Product Data

Braycote Micronic 700

Grease, Rocket Propellant Compatible

Description

Castrol Braycote™ Micronic 700 is a smooth, buttery, translucent off-white colored, NLGI #2 grease. It uses Castrol Brayco 815Z as the base fluid and a tetrafluoroethylene telomer as the gelling agent. This product was specially formulated to provide exceptional anti-wear properties, in combination with ultra low outgassing and extreme temperature use capabilities. Braycote Micronic 700 exhibits superior chemical resistance, and is non-toxic, nonflammable, chemically inert, and does not use any chlorofluorocarbons (CFC's) during product manufacture. It has excellent lubricating properties, good shear stability, low acute toxicity, and promotes extended rolling element cycle lives. Castrol Fluoroclean™ X100 can be used to remove this lubricant. Refer to the data sheet for Fluoroclean X100 for information regarding this product.

Application

Braycote Micronic 700 is designed to operate in the presence of fuels, oxidizers, and in applications of deep space vacuum at low temperatures. It is used in gears, ball and roller bearings, electrical contacts, and "O" rings. This grease is highly recommended for applications where temperature extremes and/or low vacuums are routine, such as cryogenic coolers, FLIR, laser optical systems, or hostile chemical environments. Perfluorinated greases, such as this product, exhibit excellent shelf life due to their intrinsic inertness.

Temperature Range: -80ºC to 204ºC (-112ºF to 400ºF)

Conditions of Use

Limitations:
Braycote Micronic 700 is compatible with all commonly utilized materials, plastics, and elastomers. It may be adversely affected by Lewis Acid Catalysts, such as AlC13,, at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium and titanium may react with this product under certain conditions. Such systems should be thoroughly evaluated. Surfaces must be well cleaned of organic rust inhibitors prior to grease application to insure proper lubrication. Braycote Micronic 700 is not recommended for use in applications under high vacuum with loads exceeding 100,000 psi for extended periods of time.

Packaging

Braycote Micronic 700 is packaged in 2 oz (AVDP) disposable polypropylene syringes.

Typical Characteristics

Name	Method	Units	Braycote Micronic 700
Unworked Penetration	ASTM D217 / IP 50	0.1 mm	285
Worked Penetration (60 strokes @ 25°C / 77°F)	ISO 2137 / ASTM D217	0.1 mm	285
Oil Separation (30 hrs @ 204°C / 400°F)	FTM 321.2 / ASTM D6184	% wt	12
Copper Corrosion (24 hrs,100°C / 212°F)	ASTM D4048	Rating	1b
Dropping point	ASTM D2265	°C/°F	240 / 464
Four Ball Wear test - Wear Scar Diameter (40 kgf / 75°C / 1200 rpm / 1 hr)	ISO 51350 / ASTM D2266	mm	0.5
Four Ball Weld Load test - Weld Point	ISO 11008 / ASTM D2596	kgf	800+
Vacuum Stability	ASTM E595 / NASA SP-R-0022A	Total Weight Loss (% wt) / Volatiles (%wt)	0/0
Low temperature Torque - starting torque @ -62°C / -80°F	ASTM D1478	N/m	0.057
Low temperature Torque - torque after 60 mins @ 62°C / 80°F	ASTM D1478	N/m	0.025
Low temperature Torque - starting torque @ -73°C / -100°F	ASTM D1478	N/m	0.102
Low temperature Torque - torque after 60 mins @ -73°C / -100°F	ASTM D1478	N/m	0.064
LOX Impact Sensitivity	ASTM D2512	-	Pass
High Temperature Bearing Life test	ASTM D3336	hrs	553
Specific Gravity @ 15°C / 59°F	ISO 3675 / ASTM D1298	-	1.8531
Density of finished grease @ 15°C / 59°F	In-house test	lb/gallon	15.43
Base Oil Viscosity @ 99°C / 210°F	ISO 3104 / ASTM D445	mm^2/s	45
Base Oil Viscosity @ 38°C / 100°F	ISO 3104 / ASTM D445	mm^2/s	148
Base Oil Viscosity @ -54°C / -65°F	ISO 3104 / ASTM D445	mm^2/s	10,855
Viscosity Index	ISO 2909 / ASTM D2270	-	350
Pour Point	ISO 3016 / ASTM D97	°C/°F	-72 / -100
Knudsen Vapour Pressure @ 20°C / 68°F	-	Pa	0.0000000000532
Knudsen Vapour Pressure @ 100°C / 212°F	-	Pa	0.000000266
Knudsen Vapour Pressure @ 200°C / 392°F	-	Pa	0.000266

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