



Engineering Material Specification

Material Name

Specification Number

TAPE, INSULATING - RUBBERIZED ASPHALT

ESA-M99G50-A

1. SCOPE

The material defined by this specification is a rubberized asphalt insulating tape.

2. APPLICATION

This specification was released originally for material used as a thermoinsulating tape around air conditioning refrigeration lines in automotive units.

3. REQUIREMENTS

3.1 CONDITIONING

All test values indicated herein are based on material conditioned in a controlled atmosphere of $23 \pm 2^{\circ}\text{C}$ and $50 \pm 5\%$ relative humidity for 24 h prior to testing and tested under the same controlled conditions.

3.2 THICKNESS 0.115 - 0.140 in (2.92 - 3.56 mm)
(ASTM D 1000, except use 1 in (25 mm)
diameter foot and 1 lb (0.45 kg) loading)

3.3 NEEDLE PENETRATION
(ASTM D 1321, 100 g total load)

3.3.1 As Received 3.5 - 5.0 mm

3.3.2 Aged 3 Days at $70 \pm 1^{\circ}\text{C}$, min 3.3 mm

3.4 FLEXIBILITY No visible cracks or breaks.

Test Method: Bend the specimen slowly 180° around a 1/4 in (6.4 mm) mandrel after conditioning as follows:

3.4.1 As Received at $23 \pm 2^{\circ}\text{C}$

3.4.2 Specimens maintained at -23°C for 24 h with mandrel conditioned at the same temperature.

3.5 HEAT RESISTANCE

3.5.1 Aged 24 h at $50 \pm 1^{\circ}\text{C}$

Shall not become tacky to a degree that it will stick to fingers or to cloth. Also, it shall not dry to a degree that it will not adhere to metal or to itself.

Date	Para. No.	Revisions
1979 06 22		Metricated, Renumbered and Retyped 6-13/CHSH-RD 334190 R. A. Hannum
1963 06 13		Released AS2-280

Page 1 of 2

Eng Res
June 77 3948-a

9009160 0011531 825



3.5.2 Aged 2 h at $121 \pm 3^{\circ}\text{C}$

Shall not drip, disintegrate or unwrap through loss of adhesion.

Test Method: The tape shall be wound, overlapping itself on a 1/2 in (13 mm) steel mandrel and exposed to the heat in a vertical position.

3.6 STORAGE STABILITY

Shall retain its flexibility when stored for extended periods of time (60 - 90 days) at temperatures ranging from $10 - 49^{\circ}\text{C}$.

3.7 SUPPLIER'S RESPONSIBILITY

Material supplied to this specification must be equivalent to that originally approved. Changes in formulation or processing shall not be made without prior approval as described in Supplier Procedure I-A.

4. APPROVAL OF SUPPLIERS

Suppliers to this specification must be approved by the affected product engineering office. Procedure for gaining approval of a specific material to a new/existing ES-M specification is contained in Supplier Procedure I-A. Approved new suppliers will be added to the Engineering Materials Approved Source List.

5. GENERAL INFORMATION

This information is for direction of the user and is not a requirement for the supplier.

5.1 COMPOSITION

The following composition has been found satisfactory:

Rubberized Asphalt	54%
Cork (Virgin Granulated)	45%
Other Fillers	1%

1979 06 21 RMM
Eng Res 3948-b
June 77

Page 2 of 2

■ 9009160 0011532 761 ■