



ENGINEERING MATERIAL SPECIFICATION

Material Name

Specification Number

SEALER, BUTYL RUBBER, PROFILED,
SPOT WELDABLE, HEAT CURING

WSK-M4G292-B1

1. SCOPE

The material defined by this specification is a solvent free sealer based on butyl rubber. It is die cut from extruded, laminated sheeting, spot weldable, heat curing, and heat meltable. It has pressure sensitive adhesive on one side covered by release paper or foil. The other side is covered by a very thin PE support film for handling. After curing this film does not interfere with the adhesion of the butyl sealer to the metal surface.

2. APPLICATION

This specification was released originally for material for sealing the front fender at cross member upper and is applied to oiled surfaces in body assembly.

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.	Released
1994 04 27	C10400758	Released W. Scholz

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3.4	DIMENSIONS	As specified on Engineering Drawing
3.5	COLOUR	Black
3.6	SOLIDS, min (FLTM BV 150-10)	99.0 %
3.7	ASH, max (FLTM BV 150-10)	30.0 %
3.8	THICKNESS (ISO 4593)	0.6 +/- 0.1 mm
3.9	DENSITY at 23 C (ISO R 1183, Method A)	1.3 +/- 0.5 g/cm3
3.10	PENETRATION at 23 C (ASTM D 5, needle 2.5 g, 1.5 N total weight force, 5 s dwell time)	

If the finished part does not allow the preparation of specimens, the supplier is required to provide, together with the Initial Sample Report, specimens of same material and equivalent manufacture used for the finished part. Samples for control and routine checks shall be submitted as required by Quality Control.

3.10.1	Original (in 0.1 mm)	5 - 8 mm
3.10.2	After Ageing (in 0.1 mm), max (14 d at 35 +/- 2 C)	10 mm
3.11	STORAGE STABILITY, min (From date of receipt at Ford Motor Company)	6 months

When stored in sealed unopened containers out of direct sunlight at ambient temperatures between 5 and 32 C.

The supplier must label each container to indicate expiration date of the material and production usage beyond expiration date is not permitted.

3.12	COLD RESISTANCE AFTER AGEING	No loss of adhesion or chipping
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Test Method:

- 1) Apply 250 x 40 x 0.6 +/- 0.1 mm pieces of test material in the middle to 300 x 100 x 0.8 - 0.9 mm test panels, prepared according to FLTM BZ 150-11 "Normal Grade" and press down lightly.