, based on the recorded density of their original approved production sample. (Reference para 5.5)

3.5.4 Tensile Strength, min
(ASTM D 412, Die "C")

- As Received 1000 kPa
- Aged 70 h at 100 °C 1000 kPa

3.5.5 Elongation, min
(ASTM D 412, Die "C")

- As Received 150%
- Aged 70 h at 100 °C 150%

3.5.6 Water Absorption, max 3%

Test Method: Form a circular ring of tape approximately 25 x 75 mm or equivalent, to obtain an exposure area of approximately 3900 mm². A minimum contact area of the ends is used to hold the tape in a ring form. The ring is weighed and immersed in water at 23 °C. A stainless steel grid is used to retain the tape under water. After 22 h immersion, carefully remove the tape, shake excess water off, remove the remaining surface water with air at 70 - 100 kPa and weigh immediately. Calculate the average of 3 samples as a percent of the original weight for water absorption. Exercise care to minimize contact with the pressure sensitive adhesive coated surfaces during this test procedure.

3.5.7 FOGGING
(SAE J1756, 3 h at 100 °C heating, 21 °C cooling plate, post test conditioning 1 h)

Fog Number, min 60

Formation of clear film, droplets or crystals is cause for rejection.

Tape to be tested with adhesive side up on the beaker bottom. Leave the release liner on the bottom surface.

3.6 TAPE ADHESION REQUIREMENTS

3.6.1 Adhesion, 90° Peel, N/mm
(FLTM BU 112-02, Method A)

The samples shall meet the minimum adhesion requirements both as received and after environmental aging conditions as shown below. Samples must be tested between 1 and 4 h after removal from exposure conditions, unless otherwise noted.



Tape samples are to be bonded to current production paint systems per FLTM BI 103-02, Method "C". An anodized aluminum strip 0.013 mm thick shall be heat bonded to the heat bondable side to prevent stretching of the tape. (Reference para 5.1).

Expose four samples to each of the following conditions.

Record all of the test values and compare the average to the limits outlined below:

- Room Temperature Aging
 - 1 h 1.0
 - 72 h 1.1
- Heat Aging 2.0
 - 14 d at 90 +/- 2 °C
- Humidity 1.5
 - 14 d at 38 +/- 2 °C and
98 +/- 2% condensing humidity
- Water Immersion 1.5
(FLTM BI 104-01)
 - 240 h water immersion
- Cycle Test (5 cycles) 2.0
 - Each cycle consisting of:
 - 8 h at 90 +/- 2 °C
 - 16 h at -40 +/- 2 °C
 - 8 h at 38 +/- 2 °C and
98% +/- 2% condensing humidity
 - 16 h at -40 +/- 2 °C

Adhesion Test Method:

- Insert fixture to hold test panel into lower jaw of tensile machine. This fixture must be capable of maintaining a 90° peel during test.
- Insert the extended end of the tape in upper jaw.
- Initiate jaw separation at 305 mm/min. Continue to peel to end of part.
- Record average peel force and failure mode.

3.6.2 Liner Removal, max (ASTM D 1000 with exceptions below)

- As Received 1.0 N/mm
- 1 h at 55 °C 1.0 N/mm