

CERTONAL HFE7100 Specialty Cleaning and Rinsing Agent, Carrier Fluid

Introduction

Certonal™ HFE7100 Engineered Fluid is a clear, colourless, and low odour precision fluid designed for various applications, including electronics cleaning, and carrying and deposition of lubricants and coatings. Its unique properties make it a versatile solution for mono-solvent or co-solvent cleaning.

Applications

Removing oils, greases, fluxes, waxes and particulates

Lubricant carrier for fluorocarbons, hydrocarbons and silicones

Benefits

Non-flammable for improved workplace safety

Very low global warming potential (GWP), contributing to climate protection

Non-ozone depleting, ensuring minimal environmental impact

Fast drying for improved process efficiency

Moderate boiling point and low surface tension enable enhanced cleaning and coating effectiveness

Excellent toxicity profile (200 ppm)

Provides reliable chemical and thermal stability

Table 1 Physical Properties

Formula

Molecular Weight 250

Boiling Point (°C) 61

Freeze Point (°C) -135

Liquid Density (g/ml) 1.53

Surface Tension (dynes/cm) 13.6

Solubility of Solvent in Water (ppmw) 12

Solubility of Water in Solvent (ppmw) 95

Vapor Pressure (mmHg) 202

Property	Certonal 7100
Formula	C4F9OCH3
Molecular Weight	250
Boiling Point (°C)	61
Freeze Point (°C)	-135
Liquid Density (g/ml)	1.53
Surface Tension (dynes/cm)	13.6
Solubility of Solvent in Water (ppmw)	12
Solubility of Water in Solvent (ppmw)	95
Vapor Pressure (mmHg)	202

Property	MicroCare™ HFE7100	Opteon™ SF33	Vertrel™ XF	Tergo™ PF100	Teres™
BP (°C)	61	33	55	56	51
KB Value	<20	<20	<20	<20	<20
Specific Gravity	1.53	1.36	1.58	1.47	1.39
Surface Tension (dyne/cm)	13.6	13	14.1	16.4	15
GWP	297	2	1650	580	27
Plastic Compatibility	Good	Good	Good	Good	Fair

Materials Compatibility

Certonal™ HFE7100 Engineered Fluid is compatible with most metals and hard polymers such as:

Short -Term Exposure Compatibility		
Metals	Plastics	Elastomers
Aluminum	Acrylic (PMMA)	Butyl Rubber
Molybdenum	Epoxy	Natural Rubber
Copper	Polyethylene	Nitrile Rubber
Tantalum	PET	EPDM
Carbon Steel	Polypropylene	
Tungsten	Phenolic	
302 Stainless Steel	Polycarbonate	
Cu/Be Alloy C172	ABS	
Brass	Polyester	
Mg Alloy AZ32B		

Exceptions: Some swellings of PTFE and Silicone Rubber. Some surface oxidations of copper during heat aging.

Environmental Health & Safety

Properties	
Ozone Depletion Potential (ODP) ¹	None
Global Warming Potential (GWP) ²	320
Atmospheric Lifetime (years)	4.1
Flash Point	None
Flammability Range in Air	None
Exposure Guidelines (8 hr. time-weighted average)	750
Exposure Ceiling (ppm)	None
Acute Toxicity (4 hr. LC50 [Rat])	>100,000

¹ HCFC-225 ca/cb ratio is 45/55

² CFC-11 = 1.

Storage & Handling

Before using this product, carefully read and follow all precautions and directions provided on the product label and in the Safety Data Sheet (SDS). Certonal™ HFE7100 Engineered Fluid is non-flammable and highly resistant to thermal breakdown and hydrolysis during storage and use. It is thermally and hydrolytically stable, keeping integrity under normal storage conditions without oxidation or degradation. To ensure the best performance, store containers in a clean, dry area away from direct sunlight, with a recommended storage temperature not exceeding 30°C. For detailed handling and safety recommendations, refer to the SDS, available from your local representative.

