



Fluoroclean HE

Revised Formula

Description

Castrol Fluoroclean™ HE is a high performance, environmentally friendly, non- flammable solvent. Castrol offers two perfluorinated solvents: Fluoroclean HE and Fluoroclean X-100. Fluoroclean HE is recommended for use in cleaning perfluorinated oils and greases and Fluoroclean X-100 is recommended for use in grease plating applications. See the data sheet for Fluoroclean X-100 for more information.

Application

Fluoroclean HE is designed for use as a substitute for Freon® 113 (CFC-113)* in the cleaning of perfluorinated lubricants and other halogenated lubricants, including Castrol Braycote® 600EF, 601EF, 602EF, 603EF, 631, 631A, 640, 640AC, 802, 802RP, 803, 803RP, 803EP, 804, 806, 806RP, 807, 807RP, 812, 815Z, 1613, 1616, 1624, 1625, 1632, 1636, 1721, 1722, 1723, 1724, 1728, 1729, Castrol Endurex® 1000 and 3100, and Castrol Microcote® GS, LVP and 296.

* Freon® 113 is a registered trademark of DuPont.

Advantages

- Chemically inert
- Non- flammable
- Very low in toxicity
- Compatible with most metals, plastics, and elastomers.

Typical Characteristics

| Name | Method | Units | CFC-113* | Fluoroclean HE |
|--------------------------------------|--------|---------------|------------|----------------|
| Basic Formula | | - | C2F3Cl3 | C5F12O12 |
| Average Molecular Weight | | g/mol | 187.4 | 340 |
| Physical State @ 25°C (77°F) | | - | Liquid | Liquid |
| Boiling Point | | °C / °F | 47.6 / 118 | 57 / 135 |
| Liquid Density @ 25°C (77°F) | | g/ml | 1.57 | 1.65 |
| Liquid Viscosity @ 20°C (68°F) | | cSt | 0.68 | 0.5 |
| Surface Tension, cm @ 25°C (77°F) | | dynes/cm | 19.0 | 10.0 |
| Vapor Pressure @ 25°C (77°F) | | psi | 6.46 | 4.4 |
| Heat of Vaporization @ boiling point | | cal/g | 35 | 22 |
| Solubility of water @ 25°C (77°F) | | ppm by weight | 110 | 14 |
| Solubility of Fluorocarbons | | - | High | High |
| Flash Point | | °C | None | None |

| Name | Method | Units | CFC-113* | Fluoroclean HE |
|---|--------|-------|----------|----------------|
| Hildebrand Solubility Parameter (estimated value) | | - | 7.3 | 6.2 |
| Ozone Depletion Potential | | - | 0.8 | 0.000 |

* Not a Castrol product, listed for comparative purposes only.

User Advice

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

Compatibility:

Fluoroclean HE is not an effective solvent for mineral oil or silicone oil based lubricants.

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