

279



PCS

Description

Chesterton® 279 PCS is a state of the art, precision cleaning solvent designed specifically to replace CFC-113, HCFC -141b and other ozone-depleting materials. It is a highly effective non-corrosive, nonflammable solvent cleaner for electrical and electronic contacts and assemblies. This non-ozone depleting solvent system utilizes new HFE technology to quickly remove light oils, particulates, fluorolubricants like Krytox® Grease, fluoropolymers and other contaminants from metal contacts. Chesterton 279 PCS is specifically engineered to restore and improve electrical continuity on energized equipment.

Composition

Chesterton 279 PCS is based on a clear, colorless and low-odor fluid intended to replace ozone depleting materials.

* Krytox® is a registered trademark of DuPont.

Regulatory Status

The United States Environmental Protection Agency (EPA) has listed this product as an acceptable substitute for ozone depleting substances under its Significant New Alternatives Program (SNAP). This program evaluates and approves alternatives to ozone depleting substances.

The solvent used in Chesterton 279 PCS has been accepted for commercial use in the United States through the Toxic Substances Control Act. The product is listed as “acceptable without restrictions” based on the material’s positive balance of environmental and health properties when compared to ozone depleting substances.

The solvent is also listed on most international inventories including but not limited to: Japanese Ministry of International Trade and Industry (MITI), European Inventory of Existing Commercial Chemical Substances (EINECS), Australian Inventory of Chemicals, Korean Toxic Chemical Control Law, and the Canadian Domestic Substances List. Use has recently been approved in Germany under approval #IGI2-50121/29.

Features

- Nonflammable
- Fast Evaporation
- Low Residue
- Non-corrosive
- High Purity
- High Dielectric Strength
- No Ozone Depleting Potential
- No VOC's
- Replaces CFC-113
- Removes Fluorinated Lubricants
- Safe for Plastic
- NSF K2 - Registration number 134012

Typical Physical Properties

Properties	Chesterton 279 PCS	CFC-113	HCFC-141b	HCFC-25ca/cb	HFC-4310
Molecular Wt.	250	187	117	203	252
Boiling Pt. (C)	60	48	32	54	54
Freeze Pt. (C)	-135	-35	-103	-131	-80
Flash Point	None	None	None	None	None
Flammability Range in Air	None	None	7.1-18.6 ⁽¹⁾	None	None
Liquid Density ⁽²⁾	1.52	1.56	1.23	1.55	1.58
Surface Tension ⁽³⁾	13.6	17.3	19.3	16.2	14.1
Solubility in Water ⁽⁴⁾	<20	170	210	330	140

(1) Vol. % by ASTM E681-94 @ 100°C

(2) g/ml @ 25°C

(3) dynes/cm @ 25°C

(4) ppm by weight

Data compiled from published information

Applications

Chesterton® 279 PCS can be used to clean electronic equipment, motorized instruments, medical devices, gyroscopes, and other delicate instrumentation. It removes light petroleum oils and greases, Krytox® Grease, halogenated oils and particulates as effectively as CFC-113. 279 PCS is safe to use on most materials found in industry. Test for compatibility before using on materials NOT listed.

Safety

Before using this product, review the Material Safety Data Sheet (MSDS) or the appropriate safety sheet for your area.

Chesterton 279 Materials Compatibility

Metals	Plastics	Elastomers
Aluminum	Acrylic	Butyl Rubber*
Copper	Polyethylene	Natural Rubber
Carbon Steel	Polypropylene	Nitrile Rubber
302 Stainless Steel	Polycarbonate	EPDM
Brass	Polyester	
Molybdenum	Epoxy	
Tantalum	PMMA	
Tungsten	PET	
Cu/ Be Alloy C172	ABS	
Mg Alloy AZ32B		

Compatible after one hour exposure at boiling temperature.
*Butyl Rubber best for extended exposure > 1 month
Exceptions: some swelling of PTFE and Silicone Rubber.
Some surface oxidation of copper during heat aging.

Environmental Properties

Properties	Chesterton 279 PCS	CFC-113	HCFC-141b	HCFC-225 ca/cb	HFC-4310
Ozone Depleting Potential ⁽¹⁾ - ODP	0.00	0.80	0.10	0.03	0.00
Global Warming Potential ⁽²⁾ - GWP	500	5000	630	170/530	1300
Atmospheric Lifetime ALT (years)	4.1	85.0	9.4	2.5/2.6	17.1

(1) CFC-11 = 1.0

(2) GWP - 100 year Integration Time Horizon (ITH)

Note: HCFC-225 ca/cb ratio is 45/55
Data compiled from published information

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