



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

GASKET, CORK/RUBBER, HIGH SWELL

WSP-M8G242-A

1. SCOPE

The material defined by this specification is a gasketing material comprised of medium granule size cork with a chlorosulfonated polyethylene binder. On contact with automatic transmission fluid, it will exhibit swell without disintegrating or weeping.

2. APPLICATION

This specification was released originally for material used for oil pan gaskets where oil sealing at low flange loading is required.

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 tests shall be conducted in accordance with ASTM F 104 type 2 material unless otherwise specified. The requirements of this specification are valid for gasket material of 1.75 to 2.0 mm thickness. Test specimens are to be selected from finished gaskets when practicable.

Prior to testing, the material shall be conditioned for at least 4 h at 23 +/- 2 C in a closed chamber containing anhydrous calcium chloride as a desiccant. The air in the chamber shall be circulated by gentle mechanical agitation. Specimens shall then be transferred immediately to a controlled humidity room and conditioned for at least 20 h at 23 +/- 2 C and 50 +/- 5 % relative humidity.

Date	Release No.	Release/Revision
1991 10 10	NTOOE10157849000	Released <i>T. P. Poel</i>

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3.4 ORIGINAL PROPERTIES

3.4.1	Density (ASTM D 297)	735 - 825 kg/m ³
3.4.2	Tensile Strength, min (ASTM F 152, Method B)	2.9 MPa
3.4.3	Compressibility (ASTM F 36, Procedure B)	20 to 30 %
3.4.4	Recovery, min (ASTM F 36, Procedure B)	80 %

3.5	SEALABILITY, max (ASTM F 37, 6.9 MPa flange load, 0.7 MPa internal pressure.)	3.0 mL/h
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3.6	COMPRESSION SET, max (ASTM D 395, Method B, 22 h at 100 +/- 2 C, 50 % deflection)	90 %
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3.7	ADHESION AND CORROSION, max (FLTM BV 123-01)	Rating 3
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3.8 DIMENSIONAL STABILITY
(ASTM F 1087)

High Humidity, max	3.0 %
Low Humidity, max	- 1.5 %

3.9 HEAT AGING
(ASTM D 573 168 h at 125 +/- 2 C)

3.9.1	Compressibility (ASTM F 36, Procedure B)	20 to 30 %
3.9.2	Recovery, min (ASTM F 36, Procedure B)	80 %
3.9.3	Flexibility (ASTM F 147)	5 X thickness

3.10 RESISTANCE TO ASTM OIL No. 1
(ASTM F 146, 168 h at 125 +/- 2 C.)

3.10.1	Compressibility	30 to 40 %
3.10.2	Volume change	3 to 24 %
3.10.3	Flexibility	4 X thickness