



## ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

SEALER, WELDABLE, SOLVENT FREE, NON-FLAMMABLE

WSK-M4G333-A

### 1. SCOPE

The material defined by this specification is a weldable, solvent free, heat curing and non-flammable sealer based on synthetic resins and/or rubber.

### 2. APPLICATION

This material is used for sealing spot weld seams on the body-in-white and/or as specified on Engineering Drawing.

### 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.

3.4 SOLIDS, min 99 %  
(FLTM BV 150-10)

3.5 ASH, max 40 %  
(FLTM BV 150-10)

| Date       | Release No.      | Release/Revision |           |           |
|------------|------------------|------------------|-----------|-----------|
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| 1991 07 01 | EP00E01089486000 | Released         | W. Scholz | J. Schult |

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- 3.6 DENSITY AT 23 C  
(ASTM D 1475) 1.6 +/- 0.2 kg/L
- 3.7 VISCOSITY AT 23 C  
(FLTM BV 103-01, line pressure 275 kPa,  
nozzle dia 2 mm)
- 3.7.1 As received 150 - 200 s
- 3.7.2 After Aging, max 230 s
- 3.8 FLOW RATE  
(FLTM BV 153-01, Method A, except  
oiled panels according to FLTM  
BV 150-11, "Normal Grade") No flow
- 3.9 AGING  
(FLTM BV 153-02, Method D, except  
oiled panels according to FLTM  
BV 150-11, "Normal Grade") No loss of adhesion or  
chipping
- 3.10 COLD ADHESION  
(FLTM BV 153-04, Method A,  
- 30 C) No loss of adhesion or  
chipping
- 3.11 WASH RESISTANCE No wash-off or displacement of  
sealer ribbon; slight deformation  
of sealer ribbon surface  
permitted

## Test Method:

- . Apply two ribbons of material under test 250 x 30 x 3 mm and 50 mm apart from each other to a 300 x 300 mm oiled panel. Prepare in accordance with FLTM BV 150-11, "Normal Grade".
- . After conditioning for 2 h at 23 +/- 2 C, expose test assembly in horizontal position to a water jet of 50 +/- 5 C using a nozzle No. 1/2 GG-25 Full Jet (Spraying System Co.) and a pressure of 200 kN/m<sup>2</sup>. The distance between the nozzle and test material shall be 300 mm. The water jet shall be applied between the beads for 1 minute.