



NOISE INSULATION SHIELD-II

SS-M99G9515-A

1. SCOPE

The material defined by this specification is a polyurethane elastomer based oil and moisture resistant glass fabric reinforced sheeting.

2. APPLICATION

The material was originally released as an air borne noise insulation part mechanically fixed at the sides of the engine compartment.

3. REQUIREMENTS

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

The material shall be conditioned for a minimum of 24 hours at 23 +/- 2 °C and 50 +/- 5% relative humidity prior to test and tested under the same conditions.

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).

3.1 COLOR

Black or as specified
on Engineering drawing

3.2 THICKNESS (Slide gauge)

4.0 +/- 0.3 mm or as specified
on Engineering drawing

3.3 DENSITY (ASTM D 792, Method A1)

2.1 +/- 0.1 g/cm³

3.4 SHORE HARDNESS 'A' (ASTM D 2240, 15 s dwell)

75 +/- 10

3.5 STIFFNESS (See Figure 2)

Test Method:

- 1) Cut five 90 x 25 mm specimens from the finished part.
- 2) Test according to ASTM D 747, except direct reading, 50 mm bending span, 0.15 Nm torque.
- 3) Determine the percentage of maximum bending moment depending on the angular deflection within the limits of 0.175 to 1.047 rad and based on a 1 mm specimen thickness as an average of 5 measurements.

Date	Action	Revisions
2006 10 18	Revised	Inserted 3.0; Deleted 3.16 & 4; Corrected numbering in 3
1994 12 16	Revised & Retyped	Was 11 pages
1977 02 14	Released	SM/EQ8209TP



**3.6 COLD IMPACT RESISTANCE**

No cracking

- 1) Place a steel ball of 30 mm diameter, mass 225 g and a 100 x 100 mm specimen cut from finished part for 4 hours at - 40 +/- 2 °C in a cold box.
- 2) Place the specimen horizontally on a base plate and normal to the direction of impact.
- 3) While still in the cold box drop the steel ball to the middle of the specimen from a height of 1000 mm.

3.7 TENSILE STRENGTH

(ASTM D 412, Die C; specimen to be cut from finished part)

- | | | |
|-------|---|-----------------------|
| 3.7.1 | Original, min | 210 N/cm ² |
| 3.7.2 | After Humidity Ageing, max
(48 h at 38 +/- 2 °C and 98 +/- 2% relative humidity) | -15% |
| 3.7.3 | After Heat Ageing
(14 d at 90 +/- 2 °C, 1 h at room temperature) | No loss |
| 3.7.4 | After Immersion in Engine Oil, max
(48 h in Oil No. 1 of ASTM D 471 at room temperature) | -10% |

3.8 TEAR RESISTANCE, min

(ASTM D 624, Die C; specimens to be cut from finished part)

180 N/cm

3.9 RESISTANCE TO VARIOUS REAGENTS

The material shall not dissolve or exhibit tackiness when lightly rubbed for 15 seconds with a cloth, soaked with each of the following reagents. Use separate specimens, cut from the finished part for each reagent.

Test Reagents:

- 1) Oil No. 1 of ASTM D 471
- 2) Brake fluid, SA-M6C9101-A
- 3) Sulfuric acid (10 % by weight in distilled water)
- 4) Longlife coolant SS-M97B9103-A, 50% by weight in distilled water
- 5) Rust preventive compound SK-M7C9552-A.