



ENGINEERING MATERIAL SPECIFICATION

Material Name

File Control No.

Specification Number

GASKET, ARAMIDE FIBER SHEETS
REINFORCED

SMT5008GA8240

ESK-M8G177-A5

1. SCOPE

The materials defined by this specification are synthetic rubber bonded aramide fiber sheets reinforced with a steel sheet core.

2. APPLICATION

This specification was released originally for material used for cylinder head 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

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Date	Release No.	Release/Revision
1988-02-29	SM/EQ2386 TP	Release

■ 9009160 0036326 T59 ■



3.4 TEST SPECIMENS (TEST SHEETS)

The requirements of this specification are valid for gasket material of 1.0 - 1.4 mm thickness.

- 3.4.1 Material of Core
St 4 K40 DIN 1624, 0.2 mm, zinc plated
- 3.4.2 Compressibility 6 - 12 %
(ASTM F 36, Procedure A)
- 3.4.3 Recovery, min 50 %
(ASTM F 36 Procedure A)
- 3.4.4 Immersion in ASTM Fuel C
(ASTM F 146, tests according to type 1 material, 22 h at 23 +/- 2 C)
- 3.4.4.1 Compressibility 6 - 12 %
- 3.4.4.2 Recovery, min 45 %
- 3.4.4.3 Thickness Change 0 to +5 %
- 3.4.4.4 After immersion the fiber sheets shall be firm and must not separate from the core.
- 3.4.5 Immersion in ASTM Oil No. 3
(ASTM F 146, tests according to type 1 material, 22 h at 150 +/- 2 C)
- 3.4.5.1 Compressibility 5 - 10 %
- 3.4.5.2 Recovery, min 40 %
- 3.4.5.3 Thickness Change 0 to +5 %
- 3.4.5.4 After immersion the fiber sheets shall be firm and must not separate from the core.
- 3.4.6 Immersion in long life coolant concentrate according to specification SSM-97B9103-A and distilled water (50:50) by using a suitable distillation flask and a reflux condenser for 70 h at boiling temperature.
After immersion store specimens for 30 min at 23 +/- 2 C and 50 +/- 5 % R.H. before testing. Tests according to type 1 material.