



POLYURETHANE (PUR) FOAM, CELLULAR GASKET

WSS-M2D496-A1/A2/A3/A4/
A5/A6/A7/A8/A9/A10/A11

1. SCOPE

The materials defined by these specifications are high density cellular polyurethane foams with low compression set.

2. APPLICATION

These specifications were released originally for material used for gaskets in the instrument cluster and speed control.

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 APPEARANCE

The foam shall have a homogeneous medium sized cell structure with no large voids or cracks which may impair the serviceability of the part.

3.5 TEST SPECIMEN

The following material properties shall be determined on specimens taken from the molded part with surface skin cut off wherever possible. In case the part dimensions do not allow the preparation of specimens as requested, specimens shall be prepared from a 200 x 200 x 40 mm molded foam block. The specimen shall be free of voids, hard spots and densification lines.

3.5.1	Color	(see Table 1)
3.5.2	Density, kg/m ³ +/- 10, % (ISO 845/ASTM D 3574, Test A)	(see Table 1)
3.5.3	Tensile Strength, kPa, min (ISO 1798/ASTM D 3574, Test E, 50 mm bench marks, 5 specimens min)	(see Table 1)
3.5.4	Elongation at Break, %, min (Test according to para 3.5.3)	(see Table 1)
3.5.5	Tear Strength, N/m, min (ISO DIS 8067/ASTM D 3574, Test F, 50 mm/minute test speed)	(see Table 1)

Date	Action	Revisions
2004 10 21	Revised	Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.6, 3.7 & 4
1998 08 12	Revised	Revised Table 1 K. Gerhards D. Whyte
1997 06 26	Activated	K. Gerhards D. Whyte



- 3.5.6 Compression Set, %, max (see Table 1)
(ISO 1856, Method A/ASTM D 3574,
Test D, 22 h at 70 °C, 50% deflection
Ct calculation, 3 specimens min)
- 3.5.7 Compression Deflection Stress, kPa (see Table 1)
(ISO 3386/1 at 25% compression,
25.4 x 25.4 mm specimen size,
determine sample thickness under
45 kg preload, 12.7 mm/minute test
speed, 3 specimens min)
- 3.5.8 Heat Aging
(ISO 2440/ASTM D 3574, Test K,
22 h at 140 +/- 2 °C)
- 3.5.8.1 Compression Deflection Stress Change, %, max (see Table 1)
(Test according to para 3.5.7)
- 3.5.9 Humidity Aging (AUTOCLAVE)
(ISO 2440/ASTM 3574, Test J, 100 x 100
x 50 mm specimen, 5 h at 120 °C)
- 3.5.9.1 Compression Deflection Stress Change, +/- %, max (see Table 1)
(Test according to para 3.5.7)
- 3.5.10 Dimensional Stability, % (see Table 1)
- Test Method: Linear dimensional expansion or shrinkage after being subjected to dry heat at 80 +/- 2 °C for 3 h. Specimen size should be as large as sample part permits but should not exceed 300 x 300 mm x part thickness.
- 3.5.11 FOGGING
(SAE J1756, 3 h at 100 °C heating, 21 °C
cooling plate, post test conditioning
1 + 16 h)
- Fog Number, min 70
- Formation of clear film, droplets or crystals is cause for rejection.
- 3.5.12 Odor, max Rating 2
(FLTM BO 131-01/SAE J1351)
- 3.5.13 Cold Flexibility at -40 °C No cracking
(FLTM BN 102-01, diameter of mandrel
shall be 5 times of specimen thickness)