



SILICONE RUBBER, HIGH TEAR-HIGH TEMPERATURE

WSS-M2D8-B2

1. SCOPE

The material defined by this specification is a high temperature and high tear silicone rubber.

2. APPLICATION

This specification was released originally for material used as a molded spark plug insulator for vehicles requiring a high temperature 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 MATERIAL TESTING

3.4.1 SLAB STOCK
(150 x 150 x 1.90 +/- 0.13 mm)

Whenever possible, all test specimens shall be die-cut from the finished parts. When not feasible, specimens cut from molded test sheets manufactured from the same material and with equivalent cure to molded parts are recommended. The test sheets shall have the following dimensions:

3.5 ORIGINAL PROPERTIES

3.5.1	Tensile Strength, min (ISO 37/ASTM D 412, Die C)	2.4 MPa
	Elongation, min	280%
3.5.2	Hardness, Durometer A (ISO 868/ASTM D 2240, instantaneous, plied-up specimen. Hand held durometers shall not be used)	55 - 65
3.5.3	Heat Aged (ISO 188/ASTM D 573, 70 h at 230 +/- 2 °C)	
	Tensile Strength Change, max	-10%
	Elongation Change, max	-65%
	Hardness, Durometer A Change	-2 to + 15

Date	Action	Revisions
2004 06 23	Revised	Para 3.0 inserted; para 3.1, 3.2, 3.3, 3.7 & 4 deleted
1996 03 25	Revised	Deleted para 3.5.1, renumbered
1995 06 27	Activated	NE01-E-10127076-160



3.5.4	Immersion in ASTM Oil No. 1 (ISO 1817/ASTM D 471, 70 h at 150 +/- 2 °C)	
	Tensile Strength Change, max	-22%
	Elongation Change, max	-25%
	Hardness, Durometer A Change	-10 to 0
	Volume Change, max	+ 10%
3.5.5	Immersion in Oil IRM 903 (ISO 1817/ASTM D 471, 70 h at 150 +/- 2 °C)	
	Tensile Strength Change, max	-30%
	Elongation Change, max	-25%
	Hardness, Durometer A Change	-28 to 0
	Volume Change, max	+ 38%
3.5.6	Compression Set, max (ISO 815/ASTM D 395, Method B, plied-up specimens, 70 h at 177 +/- 2 °C)	65%
3.5.7	Cold Flexibility	No cracking
	Test Method: After 70 h at -40 °C material is bent 180 °C over 12.7 mm mandrel.	
3.5.8	Tear Strength, min (ISO 34, Method B, procedure (a)/ ASTM D 624, Die B)	14 kN/m
3.5.9	Dielectric Strength, min (IEC 243/ASTM D 149 in insulating oil)	20 kV/mm
3.5.10	Ozone Resistance, max (FLTM BP 101-01, Procedure A)	
	No checking or cracking after 72 h at 38 +/- 1 °C at an ozone concentration of 50 +/- 5 parts per 100 million parts of air.	

3.6 ADDITIONAL REQUIREMENTS

Specific requirements for material and/or manufactured parts shall be specified on the Engineering drawing, Engineering parts specification and/or performance specification. All critical areas with respect to these properties shall be clearly designated on the engineering drawing.