



Product Data

Castrol Brayco® 1720 Series Oils

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. 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

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 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.

Characteristics

TEST (ASTM)	DESCRIPTION	CASTROL BRAYCO			
		1721	1722	1723	1724
D 287	Specific Gravity @ 16/16°C (60/60°F)	1.848	1.885	1.887	1.907
	Pounds per Gallon @ 16°C/60°F	15.40	15.70	15.72	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)	6.33	1.39	1.6	0.7
	22 hrs @ 120°C (248°F)	---	18.0	26.2	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) 100°C (212°F)	1×10^{-1} 1×10^{-1}	1×10^{-3} 1×10^{-1}	1×10^{-4} 1×10^{-1}	1×10^{-4} 1×10^{-1}
D 1331	Surface Tension 20°C (68°F), dynes/cm	19	21	21	21
D 2512	LOX Impact Sensitivity 20 drops, 1100 mm	Pass	Pass	Pass	Pass

Health, safety and environmental information are provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products. Castrol will not accept liability if the product is used other than in the manner or with the precautions or for the purpose(s) specified. Before using the product other than directed, please contact Castrol for consultation.

Additional Information

Temperature Range

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

Limitations

Brayco 1720 Series Oils are compatible with all commonly utilized materials, plastics, and elastomers. Brayco 1720 Series Oils may be adversely affected by Lewis Acid Catalysts such as $AlCl_3$, at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium and titanium may react with 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

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

Castrol Brayco 1720 Series Oils
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All reasonable care has been taken to ensure that the information contained in this publication is accurate as of the date of printing. However, such information may, nevertheless, be affected by changes in the blend formulation occurring subsequent to the date of printing. Material Safety Data Sheets are available for all Castrol Ltd products. The MSDS must be consulted for appropriate information regarding storage, safe handling and disposal of a product.

Castrol Industrial North America Inc. 150 West Warrenville Road, 605 3E Naperville, IL 60563
Tel: (877) 641 1600 Fax: (877) 648 9801

www.castrol.com/industrial