



Description

The 4120 *Super HFE Electronics Cleaner* is a hydrofluroether, zero residue, non-flammable, and non-conductive cleaner degreaser. The cleaner provides safety for the equipment, workers, and the environment without sacrificing performance. It offers a similar cleaning performance to similar CFC type cleaners but without the accompanying safety concerns.

Due to its high density, low surface tension, and low viscosity, the 4120 cleaner will easily drip off even the most complex geometries without becoming trapped in small spaces.

Applications & Usages

The 4120 is used to clean contacts, motors, and other electronic equipment. It is a heavy duty cleaner that cleans oils, release agents, fluoro compounds, light flux residues, and particulates.

Benefits and Features

- **Suitable for Use in Food Facilities as a Non-Food Chemical**—Canadian and NFS recognition letters available on request
- **Equipment safe**—Highly compatible with metals; electrically non-conductive
- **Workplace safe**—non-flammable
- **Replaces Freon TF solvent**
- **Zero residue**
- **Fast drying**
- **Low surface tension and viscosity**—will not cling to surface or get trapped in small spaces

NOTE: Product passes the flame extension test for non-flammable aerosols; however, if the product drips, puddled liquid residues will quickly become momentarily flammable as the constituent solvents will evaporate at slightly different rates.

Usage Parameters

<i>Properties</i>	<i>Value</i>
Shelf Life	5 y

Temperature Ranges

<i>Properties</i>	<i>Value</i>
Storage Temperature Limits ^{a)}	-20 to 40 °C [-4 to 104 °F]

a) Storage below zero is not necessary. Cool, dry, and well ventilated area recommended.

Properties

<i>Physical Property</i>	<i>Method</i>	<i>Value</i>
Color Odor Density Boiling Point Vapor Pressure @20 °C [68 °F] Evaporation Rate		Colorless Slight ethereal 1.27 g/mL ≥40 °C [≥104 °F] 36 kPa [27 mmHg] >1 (ButAc = 1)
<i>Safety Properties</i>	<i>Method</i>	<i>Value</i>
Flammability Flash Point	Flame extension test Closed Cup	Non-flammable aerosol None detected
Volatile Organic Compound (VOC) Global Warming Potential (GWP) ^{a)} 1,2-trans-dichloroethylene 134a Propellant 1,1,1,3,3-pentafluorobutane methyl nonafluorobutyl ether methyl nonafluoroisobutyl ether		73% [692 g/L] Negligible 1 430 890 280 280

a) GWP for 100 year integration time horizon for cleaner content (reference to CO₂ GWP=1).

Compatibility

It is compatible with plastics, seals, PCB components, paints, rubbers, and plant fibers.

ATTENTION! Always perform a compatibility test on a non-critical area or a representative test substrate prior to use. Test even if the compatibility chart predicts a high compatibility: modern parts may incorporate undeclared sensitive materials (such as custom plastic blends, custom additives, protective coatings, or decorative coatings).

Health, Safety, and Environmental Awareness

Please see the 4120-Aerosol **Safety Data Sheet** (SDS) for more details on transportation, storage, handling and other security guidelines.

Environmental Impact: This product has a low environmental impact. It is RoHS compliant. The HFC-134a is subject to EU F-gas Regulations.

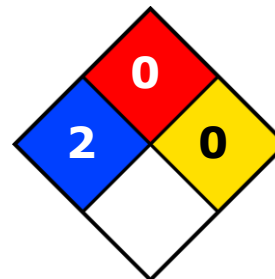
This product meets the European Directive 2011/65/EU Annex II (ROHS); recasting 2002/95/EC.

Health and Safety: This liquid cleaner causes serious eye irritation and harmful if swallowed. Inhalation of the propellant can lead to dizziness and drowsiness.

HMIS® RATING

HEALTH:	* 2
FLAMMABILITY:	0
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

Application Instructions

To clean residues in aerosol format

1. Spray dirty area.
2. Ensure that wash runs off the circuit board along the shortest unencumbered path to prevent redeposit of solvated residues.

Packaging and Supporting Products

<i>Cat. No.</i>	<i>Packaging</i>	<i>Net Volume</i>	<i>Net Weight</i>	<i>Packaging Weight</i>
4120-450G	Aerosol	360 mL 12.1 fl oz	450 g 15.8 oz	4 kg ^{a)} 8 lb ^{a)}

a) Pack of six

Supporting Products

- *Hog Hair Cleaning Brush*: Cat. No. 852
- *Large Hog Hair Cleaning Brush*: Cat. No. 853

Technical Support

Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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ISO 9001 Registered Quality System.
Burlington, Ontario, Canada QMI File # 004008

Super HFE Electronics Cleaner 4120 Technical Data Sheet

4120-Aerosol

Warranty

M.G. Chemicals Ltd. warrants this product for 12 months from the date of purchase by the end user. *M.G. Chemicals Ltd.* makes no claims as to shelf life of this product for the warranty. The liability of *M.G. Chemicals Ltd.* whether based on its warranty, contracts, or otherwise shall in no case include incidental or consequential damage.

Disclaimer

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