



ENGINEERING MATERIAL SPECIFICATION

Material Name	File Control No.	Specification Number
GASKET, CORK/RUBBER (NBR) HIGH HEAT RESISTANT	SMT5008GA8570	WSK-M8G220-A2

1. SCOPE

The material defined by this specification is a gasketing material comprised of cork granule and NBR binder.

2. APPLICATION

This specification was released originally for material used for rocker arm cover gaskets.

3. REQUIREMENTS

Note: 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 1.5 to 5.0 mm thickness. Test specimens are to be selected from finished gaskets when practicable.

Prior to testing the materials shall be conditioned for at least 46 h in a controlled humidity room at 23 +/- 2 C and 50 +/- 5% relative humidity.

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 materials/source approval. Appropriate statistical tools must be used to analyse 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 thermogram 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 thermogram that correspond to the reference standard when tested under the same conditions.

Date	Release No.	Release/Revision	
1988 11 30	SM/EQ9496 TP	Released	M. Siewert

WP 3948-a

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3.3 ORIGINAL PROPERTIES

3.3.1	Density (ASTM D 297)	0.85 - 0.95 g/cm ³
3.3.2	Tensile Strength, min (ASTM F 152, Method B)	2.8 MPa
3.3.3	Compressibility (ASTM F 36, Procedure B)	16 to 24 %
3.3.4	Recovery, min (ASTM F 36, Procedure B)	80 %

3.4 SEALABILITY, max
(ASTM F 37, 2.8 MPa flange load, 1.7 MPa internal pressure) tbe

3.5 CREEP RELAXATION, max
(ASTM F 38, Method B, 22 h at 125 +/- 2 C.) tbe

3.6 ADHESION AND CORROSION
(FLTM BV 123-1, except M8 screw and nut, torque 15 +/- 2 Nm)

3.6.1 After Heat Aging at 125 +/- 2 C

3.6.1.1 Adhesion, max Rating 2

3.6.1.2 Corrosion, max Rating 2

3.6.2 After Aging in Humidity Cabinet

3.6.2.1 Adhesion, max Rating 2

3.6.2.2 Corrosion, max Rating 2

3.7 DIMENSIONAL STABILITY

Test Method: Cut twelve 2.5 x 20 cm specimens. Precondition samples for 24 h at 50 +/- 5 % relative humidity and 23 +/- 2 C. After preconditioning measure the length of each test specimen. Place 6 specimens in a tray of de-ionized water to a depth of 1.2 cm for a 22 h period. Remove specimens from water, immediately lightly blot excess water from the surface and immediately remeasure the length. Place the 6 remaining specimens in a recirculating hot air oven at 100 +/- 2 C for 5 h. Remove from oven and place immediately in a desiccator containing anhydrous calcium chloride. Cool to room temperature, remove and immediately remeasure the length.

3.7.1 High Humidity Test
Length Change, max + 1.5 %

3.7.2 Low Humidity Test
Length Change, max - 1.5 %