ENGINEERING MATERIAL SPECIFICATION

Material Name | Specification Number

HEAT INSULATION, SELF-ADHESIVE, POLYETHYLENE FOAM | SK-M99G9522-A

1. SCOPE

The material defined by this specification is a moulded self-adhesive, closed cell, crosslinked polyethylene foam with the adhesive side covered by a release liner.

2. APPLICATION

This material was originally released for heat insulation of the heating channel in the engine compartment.

3. REQUIREMENTS

Note: If the finished part does not allow the preparation of plane specimens, the supplier is required to provide, together with the Initial Sample Report, specimens of same material and equivalent manufacture used for the finished part. Samples for control and routine checks shall be submitted as required by Quality Control.

The material shall be conditioned for a minimum of 24 hours at 23 +/- 2 C and 50 % relative humidity prior to test and tested under the same conditions. Tests shall be conducted not earlier than 72 hours after manufacture of part.

3.1	COLOR	Grey to black or as specified on Engineering drawing
3.2	DIMENSIONS	As specified on Engineering drawing
3.3	WEIGHT OF FINISHED PART	As specified on Engineering drawing
3.4	DENSITY (ASTM D 2406)	35 +/- 5 kg/m3
3.5	TENSILE STRENGTH, min (ASTM D 2406)	15 N/cm2
3.6	ELONGATION, min (ASTM D 2406)	50 %

Date	Release No.	Released
1994 12 16		Revised and Retyped, was 11 pages
1978 09 27	SM/EQ 8424 TP	Released

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3.7 TEAR STRENGTH, min — 30 N/25 mm
(ASTM D 624, Die C)

3.8 COMPRESSION SET, max — 42 %
(ASTM D 2406, specimens 50 x 50 x 25 +/- 1 mm, 50 % compression, 70 h at 23 +/- 2 C)

Calculation:

$$Ct = \frac{to - tf}{to} \times 100$$

Ct = Compression set expressed as a % of the original thickness

to = Original thickness

tf = Final thickness

3.9 COMPRESSION LOAD DEFLECTION — 5.5 +/- 1.5 N/cm2
(ASTM D 1056)

3.10 WATER ABSORPTION, max — 3 %
(ASTM D 1056, 24 h)

3.11 DIMENSIONAL STABILITY

Dimensional Change, max — 3 %

Test Method: A specimen approximately 300 x 300 mm in size shall be placed into a mechanical convection oven maintained at 90 +/- 2 C for 3 hours. Dimensional changes shall be measured after conditioning for 30 minutes at room temperature.

3.12 COLD RESISTANCE — - 40 %

After test, specimen shall not show any cracks or breaks.

Test Method: Specimens 150 x 50 x 5.5 +/- 0.5 mm in size shall be placed in a cold box maintained at - 40 +/- 1 C for 4 hours and subsequently, twisted 360 deg around itself. Test shall be done inside the cold box. Examination shall be done on specimens bent 180 deg with the unaided eye from a distance of 300 mm.

3.13 COLD ADHESION AFTER HEAT AGEING — No chipping

Test Method:

1) Apply 280 x 290 x 5.5 +/- 0.5 mm self adhesive specimens to 300 x 300 x 1.5 +/- 0.1 mm test panels, prepared according to FLTM EU-BI 3-2 Bb and firmly press together.

2) After 2 hours at room temperature, expose test assemblies to 80 C +/- 2 C for 14 days.

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