



ENGINEERING MATERIAL SPECIFICATION

Material Name	File Control No.	Specification Number
GASKET, STEEL CORE, ARAMIDE FIBER SHEET	SMT5008GA8750	WSK-M8G224-A

1. SCOPE

The materials defined by this specification consist of a low carbon steel core covered equally on both sides with a synthetic rubber bonded aramide fiber facing. The assembly is coated with a barrier, anticorrosive and antistick coating.

2. APPLICATION

This specification was released originally for exhaust manifold gaskets.

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

Prior to testing, the materials shall be conditioned in an oven at 100 +/- 2 C for 1 h and allowed to cool to 23 +/- 2 C in a desiccator containing anhydrous calcium chloride. All tests shall be conducted in accordance with ASTM F 104, Type 1 material unless otherwise specified. The requirements of this specification are valid for gasket material of 1.0 to 1.4 mm thickness. Test specimens are to be selected from finished gaskets when practicable.

Date	Release No.	Release/Revision
1989-04-07	SM/EQ15817 TP	Released M. Siewert

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3.4 CONSTRUCTION

Consists of a low carbon steel sheet with a material consisting of aramide fibers and synthetic rubber bonded to each side of the steel sheet. The assembly is covered with a barrier anticorrosive sealing coat. Finally, an antistick coating is applied to the gasket assembly.

3.4.1 Steel Core

Low carbon steel, thickness and finish as specified on Engineering Drawing.

3.4.2 Facing Material

The aramide fiber sheet shall be plied uniformly and bonded to each side of the steel core to meet requirements of the application at the thickness specified on the Engineering Drawing.

3.4.3 Coatings

Coatings of gasket as specified on Engineering Drawing.

3.5 ORIGINAL PROPERTIES

3.5.1	Ignition Loss of Facing Material (ASTM F 495)	13 - 18 %
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3.5.2	Compressibility (ASTM F 36, Procedure A)	12 - 18 %
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3.5.3	Recovery, min (ASTM F 36, Procedure A)	45 %
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3.6	SEALABILITY, max (ASTM F 37, Method A, 3.5 MPa flange load, 0.1 MPa internal pressure)	16 mL/h
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3.7	CREEP RELAXATION, max (ASTM F 38, Method B, 22 h at 150 +/- 2 C.)	35 %
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3.8 ADHESION AND CORROSION
(FLTM BV 123-1)

3.8.1 After Heat Aging at 150 +/- 2 C

Adhesion, max	Rating 2
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Corrosion, max	Rating 2
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