

**TAPE SEALER, BUTYL COVERED, POLYVINYL  
CHLORIDE FOAM CORE****ESB-M3G143-A2****1. SCOPE**

The material defined by this specification is a sealing tape which has a polyvinyl chloride foam core displaying a skin on all sides covered completely by a butyl sealer. This material has release paper on one side only.

**2. APPLICATION**

This specification was released originally for material used in conjunction with mechanical retention, to seal PVC quarter window modules to the painted sheet metal, in the 1984 Mark and Tempo 4-door vehicles. It was also released for sealing the air vent system to the door inner panel in the 1983 Ranger. The tape should be under proper compression, as specified by the Sealing Engineering Department, for effective sealing. The materials should be conditioned at 23 +/- 2 °C for 24 h prior to application.

**3. REQUIREMENTS****3.0 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

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

**3.4 DIMENSION**

As specified on the  
engineering drawing

**3.5 BUTYL PROPERTIES**

3.5.1 Color Black

3.5.2 Solids, min 99%  
(ASTM D 2834, except heat for 3 h at  
102 +/- 3 °C in a mechanical convection  
oven. Save sample for next test.)

3.5.3 Ash Content (Solids Weight), max 40.0%

The tolerance for any one supplier shall be +/- 0.2% based on the results obtained from his original approved production sample.

Test Method: Place the crucible containing the solids residue in a cool muffle furnace. Slowly heat to and maintain at 760 +/- 10 °C for 1 h. Cool in a desiccator and weigh.

3.5.4 Specific Gravity 1.00 - 1.25  
(ASTM D 297, Hydrostatic Method)

| Date       | Action   | Revisions                                     |
|------------|----------|-----------------------------------------------|
| 2006 06 22 | Revised  | Inserted 3.0; Deleted 3.1, 3.2, 3.3, 3.11 & 4 |
| 1996 10 14 | Revised  | Revised; Inactivated ESB-M3G143-A1            |
| 1985 11 06 | Released | C3P1-DR644819-1                               |



**Documents**  
Document Sharing Hub



### 3.6 FOAM CORE PROPERTIES (12 mm Diameter Tape Core)

|       |                                        |                                                 |
|-------|----------------------------------------|-------------------------------------------------|
| 3.6.1 | Color                                  | Black or as specified<br>on engineering drawing |
| 3.6.2 | Tensile Strength, min<br>(ASTM D 1564) | 276 kPa                                         |
| 3.6.3 | Elongation, min<br>(ASTM D 1564)       | 50%                                             |

### 3.7 PERFORMANCE REQUIREMENT ON THE COMPOSITE

|       |                                                                                   |                                                            |
|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------|
| 3.7.1 | Force to Compress<br>(FLTM BU 114-01, except<br>50% compression on<br>12 mm tape) | 83 - 137 N                                                 |
| 3.7.2 | Recovery<br>(FLTM BU 114-01,<br>except 50%<br>compression on<br>12 mm tape)       | After 5 minutes<br>10.1 - 10.9<br>After 2 h<br>11.4 - 11.8 |

#### 3.7.3 Heat Resistance

No flow, blistering, or degradation of butyl skin or foam core.

Test Method: Place a 12 mm diameter x 100 mm long tape strip on a 100 x 300 mm painted panel, identified per para 5.1. Pass a 2 kg roller over the release paper side of tape in one forward and reverse direction. Remove a release paper and hang one panel vertically in an air circulating oven at 121 +/- 3 °C for 30 minutes.

#### 3.7.4 Low Temperature Flexibility

No cracking

Test Method: Condition three 12 mm diameter x 225 mm long tapes at -15 °C for 4 h. Bend each sample 180° around a temperature conditioned mandrel 6.4 mm in diameter.

#### 3.7.5 Yield Force, min

Normal

|         |                     |      |
|---------|---------------------|------|
| 3.7.5.1 | 24 h at 23 +/- 2 °C | 35 N |
|---------|---------------------|------|

Aged

|         |                        |      |
|---------|------------------------|------|
| 3.7.5.2 | 2 weeks at 88 +/- 1 °C | 53 N |
|---------|------------------------|------|

|         |                                       |      |
|---------|---------------------------------------|------|
| 3.7.5.3 | 500 h at 38 +/- 1 °C<br>and 100% R.H. | 40 N |
|---------|---------------------------------------|------|