



## Braycote 803

Perfluoroether Grease

### Description

Castrol Braycote 803 is a smooth, buttery, translucent-white, NLGI #2, grease, based on perfluoropolyether oil and thickened with a tetrafluoroethylene gelling agent. This product provides excellent lubricity, oxidative and thermal stability, low volatility, good shear stability, low acute toxicity and contain no sodium or other alkali metal containing ingredients. Brayco IC X-100 (formerly Fluoroclean™ X100) can be used to clean this product. Refer to the data sheets for information regarding these products.

### Application

Braycote 803 was developed for use in applications where long term exposure to high temperature or high vacuum is expected. It is suitable for use in static and dynamic lubrication of ball and roller bearings, gears, actuator and lead screw drive assemblies. This product is fully compatible for use in both direct and indirect contact with liquid and gaseous oxygen (LOX/GOX). Braycote 803 is stable with exposure to strong acids and oxidizers. Perfluorinated greases, in general, exhibit excellent shelf lives due to their intrinsic inertness.

### Typical Characteristics

Name	Method	Units	Result
Penetration @ 25°C (77°F), Unworked/Worked, 60 strokes	D 1403	mm-1	286/283
Evaporation Loss 22hrs @ 400°F	D 2595	% wt	.33
Oil separation 30hrs @ 204°C (400°F)	FTM 321	% wt	8.93
Dropping Point, Grease	D 2266	°C (°F)	216 (420)
Copper Corrosion 22hrs @ 99°C (210°F)	FTM 5309	-	1 b
Four-ball Wear test, AWSD 1200 rpm, 40 kgf, 1hr, 75°C (167°F)	D 2266	mm	70
Four-ball Extreme pressure test, no weld point	D 2596	kgf	500
Dropping Point	D 2266	°C (°F)	216 (420)
Low temperature torque @ -73°C (-100°F), starting	D 1478	Nm	.22
Low temperature torque @ -73°C (-100°F), running	D 1478	Nm	.13
Pounds per gallon @ 16°C (60°F)		lbs	15.71
Kinematic Viscosity @ 20°C (68°F) / 40°C (104°F) / 100°C (212°F)	D 445	cSt	440 / 187 / 33
Viscosity Index	D 2270		225
Vapor Pressure @ 20°C (68°F) / 100°C (212°F)	Knudsen	torr	<1 x 10 <sup>-10</sup> / 1 x 10 <sup>-7</sup>

Name	Method	Units	Result
Pour Point	D 97	°C (°F)	<-60 (-75)
Solid Particle Contamination per cc of grease 0-75 microns / 75+ microns	FTM 3005.4		319 / 0

## 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.

### Limitations

Braycote 803 is compatible with most commonly used construction materials including metals, plastics and elastomers. This product may be adversely affected by Lewis Acids such as aluminum chloride, at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium or titanium alloys at elevated temperatures may react with Braycote 803 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

Braycote 803 is available in 2 oz (AVDP) disposable syringes, 1 lb plastic jars (NGLI Grade 2). A specially filtered "Micronic" version of NGLI Grade 2 is also available in 2 oz (AVDP) disposable plastic syringes and 1 pound jars.

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