



Engineering Material Specification

Material Name

GREASE - BENTONE/LITHIUM SOAP BASE

Specification Number

ESA-M1C156-A

1. SCOPE

The grease defined by this specification is a refined mineral oil with lithium soap and clay (bentone) fillers and molybdenum disulfide additive.

2. APPLICATION

This specification was released originally for grease for the lubrication of passenger car and truck parking brake cables.

3. REQUIREMENTS

3.1 COMPOSITION

3.1.1	Moisture (ASTM D 95)	Nil
3.1.2	Mineral Oil, % min by weight (ASTM D 128)	77.0
3.1.2.1	Fire Point, °C min (ASTM D 92)	233
3.1.2.2	Flash Point, °C min (ASTM D 92)	210
3.1.2.3	Viscosity at 37.8°C, cSt(mm ² /s) (ASTM D 445)	29.65 - 38.53
3.1.2.4	Viscosity at 98.9°C, min, cSt(mm ² /s) (ASTM D 445)	4.80
3.1.3	Molybdenum Disulfide, % min by weight (ASTM D 128, 2-5 micron size)	2
3.1.4	Lithium Soap, % by weight (ASTM D 128)	4.0 - 8.0
3.1.5	Bentone, % max by weight	13

Date	Para. No.	Revisions	Approval
1979 01 10		Metricated and Retyped CAH2 823385	J. W. [Signature] 1/25/79
1970 10 09		Released CAZ2-965643	E. P. [Signature] 11-29-78

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|-----|---|-----------|
| 3.2 | DROPPING POINT, °C min
(ASTM D 566) | 200 |
| 3.3 | PENETRATION, (mm/10)
(ASTM D 217, worked 60 strokes) | 330 - 350 |
| 3.4 | 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.

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