



Product Data

Castrol Braycote 646

Lubricating Oil, Semi-Fluid (Automatic Weapons)

Description

Castrol Braycote™ 646 is a light tan, homogeneous, semi-fluid, lithium stearate thickened synthetic grease. Additives have been employed to impart resistance to oxidation, wear and rusting.

Application

Braycote 646 is intended for use in the operation of the M16, M61, M39 and related types of automatic weapons under thin film lubricating conditions of extreme pressure. It is a suitable lubricant for small gear boxes, where light starting torque is a factor and for such applications where it is necessary to pump the grease to the lubrication area through extremely small orifices.

Braycote 646 may soften certain paints and adversely affect natural rubber. Paints and rubber suitable for use with this lubricant are readily available.

Typical Technical Characteristics

	Unit	Test Method	Typical Value
Kinematic Viscosity @ 40°C (Base Fluid)	cSt	ASTM D 445	12.2
Kinematic Viscosity @ -54°C (Base Fluid)	cSt	ASTM D 445	9,100
Density @ 16°C	g/ml lbs/gal	ASTM D 287	0.922 7.688
Acid Number	mg KOH/g	ASTM D 664	1.05
Evaporation Loss (8 hrs @ 149°C)	%	ASTM D 972	1.1
Oxidation Stability, Pressure Drop (6 hrs @ 149°C)	psi	ASTM D 942	2
Copper Strip Corrosion (72 hrs @ 99°C)	-	ASTM D 4048	Pass, No Staining
Worked Penetration (25°C, 60 str)	0.1 mm ⁻¹	ASTM D 217	365 – 385
Load Carrying Capacity, Film Strength, Falex, 1b	-	Spec	1,500
Extreme Pressure Characteristics - Incipient Seizure Load	kg	FTM 6503	80
Extreme Pressure Characteristics - Welding Load	kg	FTM 6503	160
Rust Inhibition (Humidity Cabinet), 400 hrs, 100% RH	-	ASTM D 1478	Pass
Four Ball Wear Test – 600 RPM, 120°C, 50 kg, 1 hr	mm	Spec	0.35

Subject to usual manufacturing tolerances

Conditions of Use

Temperature Range: -54°C to 127°C (-65°F to 260°F)

Warning: Do not use this lubricant in food processing or food handling machinery on surfaces that may contact food. Do not allow the lubricant to contaminate food stuffs.

Additional Information

Braycote 646 meets all requirements and is qualified under MIL-L-46000. The lubricant is identified by the Military Symbol: LSA and NATO Code: O-158

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