



Engineering Material Specification

Material Name

Specification Number

**GASKET, GRAPHITE POWDER, CARBON STEEL
FIBER AND STAINLESS STEEL WIRE
COMPOSITE**

ESA-M8G184-A

1. SCOPE

The material defined by this specification is a combination of graphite powder, low carbon steel fiber and stainless steel wire.

2. APPLICATION

This specification was released originally for material used as a seal ring between the exhaust pipe and the engine manifold.

3. REQUIREMENTS

3.1 COMPOSITION

3.1.1	Graphite Powder, min	20%
	. Carbon, min	90%
	. Moisture, Volatile Matter, max	1.5%
	. Ash	Remainder
3.1.2	Low Carbon Steel Fiber, min	45%
	. Carbon, max	0.15%
	. Manganese, max	0.80%
	. Other	Remainder
3.1.3	Stainless Steel Wire, SAE 30304, min	5.0%
	. Diameter (Nominal)	0.279 mm
3.1.4	Resin Binder, min	15%
3.1.5	Infrared Spectrophotometry	

Ford Motor Company, at its option, may conduct infrared analysis of material/parts supplied to this specification. The spectra established for initial approval shall constitute the reference standard and shall be kept on file at the designated material laboratory. All samples shall produce spectra that correspond to the reference standard when tested under the same conditions as those specified on the master spectrum.

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1985-04-11	CDP2-610792-C	Released

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3.2 FINISHED MATERIAL

3.2.1 Shall be compressed to the dimensions specified on the engineering drawing.

3.2.2 Gasket shall not split, break, emit noxious or objectionable fumes or have any other deleterious effects in the intended application.

3.2.3 Resistance to Heat Aging

After exposure to 670°C for one hour (air), weight loss must not exceed 5% of the original part weight and part shall not show evidence of deterioration.

3.3 SUPPLIER'S RESPONSIBILITY

All materials supplied to this specification must be equivalent in all characteristics to the material upon which approval was originally granted.

Prior to making any change in the properties, composition, construction, color, processing or labelling of the material originally approved under this specification, whether or not such changes affect the material's ability to meet the specification requirements, the Supplier shall notify Purchasing, Toxicology and the affected Materials Engineering activity of the proposed changes and obtain the written approval of the Materials Engineering activity. Test data, test samples and a new code identification are to be submitted with the request.

Substance restrictions imposed by law, regulations or Ford, apply to the materials addressed by this document. The restrictions are defined in Engineering Material Specification WSS-M99P9999-A1, unless a different suffix (e.g., A2 or A3) is specified on the engineering document for the application.

4. APPROVAL OF MATERIALS

Materials defined by this specification must have prior approval by the responsible Materials Engineering activity. Suppliers desiring approval of their materials shall first obtain an expression of interest from the affected Purchasing, Design and Materials Engineering activity. Upon request, the Supplier shall submit to the affected Materials Engineering activity its own laboratory report to the specification (test results, not nominal values), the material designation and code number, and test specimens for Ford evaluation. Upon approval, the material will be added to the Engineering Material Approved Source List.

Handwritten signature and date 4-1-85
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