

Castrol Braycote 640 AC

Grease, Perfluoroether
Propellant and Oxidizer Compatible

Description

Castrol Braycote 640AC is a white, smooth, homogeneous NLGI Grade 2 grease based upon a blend of a perfluoroether base oil and a tetrafluoroethylene telomer. Castrol Fluoroclean™ X100 or Castrol Fluoroclean™ HE can be used to remove this lubricant. Refer to the data sheets for information regarding these products.

Application

Braycote 640AC is designed as an oxidizer and propellant compatible grease suitable for use in aerospace vehicles, spacecraft, rocket and aircraft engines and associated ground support equipment, oxygen equipment, and transport equipment. Braycote 640AC is typically used in the lubrication of threaded fasteners, connectors, valves, gaskets, elastomers and bearings. Perfluorinated greases, in general, exhibit excellent shelf lives due to their intrinsic inertness.

Typical Characteristics

TEST METHOD	DESCRIPTION	RESULT
-	NLGI Grade	2
D 1403	Penetration, 25°C, mm ⁻¹ Unworked	286
	Worked, 60 strokes	285
D 2595	Evaporation Loss, % wt 22 hrs @ 204°C (400°F)	1.7
FTM 321	Oil Separation, % wt 30 hrs @ 204°C (400°F)	8.9
FTM 5309	Copper Strip Corrosion 72 hrs @ 100°C (212°F)	1b
FTM 5414	Solubility in Fuel	0.48
D 2512	LOX Impact Sensitivity Test 20 drops, 1100 mm	Pass

Base Oil Characteristics		
D 445	Kinematic Viscosity, cSt @ 99°C (210°F)	26
	@ 38°C (100°F)	270
	@ 0°C (32°F)	4200
D 2270	Viscosity Index	134
D 97	Pour Point, °C (°F)	-36 (-30)
D 972	Evaporation Loss, % wt 22 hrs @ 204°C (400°F)	1
Knudsen	Vapor Pressure, torr @ 38°C (100°F)	8 x 10 ⁻⁶
	@ 100°C (212°F)	2 x 10 ⁻³
D 287	Density @ 24°C (75°F), g/mL	1.91

Additional Information

Temperature Range

-36°C to 204°C (-30°F to 400°F) under normal operating conditions and up to 260°C (500°F) for short durations.

Limitations

Braycote 640AC is compatible with all commonly used metals, plastics and elastomers. Braycote 640AC may be adversely affected by Lewis Acids such as aluminum chloride, at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium, or titanium alloys may react with Braycote 640AC under certain conditions. Such systems should be thoroughly evaluated. Surfaces must be well cleaned of organic rust inhibitors prior to grease application to insure proper lubrication. This product is not recommended for use in applications under high vacuum with loads exceeding 100,000 psi for extended periods of time.

Packaging

Braycote 640AC is available in 2 ounce (AVDP) syringes.

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