

DuPont™ Krytox® 157 FS Fluorinated Oil

PRODUCT INFORMATION

DuPont™ Krytox® 157 FS is a functionalized version of the DuPont series of Krytox® fluorinated oils that acts as a surfactant. The functionality is a carboxylic acid group located on the terminal fluoromethylene group of poly(hexafluoropropylene oxide). Krytox® 157 FS is available in two relatively broad molecular weight ranges designated as low and high with the following typical properties.

Like the other Krytox® fluorinated oils, Krytox® 157 FS is insoluble in most common organic solvents. It is also nonflammable. Decarboxylation occurs on heating above about 170 °C (338 °F) and becomes vigorous at 200 °C (392 °F). The product formed appears to be a mixture, but is mainly a hydro-end-capped version of Krytox® fluorinated oil. The decarboxylation of its alkali metal salts in the presence of water occurs at lower temperatures and yields essentially pure polymers end-capped with hydrogen.

Krytox® 157 FS has been effective in surface pretreatment of magnetic recording discs prior to the application of a Krytox® fluorinated lubricant. It is postulated that the surfactant is more rigidly attached on the surface through its functional group and that its fluoroalkylether tail attracts the identical molecular structure of Krytox® fluorinated oil, resulting in more tenacious surface adhesion of this lubricant.

Typical Properties of DuPont™ Krytox® 157 FS

	157 FSL (Low)	157 FSH (High)
Viscosity, cSt at 40 °C (104 °F)	99.4–149	703–1055
Appearance	Clear to hazy pale straw color	
TAN-E, mg KOH/g	23–27	8–10
Pour Point, °C (°F)	–29 (–20)	–9 (15)
Density, g/mL at –9 °C (15 °F)	1.91	1.88
Molecular Weight	–2500	7000–7500

DuPont Performance Lubricants

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For product information, industry applications, technical assistance, or global distributor contacts, visit krytox.com or within the U.S. and Canada, call **1-800-424-7502**.

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