

Electrolube® FRE

Freezer Spray

DESCRIPTION

Electrolube® FRE 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 DATA SHEET BEFORE USING THIS PRODUCT

FEATURES AND BENEFITS

- 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
- Compatible with most conformal coatings

APPROVALS

Standard	Status
NATO Stock No	6850-99-225-3691 (FRE200) 1045-99-282-1231 (FRE400)

PRODUCT INFORMATION

Please contact your customer service representative for information on available package sizes.

PHYSICAL PROPERTIES

Category	Results
Typical Properties	
Form	Colorless Gas
Density (g/mL)	1.17
Boiling Point (°C)	-26.5
Flash Point (°C)	None
Ozone Depleting Potential	Zero
GWP (vs. CO ₂ , 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 FRE. 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

www.macdermidalpha.com

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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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