



### Introduction:

Castrol Brayco<sup>®</sup> 814 is a clear white perfluoroether fluid. It is essentially chemically inert, nonflammable, compatible with most commonly used oxidizers and is virtually unaffected by gamma radiation doses. It has an exceptionally high viscosity index, relatively low volatility and little tendency to form deposits. It exhibits excellent lubrication properties, good dielectric properties, excellent shear stability and low toxicity. Castrol Fluoroclean<sup>™</sup> X100 or Castrol Fluoroclean<sup>™</sup> HE can be used to remove this lubricant. Refer to the data sheet for Castrol Fluoroclean<sup>™</sup> X100 and Castrol Fluoroclean<sup>™</sup> HE for information regarding these products.

Castrol Brayco<sup>®</sup> 814 is practically insoluble in current fuels and oxidizers, as well as in most organic solvents. It is particularly suited for applications where wide temperature variations are routine. Perfluorinated fluids, in general, exhibit excellent shelf lives due to their intrinsic inertness.

Castrol Brayco<sup>®</sup> 814 is compatible with all commonly utilized materials, plastics, and elastomers. Castrol Brayco<sup>®</sup> 814 may be adversely affected by Lewis Acid Catalysts such as AlCl<sub>3</sub> at elevated temperatures. Newly exposed rubbing surfaces of aluminum, magnesium, or titanium may react with Castrol Brayco<sup>®</sup> 814 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.

### Removal of unwanted grease from grease applied surfaces:

The composition of this product is a pure perfluorinated liquid without PTFE particles (which if present won't dissolve in anything). We have found that [Castrol<sup>®</sup> Fluoroclean<sup>™</sup> HE](#) is an effective solvent for the perfluorinated liquid lubricants and greatly aids in the removal of the liquid from places where it is no longer needed or wanted.

### Temperature Range of Use:

-87°C to above 149°C (-125°F to above 300°F)

### Characteristics

TEST METHOD	DESCRIPTION	RESULT
D 287	Specific Gravity @ 16/16°C (60/60°F) Pounds per Gallon @ 16°C (60°F)	1.8354 15.290
D 445	Kinematic Viscosity, cSt @ 99°C (210°F) @ 38°C (100°F) @ -40°C (-104°F) @ -54°C (-65°F)	5.75 18.5 595 2121
D 2270	Viscosity Index	311
D 97	Pour Point, °C (°F)	<-70 (<-100)
D 972	Evaporation Loss, % wt 22 hrs @ 149°C (300°F)	4.4
D 664	Acid Number	0.0

D 1331	Surface Tension, 20°C (68°F) dynes/cm	19.5
Knudsen	Vapor Pressure, torr @ 20°C (68°F), cSt @ 100°C (212°F), cSt	6 x 10 <sup>-5</sup> 3 x 10 <sup>-2</sup>