



GREASE, FLUORINATED ETHER OIL, PTFE THICKENED

WSB-M1C242-A

1. SCOPE

The material defined by this specification is a NLGI 2 grease based on medium viscosity perfluoropolyether oil thickened with PTFE. The lubricant is resistant to nonfluorinated solvents and fuels. The operating temperature range is -50 to 225 °C.

2. APPLICATION

This specification was released originally to lubricate the electrical light switch rheostat-resistor assembly. It can also be used on the mechanical portion of switches and high insertion force connectors to lower mating forces.

3. REQUIREMENTS

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 COLOR
(Visual)

White

3.3 PENETRATION

3.3.1 UNWORKED PENETRATION tenths of a millimeter
(ASTM D217, DIN ISO 2137, 0 stroke)

250 min

3.3.2 WORKED PENETRATION, tenths of a millimeter
(ASTM D217, DIN ISO 2137, 60 stroke)

265 – 295

3.4 COPPER CORROSION
(ASTM D4048, 24 hr at 150 °C)

No corrosion

3.5 OIL SEPARATION FROM GREASE
(ASTM D1742, DIN 51817 or FTMS 791 C 321.3, 24 hr at 150 °C)

10% max

3.6 EVAPORATION
(ASTM D972, 24h at 150 °C)

3% max

3.7 BASE OIL VISCOSITY
(ASTM D445, DIN 51562, ISO 3104)

3.7.1 Kinematic Viscosity at 100 °C

13 mm²/s min

3.7.1 Kinematic Viscosity at 40 °C

75 mm²/s max

Date	Action	Revisions	Rev. 2
2012 02 16	Revised	See Summary of Revisions	A. Wedepohl, FNA
2004 04 29	Revised	Para 3.0 inserted; para 3.1, 3.2, 3.3, 3.6 & 4 deleted	
1993 05 03	NB00I1004305	Released TRB BCF	



4. GENERAL INFORMATION

This information given below is provided for clarification and assistance in meeting the requirements of this specification. Contact gmfs@ford.com for questions concerning Engineering Material Specifications. Grease approved to this specification should have the following typical properties.

4.1 PENETRATION

(ASTM D217, DIN ISO 2137)

4.1.1 Unworked Penetration 267

4.1.2 Worked Penetration, 60 strokes 281

4.1.3 Prolonged Worked Penetration, 100,000 strokes 288

4.2 DROPPING POINT

(ASTM D2265, DIN ISO 2176)

None

4.3 OXIDATION STABILITY

(ASTM D942 or DIN 51808, 500hr at 100°C)

13.8 kPa

4.4 FOUR BALL WEAR

(IP 239, ASTM D2266-01, 1 hr, 1200 RPM, 40kg load)

1.27 mm

4.5 LOW TEMPERATURE TORQUE

(ASTM D1478)

Starting Torque	-40 °C	914 g/cm
Running Torque	-40 °C, 10 minutes	384 g/cm
	-40 °C, 60 minutes	236 g/cm

4.6 INTERFACE COMPATIBILITY

4.6.1 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.

4.6.2 Resistance to Stress Cracking
(FLTM BO 127-03)

Note: Not tested for initial application of this grease. Grease must be tested for resistance to stress cracking when used for additional applications that come in contact with polymers such as PC, ABS, PC+ABS, ASA or acrylic

4.6.3 Elastomer Compatibility
(ASTM D 4289, 70 h, 100 °C, DIN 53505, DIN 53504)

Note: Not tested for initial application of this grease. Grease must be tested for elastomer compatibility when used for additional applications that come in contact with elastomers. Application specific elastomer should be used for testing instead of a reference elastomer.

Determine change in volume, hardness change tensile strength and elongation