

Castrol Braycote 803 RP

Perfluoroether Grease, Rust Inhibited
Wide Temperature, Low Volatility

Description

Castrol Braycote® 803RP is a smooth, buttery, off-white NLGI#2 grease, based on perfluoropolyether oil (Castrol Brayco® 812) and thickened with a tetrafluoroethylene gelling agent. It contains a rust and corrosion inhibitor for ferric component protection. Castrol Braycote® 803RP is thermally stable in air, vacuum, strong acids and oxidizers. Castrol Fluoroclean™ X 100 or Castrol Fluoroclean™ HE can be used to clean this product. Refer to the data sheets for information regarding these products.

Application

Castrol Braycote® 803RP was developed for use in applications in which long- term exposure to high temperature or hard vacuum is expected. This product is fully compatible for use in direct or indirect contact with Liquid and Gaseous Oxygen (LOX/GOX). Castrol Braycote® 803RP is stable with exposure to strong acids and oxidizers. Perfluorinated greases, in general, exhibit excellent shelf lives due to their intrinsic inertness.

Typical Characteristics

TEST (ASTM)	DESCRIPTION	RESULT
D 1403	Penetration @ 25°C (77°F), mm ⁻¹	
	Unworked	287
	Worked, 60 strokes	288
D 2595	Evaporation Loss, % wt 22 hrs @ 204°C (400°F)	0.29
FTM 321	Oil Separation, % wt 30 hrs @ 204°C (400°F)	8.83
FTM 5309	Copper Strip Corrosion 22 hrs @ 99°C (210°F)	1b
D 2266	Four-Ball Wear-Test, AWSD, mm 1200 rpm, 40 kgf, 1 hr, 75°C (167°F)	0.75
D 2596	Four-Ball Extreme-Pressure Test No Weld Point, kgf	800
D 3336	High Temperature Bearing Performance 204°C (400°F), 10,000 rpm, hrs	2000+
D 1478	Low-Temperature Torque, g.cm @ -54°C (-65°F)	
	Starting	1800
	Running, 1 hr	1050
	@ -62°C (-80°F)	
	Starting	2220
	Running, 1 hr	1295
E 595	Vacuum Stability Test	
	125°C (257°F), 24 hrs, 10 ⁻⁶ torr	
	Total Weight Loss, % wt	0.1
	Volatile Condensable Materials, % wt	0
D 2512	LOX Impact Sensitivity 1100 mm, 20 drops	Pass

Base Oil Information:

	Pounds per gallon @ 16°C (60°F)	15.71
D 445	Kinematic Viscosity, cSt	
	@ 20°C (68°F)	434
	@ 40°C (104°F)	187
	@ 100°C (212°)	33
D 2270	Viscosity Index	224
Knudsen	Vapor Pressure, torr	
	@ 20°C (68°F)	$<1 \times 10^{-10}$
	@ 100°C (212°F)	$<1 \times 10^{-7}$
D 97	Pour Point, °C(°F)	$\leq -60 (-75)$

Additional Information**Temperature Range**

Below -62°C to above 260°C (below -80°F to above 499°F). Lower temperature operation below -62°C (-80°F) is possible where adequate torque is available.

Compatibility

Castrol Braycote® 803RP is compatible with all commonly used construction materials including metals, plastics and elastomers. Lewis Acids, such as aluminum chloride, can adversely affect any PFPE grease at elevated temperature. Newly exposed rubbing surfaces of aluminum, magnesium or titanium at elevated temperatures may react with Castrol Braycote® 803RP under certain conditions. Such systems should be thoroughly evaluated. Surfaces must be well cleaned of organic rust inhibitors prior to grease application to ensure proper lubrication.

Packaging

Castrol Braycote® 803RP is available in 2 ounce (AVDP) disposable plastic syringes and 1 pound plastic jars.

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