



WATERSHIELD, POLYETHYLENE FOAM, DOOR AND QUARTER TRIM PANELS

ESB-M99G137-A

1. SCOPE

The material defined by this specification is a flexible, cross-linked closed cell polyethylene foam.

2. APPLICATION

This specification was released originally for material used as a watershield for door and quarter panels on 1983 luxury vehicles. Material supplied to this specification shall have a skin on one or both sides as specified on the engineering drawing.

3. REQUIREMENTS

Material specification requirements are to be used for initial qualification of materials.

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 CELL STRUCTURE

Shall have a homogeneous, closed cell structure with no large voids or solid spots. It shall be free from internal defects such as cold shuts, folds, laps and, tears.

3.5 DENSITY, +/- 10% 32 kg/m³
(ASTM D 3575, 300 x 300 mm sample)

3.6 THICKNESS As specified on
engineering drawing

3.7 TENSILE STRENGTH, min
(ASTM D 3575, Suffix 'T')

MD 225 kPa
XD 200 kPa

3.7.1 Elongation, min

MD 70%
XD 50%

Date	Action	Revisions
2006 09 22	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.15 & 4
1990 07 10	Revised	NB00E10043064021 Add 3.1, 3.2, 3.13; Rev 3.7, 3.7.1, 3.8, 3.9, 5 DRH, JBM
1981 12 16	Released	5M1-6000-27

**3.8 TEAR STRENGTH, min**
(ASTM D 624, Die 'C')

MD	17.0 N/cm
XD	10.5 N/cm

3.9 COMPRESSION SET, max
(ASTM D 3575, Suffix 'B' based on original thickness)

30%

3.10 THERMAL STABILITY, max
(ASTM D 3575, Suffix 'S', except use 85 +/- 2 °C)

MD	3.0%
XD	1.5%

3.11 WATER ABSORPTION, max
(SAE J315b, 24 h immersion)

Skin on both sides	30%
Skin on one side	80%

3.12 COLD FLEXIBILITY

No cracking

Condition three 25 x 150 mm samples of the material in a cold box maintained at -29 +/- 2 °C for 24 h and then slowly bend 180° around a 13 mm diameter mandrel at the same temperature.

3.13 FOGGING
(SAE J1756, 3 h at 100 °C heating, 21 °C cooling plate, post test conditioning 1 h and 16 h)

Fog Number, min	60
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Formation of clear film, droplets or crystals is cause for rejection.

3.14 FLAMMABILITY
(ISO 3795/SAE J369)

Burn Rate, max	100 mm/minute
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5. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification.

Cell count	5 - 25/linear cm
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Compressive load at 50% deflection	60 - 120 kPa
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