



REPAIR PERFORMANCE, SEALER, 2K EXPANSION

WSS-M18P11-B4

1. SCOPE

The material defined by this specification is a fast curing, two part, foamed-in-place polyether polyurethane foam. This foam is formulated to be free of chlorofluorocarbons (CFC).

2. APPLICATION

This specification was released originally for material used after paint process on protected (e-coated) substrates for repair to seal cavities against wind noise and dust.

3. REQUIREMENTS

The Manufacturing Properties and Engineering Performance requirements defined in this specification are based on laboratory sample testing and define the minimum acceptance criteria for adhesive/polymer material performance. The function and design requirements for the engineered part are defined by the component SDS (Sub-system Design Specification), key life test requirements, or vehicle program requirements.

Prior to use, the material must be evaluated under the intended application processing parameters. The choice of substrates and assembly plant processing conditions and specific design application may affect material performance. Compliance with this specification does not guarantee the engineered part will function for all potential applications on a vehicle.

3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS

Material suppliers and part producers must conform to the Company's Standard Requirements For Production Materials (WSS-M99P1111-A).

3.2 SYSTEM COMPATIBILITY

Initial material approval was based on a specific material system which included the substrate, and adhesive/polymer. The originally approved material system was using specific production process parameters. The choice of substrates and assembly plant processing conditions and specific design application may affect adhesive /polymer / engineered part performance. If any of these parameters are changed, the material performance must be validated using the new parameters.

3.3 MATERIAL PROPERTIES

3.3.1 Density 35 kg/m³ +/- 10%
(ISO 845/ASTM D 3574,
Test A, interior density)

The density variation for any one supplier shall be +/- 1 kg/m³, based on the recorded density of their original approved production sample.

3.3.2 Compression Strength 20 N/cm² +/-10%
(ASTM D 1621,10% deflection,
sample size 50x50x50mm)

Date	Action	Revisions	Rev. 0
2014 12 01	Released		



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3.3.3 Volume Expansion, at 23 °C 1500-2500%

$$\% \text{ Expansion} = (V2 - V1) / V1 \times 100$$

V1=Volume of Material in Can

V2=Volume of free expanded fully cured Material

3.3.4 Volatile Organic Compounds (VOC) Content +/- 0.05 kg/L
(EPA Method 24, Procedure B)

The VOC Content variation for any one supplier shall be +/- 10%, based on the recorded VOC Content of their original approved production sample.

3.3.5 Cure Requirements at 23 °C
(From application until end of chemical reaction)

Tack free time 10-20 min
Curing time 30-60 min

3.4 MANUFACTURING PROPERTIES

3.4.1 Water Absorption,
(FLTM BV 117-01, Method A, 8 h soak time)

Cut	2% max
Uncut	1% max

3.4.2 Bridging 3 mm max
(SAE J243, ADS-9, Section 3.3, Method D,
non-flow fixture, substrates per para 4.1)

3.4.3 Uncured Adhesion

Test Method:

Prepare four panels for each substrate per para 4.1.

Apply a 10mm bead of material

Stand the panels vertically immediately after material application and condition for 2 h at 23 °C. Observe for peeling or lifting of material from panel or slump or sag, as appropriate.

3.4.4 Adhesion Characteristics

Test Method: Apply two 200 mm length ribbons of material to each of two 0.89 x 100 x 300 mm steel per para 4.1 and condition panels at 23 +/- 2 °C for 2 h.

Evaluate adhesion by inserting the top of a sharp spatula under the end of the material strip. Grasp the tab of sealer and attempt to peel 180°.

The material shall not be removable in a continuous coherent film. Observe for any indication that the material fails to adhere to the substrate or is brittle.

3.4.5 Aged Weight Loss 7% max

Test Method: Weigh a 100 x 100 x 25 mm sample to the nearest mg (W1).

Expose for 24 h at 120 +/- 2 °C in a mechanical oven. Remove sample and reweigh (W2) after 30 minutes in a desiccator.