

**GREASE - CALCIUM COMPLEX,
POLYMER ADDITIVE - HIGH TEMPERATURE****ESB-M1C185-B****1. SCOPE**

The material defined by this specification is a NLGI Grade 1 high temperature grease consisting of a calcium complex thickener and mineral oils modified with a polymeric thickening agent. The grease also contains rust and oxidation inhibitors.

2. APPLICATION

This specification was released originally for grease having superior adhesion qualities at the point of contact between the Mustang/Capri door hinge tab and the leaf spring assembly. In 2010, the grease was supplied only to the Twin Cities assembly plant.

3. REQUIREMENTS**3.1 STANDARD REQUIREMENTS FOR PRODUCTION MATERIALS**

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

3.2 COLOR (Visual)	Green
3.3 WORKED PENETRATION, tenths of a millimeter (ASTM D 217, DIN ISO 2137, 60 stroke)	290 – 320
3.4 DROPPING POINT, (ASTM D 2265, DIN ISO 2176)	300 °C min
3.5 4-BALL EP WELD POINT (ASTM D 2596, DIN 51350 T 4)	227 kg

4. GENERAL INFORMATION

The information given below is provided for clarification and assistance in meeting the requirements of this specification. Grease approved to this specification should have the following typical properties.

4.1 CALCIUM COMPLEX THICKENER (According to formulation, ASTM D 128)	10 - 15%
4.2 MINERAL OIL PROPERTIES (including polymer additive)	
4.2.1 Viscosity at 40 °C (ASTM D 445, DIN 51562, ISO 3104)	355 mm ² /s
4.2.2 Viscosity at 100 °C (ASTM D 445, DIN 51562, ISO 3104)	31 mm ² /s

Date	Action	Revisions	Rev. 3
2010 12 02	Revised	See Summary of Revisions	A. Wedepohl, NA
2004 01 27	Revised	Para 3.0 inserted; para 3.1, 3.12, 3.13, 3.14, 4, 5.2.1 deleted	
1979 12 05	Released	CEK1-DR582417-1	



4.2.3	Viscosity Index (ASTM D 2270)	124
4.2.4	Pour Point (ASTM D 97, DIN ISO 3016)	- 18 °C
4.2.5	Flash Point (ASTM D 92, DIN EN ISO 2592)	216 °C
4.2.6	Fire Point (ASTM D 93, DIN EN ISO 2592)	243 °C
4.3	PENETRATION	
4.3.1	Worked Penetration, tenths of a millimeter (ASTM D 217, DIN ISO 2137, 60 stroke)	290 – 320
4.3.2	Prolonged Worked Penetration (ASTM D 217, DIN ISO 2137, 100,000 strokes)	313
4.4	OXIDATION STABILITY, PRESSURE DROP (ASTM D 942 or DIN 51808, 100 h at 99 °C)	69 kPa
4.5	WATER WASHOUT (ASTM D 1264, DIN 51807 T02, 80 °C)	2%
4.6	COPPER CORROSION (ASTM D 4048, 24 h at 50 °C)	2 °C
4.7	TIMKEN LOAD CARRYING CAPACITY (ASTM D 2509)	
4.7.1	OK Load	20.4 kg min
4.7.2	Score Load	22.7 kg min
4.8	OIL SEPARATION DURING STORAGE (ASTM D 1742, DIN 51817 or FTMS 791 C 321.3)	<1%
4.9	INTERFACE COMPATIBILITY	
4.9.1	Chemical Attack to Painted Surfaces (FLTM BJ 126-01).	

Note: Not tested for initial application of this grease. Grease must be tested for chemical attack to painted surfaces for applications that come in contact with paint surfaces, ex. E-coat and powder coat.