

Castrol Brayco 1720 Series

Perfluoroether Lubricant Gear, Pump and
Lubricating Oil, Chemically Inert, Oxidizer Compatible

Description

Castrol Brayco® 1720 Series Oils are clear, colorless low molecular weight perfluoroether oils. The oils are chemically inert to virtually all chemicals, and safe to use in direct contact with oxidants such as LOX/GOX and chlorine. Castrol Brayco® 1720 Series Oils are nonflammable and non-toxic. Castrol Fluoroclean™ X100 and Castrol Fluoroclean™ HE can be used to remove these lubricants. Refer to the data sheets for information regarding these products.

Application

Castrol Brayco® 1720 Series Oils are intended for use as gear, pump, and lubricating oils where direct or indirect contact with aggressive chemicals, oxidants, and low temperatures are routine. The Castrol Brayco® 1720 Series Oils can also be used as vacuum pump oils in operations requiring vapor pressures as low as 10⁻⁴ torr. Perfluorinated fluids, in general, exhibit excellent shelf lives due to their intrinsic inertness.

Typical Characteristics

Test (ASTM)	Description	CASTROL BRAYCO®			
		1721	1722	1723	1724
D 287	Specific Gravity @ 16/16°C (60/60°F) Pounds per Gallon @ 16°C/60°F	1.848 15.4	1.885 15.7	1.887 15.72	1.907 15.89
D 445	Kinematic Viscosity, cSt				
	@ 100°C (212°F)	1.43	4.04	5.19	9.46
	@ 40°C (104°F)	5.1	21.8	30.1	67.7
	@ 20°C (68°F)	10.3	56.4	79.1	198.1
	@ 0°C (32°F)	22	240	310	800
	@ -20°C (-4°F)	90	1600	2100	7000
	@ -40°C (-40°F)	2500	18,000	30,000	ND
	@ -54°C (-65°F)	60,000	250,000	ND	ND
D 2270	Viscosity Index	ND	60	101	114
D 97	Pour Point, °C (°F)	-69 (-90)	-57 (-70)	-48 (-55)	-42 (-45)
D 972	Evaporation Loss, % wt				
	22 hrs @ 60°C (140°F) 22 hrs @ 120°C (248°F)	6.33 ---	1.39 18	1.6 26.2	0.7 9.3
D 2266	Four-Ball Wear-Test, AWSD, mm 600 rpm, 2 hrs, 75°C (167°F), 40 kgf	0.59	0.55	0.52	0.42
D 2783	Four-Ball EP Weld Point				
	Weld Point, kgf	250	250	315	315
	Load Wear Index	50	75	85	115
Knudsen	Vapor Pressure, torr				
	20°C (68°F)	1 x 10 ⁻¹	1 x 10 ⁻³	1 x 10 ⁻⁴	1 x 10 ⁻⁴
	100°C (212°F)	1 x 10 ⁻¹	1 x 10 ⁻¹	1 x 10 ⁻¹	1 x 10 ⁻¹
D 1331	Surface Tension 20°C (68°F), dynes/cm	19	21	21	21

Additional Information

Temperature Range

Castrol Brayco®1721 -54°C to 93°C (-65°F to 200°F)
Castrol Brayco®1722 -34°C to 149°C (-30°F to 300°F)
Castrol Brayco®1723 -34°C to 163°C (-30°F to 325°F)
Castrol Brayco®1724 -29°C to 177°C (-20°F to 350°F)

Limitations

Castrol Brayco® 1720 Series Oils are compatible with all commonly utilized materials, plastics, and elastomers. Castrol Brayco® 1720 Series Oils may be adversely affected by Lewis Acid Catalysts such as AlCl₃, at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium and titanium may react with Castrol Brayco®1720 Series Oils under certain conditions. Such systems should be thoroughly evaluated. Surfaces must be well cleaned of organic rust inhibitors prior to oil application to insure proper lubrication.

Packaging

Castrol Brayco®1720 Series Oils are available in 4 pound (1 quart), 16 pound (1gallon) bottles and 75 pound pails.

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