



## 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. Castrol Fluoroclean™ X100 or Castrol Fluoroclean™ HE 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. 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.

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.

### Conditions of Use

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.

## Typical Characteristics

Name	Method	Units	Braycote 803
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	283
Evaporation Loss (22hrs @ 204°C / 400°F)	ASTM D2595	%wt	0.33
Oil Separation (30 hrs @ 204°C / 400°F)	FTM 321.2 / ASTM D6184	% wt	8.93
Copper Corrosion (22 hrs, 100°C / 212°F)	ASTM D4048	Rating	1b
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ISO 51350 / ASTM D2266	mm	0.70
Four Ball Weld Load test - Weld Point	ISO 11008 / ASTM D2596	kgf	500
Dropping point	ASTM D2265	°C/°F	216 / 420
Low temperature Torque - starting torque	ASTM D1478	N/m	0.22
Low temperature Torque - torque after 60 mins	ASTM D1478	N/m	0.13
Density of finished grease @ 15°C / 59°F	In-house test	lb/gallon	15.71
Base Oil Viscosity @ 20°C / 68°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	440
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	187
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	23
Viscosity Index	ISO 2909 / ASTM D2270	-	225
Knudsen Vapour Pressure @ 20°C / 68°F	-	Pa	<0.000000133
Knudsen Vapour Pressure @ 100°C / 212°	-	Pa	0.0000133
Pour Point	ISO 3016 / ASTM D97	°C/°F	< -60 / -75

## Additional Information

### 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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Castrol Industrial, Technology Centre, Whitchurch Hill, Pangbourne, Reading, RG8 7QR, United Kingdom

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