



## Braycote 803 EP

Grease, Wide Temperature, Hard Vacuum

### Description

Castrol Braycote™ 803EP is a smooth, buttery, grayish colored NLGI #2 grease, based on a perfluoropolyether oil (Castrol Brayco® 812) and thickened with a tetrafluoroethylene gelling agent. It also contains an extreme pressure additive. This product is thermally stable in air, vacuum, or in the presence of oxidizers such as oxygen and does not polymerize under these conditions. This grease is designed to operate from below -65°F to above 500°F (below -54°C to above 260°C) due to its inherently good volatility characteristics. Castrol Braycote® 803EP is compatible with all commonly used construction materials including metals, plastics and elastomers. 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

Castrol Braycote 803EP was developed for those applications in which long- term exposure to high temperature and hard vacuum are expected and high load carrying capabilities are required. This product 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 803 EP
Unworked Penetration	ASTM D217 / IP 50	0.1 mm	275
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	285
Evaporation Loss (22hrs @ 204°C / 399.2°F)	ASTM D2595	% wt	0.1
Oil Separation (30 hrs @ 100°C / 212°F)	ASTM D6184 / FTM 321.2	% wt	10.58
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ISO 51350 / ASTM D2266	mm	0.7
Four Ball Wear test after 800 kgf load MWSD	ISO 11008 / ASTM D2596	mm	2.3
Low temperature Torque - starting torque	ASTM D1478	N/m	0.185
Low temperature Torque - torque after 10 mins	ASTM D1478	N/m	0.159
Low temperature Torque - torque after 60 mins	ASTM D1478	N/m	0.102
Vacuum Stability	ASTM E595 / NASA SP-R-0022A	Total Weight Loss (% wt) / Volatiles (%wt)	0.73/0
LOX Impact Sensitivity (1100 mm, 20 drops)	-	Pass	Pass
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	1882.5
Knudsen Vapour Pressure @ 20°C / 68°F	-	Pa	>1.33
Knudsen Vapour Pressure @ 100°C / 212°F	-	Pa	0.0000133
Base Oil Viscosity @ 20°C / 68°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	434
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 / ASTM D2270	-	224
Pour Point	ISO 3016 / ASTM D97	°C/°F	< -60 / -75

## **Additional Information**

### **Temperature Range**

Below -54 °C to above 260 °C (Below -65 °F to above 500 °F).

### **Compatibility**

Castrol Braycote® 803 EP is compatible with most commonly used construction materials including metals, plastics and elastomers. It 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 Castrol Braycote® 803EP 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® 803EP is available in one pound jars and 10 gram syringes.

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