

## MCF

### Minimal Charging Freezer

#### DESCRIPTION

**MCF** is a powerful non-corrosive refrigerant for use as a rapid and safe method of cooling small components, particularly in electrical and electronic equipment. It can also be used for the testing of thermostats and other thermosensitive components and to detect faulty soldered joints and overheating components.

READ ENTIRE TECHNICAL BULLETIN BEFORE USING THIS PRODUCT

#### FEATURES AND BENEFITS

- Contains an anti-static additive, suitable for use with static sensitive devices
- Cools rapidly down to at least -48 °C; extension tube aids access to concealed components
- Prevents component damage due to overheating during soldering
- Non-flammable; can be used to find faulty solder joints and overheating components

#### PRODUCT INFORMATION

For available packaging sizes please visit:

[electrolube.com](http://electrolube.com)

#### PHYSICAL PROPERTIES

Category	Results
<b>Typical Properties</b>	
Form	Colorless Gas
Density (g/mL)	1.17
Boiling Point (°C)	-26.5
Flash Point t (°C)	None
Ozone Depleting Potential	Zero
GWP (vs. CO <sub>2</sub> , 100yr ITH)	<1

### APPLICATION GUIDELINES

Switch on and set up equipment so that the fault conditions caused by the 'dry' joint exist. Spray each joint in the circuit with the end of the extension tube approximately one inch from the joint. Spraying should continue until a layer of 'frost' appears on the joint, usually about 2 seconds. When the 'dry' joint is frozen, the fault condition will disappear but will return as the temperature of the joint returns to normal ambient. A similar procedure is adopted for tracing faulty components that are overheating.

An alternative test method is to spray suspected faulty components until a good level of frost has been formed. The component which "defrosts" the most rapidly is the component which is overheating or faulty. If it is necessary to cool a component for any length of time, a piece of plastic foam should be wrapped around the component and then saturated with MCF. If the foam is periodically re-saturated the temperature of the component may be held below 0 °C as long as required.

Fractured copper tracks on PCBs can be located by spraying over the suspect area and the fracture will appear as the copper tracks contract and part.

### ADDITIONAL INFORMATION

**Shelf Life:** 48 Months

### SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available.**

### CONTACT INFORMATION

To confirm this document is the most recent version, please contact

**TechnicalSupportTeam@hkw.co.uk**

[www.electrolube.com](http://www.electrolube.com)

<b>North America</b> 109 Corporate Blvd. South Plainfield, NJ 07080, USA 1.800.367.5460	<b>Europe</b> Ashby Park Coalfield Way Ashby de la Zouch Leicestershire, LE65 1JR, UK 44.01530.41960	<b>Asia</b> 8/F., Paul Y. Centre 51 Hung To Road Kwun Tong, Kowloon, Hong Kong 852.3190.3100
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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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