



OIL - FLUORINATED - GENERAL PURPOSE

ESB-M99C114-A

1. SCOPE

The material defined by this specification is a general purpose clear, colorless, odorless fluorinated oil intended for use in applications where high temperature resistance, non-flammability, or non-reactivity is required. The oil will not burn, decompose or react to form gummy or solid deposits.

2. APPLICATION

The specification was released originally for material used as an anti-stick by applying the lubricant to the vent window weather-strip rubber to prevent the rubber sticking to the painted surface. This material is compatible with all other elastomeric materials.

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

Clear, Colorless

3.3 VISCOSITY
(ISO 3104/ASTM D 445)

40 °C	144 - 176 mm ² /s
100 °C	16.1 - 19.7 mm ² /s

4. GENERAL INFORMATION

The information below is provided for clarification and assistance in meeting the requirements of this specification. This specification was written for the specific oil as indicated on the approved source list. The following are properties of the fluid that may be inherent or checked only as needed.

4.1 VISCOSITY
(ISO 3104/ASTM D 445)

20 °C	522 mm ² /s
40 °C	160 mm ² /s
100 °C	18 mm ² /s
204 °C	3.1 mm ² /s

4.2 OIL VISCOSITY INDEX

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4.3 FLASH POINT
(ISO 2592/ASTM D 92, Cleveland Open Cup)

Does not ignite

4.4 ODOR

None

4.5 DENSITY, AT 15.6 °C
(ASTM D 891, Method B)

1.91 g/mL

Date	Action	Revisions	Rev. 2
2010 01 13	Revised	See Summary of Revisions	A. Wedepohl, NA
2004 01 29	Revised	Para 3.0 inserted; para 3.1, 3.10, 3.11, 3.12, 4 deleted	
1988 11 29	Released	CAS1-RD362669-1	



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|------------|---|--------------------------------------|
| 4.6 | POUR POINT
(ISO 3016/ASTM D 97) | -36 °C |
| 4.7 | OIL VOLATILITY
(ASTM D 2595, % in 22 hours) | 121 °C 1% max
204 °C 7% max |
| 4.8 | LUBRICANT PAINT STAINING
(FLTM BJ 126-01) | No stain or softening |

Painted surfaces can be repaired with no evidence of "fish eyes", crawling, or other visible paint defects. This was confirmed in 1992 with current production body paint systems. See approval documents for details. Soft cloths moistened with naphtha or denatured alcohol were able to provide adequate cleaning even though the fluorinated oil is not soluble in these liquids

Test Method: Apply a thin film of lubricant to panels freshly painted with ESB-M50J100 enamel per FLTM BJ 107-03. Allow 1 h air dry at 23 +/- 2 °C and 50 - 55% relative humidity. Wipe the lubricant with a soft cloth moistened with naphtha. Repaint with enamel and examine for paint defects.

4.9 STORAGE AND SHELF LIFE

When stored in a clean, dry place with containers closed to avoid contamination, shelf life should be indefinite.

5. SUMMARY OF REVISIONS

2010 01 13

Removed petroleum color method. Added Clear, Colorless

Moved flash point, density, pour point, and lubricant paint staining to General Information since they are material properties and the product is not formulated to meet them. Volatile content replaced with Oil Volatility with a different test method.

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