



SILICONE ELASTOMER, INHERENTLY LUBRICATED - POLYCARBONATE COMPATIBLE

ESB-M2D280-A2

1. SCOPE

The material defined by this specification is an inherently lubricated silicone elastomer that is compatible with polycarbonate.

2. APPLICATION

This specification was released originally for material used for the plastic aerodynamic headlamp O-ring seal.

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 MOLDED TEST SPECIMEN

3.4.1	Color	Natural
3.4.2	Lubricant Bleed	
	An ASTM test slab observed 24 h after molding must show evidence of lubricant bleed.	
3.4.3	Specific Gravity	1.18 - 1.42
3.4.4	Hardness, Durometer A (ASTM D 2240)	45 - 55
3.4.5	Tensile Strength, min (ASTM D 412, Die C)	5.5 MPa
	Elongation, min	300%
3.4.6	Tear Strength, min (ASTM D 624, Die B)	8.7 kN/m
3.4.7	Compression Set, max (ASTM D 395, Method B, 22 h at 175 °C)	50%

Date	Action	Revisions
2004 07 15	Revised	Para 3.0 inserted; para 3.1, 3.2, 3.3, 3.8 & 4 deleted
1986 11 13	Revised & Retyped	CAQ1-RD539398
1983 07 19	Released	CLN1-DR503827-2



**3.5 HEAT AGED**

(ASTM D 865, 70 h at 232 +/- 2 °C)

3.5.1	Hardness, Durometer A (ASTM D 2240)	45 - 70
3.5.2	Tensile Strength, min (ASTM D 412, Die C)	3.0 MPa
3.5.3	Elongation, min (ASTM D 412, Die C)	150%

3.6 IMMERSION IN ASTM NO. 3 OIL

(ASTM D 471, 70 h at 150 +/- 2 °C)

3.6.1	Hardness, Durometer A Change, max (ASTM D 2240)	-25
3.6.2	Tensile Strength, min (ASTM D 412, Die C)	1.9 MPa
3.6.3	Elongation, min (ASTM D 412, Die C)	175%
	Volume Change, max	+50%

3.7 MOLDED PART

3.7.1	Color	As specified on engineering drawing
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3.7.2 Additional Requirements

Specific requirements of the molded part shall be specified on the engineering drawing and/or engineering part specification.

**3.7.3 Compatibility with Polycarbonate
(FLTM BO 127-03)**

The molded test bars shall show no evidence of cracking or crazing after the following exposures:

- 3.7.3.1 168 h at +/- 2 °C, 1.0% strain.
- 3.7.3.2 70 h at 85 +/- 2 °C, 0.5% strain.
- 3.7.3.3 1,000 h at 93 +/- 2 °C, 0.2% strain.

Test Materials: ESB-M4D100-A1, ESB-M4D100-A2 and ESB-M4D100-A3 or other affected polycarbonate compounds.