



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

TAPE, LOW DENSITY EPDM FOAM, PRESSURE
SENSITIVE, SUPERSOFT

WSB-M3G212-A

1. SCOPE

The material defined by this specification is a supersoft, cellular, 100 % EPDM component foam tape with one side adhesive coated and protected by a coated release paper.

Note: This material can be supplied extruded into very complex cross sections, die cut or in roll form.

2. APPLICATION

This specification was released originally for material used as a filler between exterior moldings and painted metal to seal against air leaks, water leaks, and wind noise. It is used in areas where low force to compress is required and may also be used to seal areas where the design requires complex extrusions.

3. REQUIREMENTS

3.1 STATISTICAL PROCESS

Suppliers must conform to the requirements of Ford Quality System Standard Q-101. A mutually acceptable Control Plan as described therein is required for material/source approval. Appropriate statistical tools must be used to analyze process/product data so that variation in the final product is continuously reduced.

3.2 INFRARED SPECTROPHOTOMETRY AND/OR THERMAL ANALYSIS

Ford Motor Company, at its option, may conduct infrared and/or thermal analysis of material/parts supplied to this specification. The IR spectra and thermograms established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce IR spectra and thermograms that correspond to the reference standard when tested under the same conditions.

3.3 CONDITIONING AND TEST CONDITIONS

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Action	Changes
1993 05 01	NB00E10204040000	Released D. DiGregorio E. Rezendes

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3.4 DIMENSIONS

Cross sections/dimensions as specified on the Engineering drawing.

3.5 DENSITY

(ASTM D 3574, Test A)

The density tolerance for any given supplier shall be ± 23 kg/m³ based on the recorded density of the original approved production sample. See para 5.2.

3.6 TENSILE STRENGTH, min
(ASTM D 412, Die C)

350 kPa

3.6.1 Elongation, min

150 %

3.7 COMPRESSION DEFLECTION
(ASTM D 1056, Test B1)

3.45 - 13.79 kPa

3.8 COMPRESSION SET, max
(ASTM D 1056, Test B1)

50 %

3.9 WATER SEAL, min

No leak after 60 minutes

Test Method: Wipe two glass plates with mineral spirits using a clean cotton cloth. Shape a 12 x 6 x 300 mm sample into a "U" configuration between the surfaces of the glass plates. The plates should be spaced and clamped so that the material between them is compressed 30 % of the original thickness for 3.9.1 and 50 % of the original thickness for 3.9.2. After the assemblies have been processed as specified below, pour water into the "U" so that the deepest point measures 100 mm. Examine the assembly after 60 minutes.

3.9.1 Condition the assembly for 30 minutes at 23 ± 2 C.

3.9.2 Expose the assembly for 30 minutes at 121 ± 2 C, then cool to 23 ± 2 C prior to test.

3.10 LOW TEMPERATURE FLEXIBILITY

No cracking

Test Method: Condition a minimum of three 150 mm samples of tape as received at -40 ± 1 C for 4 h and bend the samples 180 deg around a temperature conditioned 6.4 mm diameter mandrel.

3.11 PAINT STAINING

No migration staining

Test Method: Securely attach a 50 x 100 mm sample of the material to a 100 x 150 mm steel panel coated with currently released body enamels with top surface of foam against the paint. Expose the assembly for 500 h in a Q.U.V. cabinet described in SAE J2020. Examine for any evidence of staining beyond the boundaries of the test specimen.