Product Data

Braycote 640 AC

Grease, Perfluoroether

Description

Castrol Braycote™ 640 AC 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 640A C 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

Name	Method	Units	Braycote 640 AC
Consistency	ISO 2137 / ASTM D217	NLGI Grade	2
Unworked Penetration	ASTM D217 / IP 50	0.1 mm	286
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	285
Evaporation Loss (22hrs @ * °C/°F)	ASTM D2595	% wt	1.7
Oil Separation (30 hrs @ 204°C / 400°F)	ASTM D6184 / FTM 321.2	% wt	8.9
Copper Corrosion (24 hrs,100°C / 212°F)	ASTM D4048	Rating	1b
Resistance to Wash-out by Fuel	FTM 5414	Solubility in fuel (%wt)	0.48
LOX Impact Sensitivity (1100mm, 20drops)	-	Pass	Pass
Base Oil Viscosity @ 99°C / 210°F	ISO 3104 / ASTM D445	mm^2/s	26
Base Oil Viscosity @ 38°C / 100°F	ISO 3104 / ASTM D445	mm^2/s	270
Base Oil Viscosity @ 0°C / 32°F	ISO 3104 / ASTM D445	mm^2/s	4,200
Viscosity Index	ISO 2909 / ASTM D2270	-	134
Pour Point	ISO 3016 / ASTM D97	°C/°F	-36 / -30
Evaporation Loss (22hrs @ 204°C / 400°F)	ASTM D972	% wt	1
Knudsen Vapour Pressure @ 38°C / 100°F	-	Torr	8×10^{-8}
Knudsen Vapour Pressure @ 100°C / 212°F	-	Torr	2×10^{-3}
Density @ 24°C / 75°F	ASTM D4052 / DIN 51757D	kg/m^3	1910

Additional Information

Temperature Range
-36ºC to 204ºC (-30ºF to 400ºF) under normal operating conditions and up to 260ºC (500ºF) 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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