



## ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

POLYETHYLENE (PE) BLACK PIGMENT CONCENTRATE

WSK-M99B182-A

### 1. SCOPE

The material defined by this specification is a high concentration black pigment in granular polyethylene.

### 2. APPLICATION

This specification was released originally for material used to black color natural colored high density polyethylene, intended for production of blow molded fuel tanks.

### 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 |             |
|------------|------------------|------------------|-------------|
|            |                  |                  |             |
|            |                  |                  |             |
| 1991-05-02 | EP00E01089484000 | Released         | KH Gerhards |

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### 3.4 ADDITIONAL REQUIREMENTS

Specific requirements for material and/or manufactured parts shall be specified on the Engineering drawing, Engineering parts specification and/or performance specifications. All critical areas with respect to these properties shall be clearly designated on the engineering drawing.

### 3.5 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 labeling 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 a completed copy of their laboratory test reports, signed by a qualified and authorized representative of the test facility, demonstrating full compliance with all the requirements of this specification (test results, not nominal values), the material designation and code number, and test specimens for Ford evaluation. In addition to meeting the requirements of this specification, the materials will be assessed for suitability for intended applications as part of the approval process. Upon approval, the material will be added to the Engineering Material Approved Source List.