



## Braycote Micronic 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.

### Typical Characteristics

Name	Method	Units	Braycote Micronic 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 @ 100°C / 212°F)	ASTM D6184 / FTM 321.2	% 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
Outgassing Performance - Total Mass Loss under vacuum (48 hrs @ 150°C / 302°F)	ASTM E597-07	% wt	--
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	-	lb/gallon	15.71

Name	Method	Units	Braycote Micronic 803
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	33
Viscosity Index	ISO 2909 / ATM D2270	-	225
Knudsen Vapour Pressure @ 20°C / 68°F	-	Pa	<1.33
Knudsen Vapour Pressure @ 100°C / 212°F	-	Pa	0.0000133
Pour Point	ISO 3016 / ASTM D97	°C/°F	< -65 / -70

## 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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