

## Minimal Charging FREEZER

Product Code: MCF

### PRODUCT DESCRIPTION

**Electrolube Minimal Charging Freezer, 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, and to detect faulty soldered joints and overheating components. **Electrolube Minimal Charging Freezer** utilises Non Ozone Depleting materials.

### PRODUCT USE

On all electrical and electronic circuitry for detection of faulty joints and overheating components, for the testing of thermostats and other thermosensitive components. **MCF** is particularly suitable for testing static sensitive devices as it has been specially formulated to induce the absolute minimum charge in components being tested.

### FEATURES

- \* Safe - the corrosion inhibiting refrigerant is non-toxic and non-flammable making **MCF** ideal for use by unskilled operatives even in high volume use.
- \* **Electrolube Minimal Charging Freezer** has been specially formulated to induce the absolute minimum of static charge possible. This avoids the potential danger of build up of highly damaging voltages on static sensitive devices that can occur with less carefully formulated products.
- \* **MCF** does not exhibit the "wetness" normally associated with "anti-static" freezer products, therefore it is possible to utilise the speed of dissipation of frost as a test method.
- \* High pressure rapidly lowers temperature of components down to at least  $-50^{\circ}\text{C}$  (dependent upon initial temperature of the component) in a matter of seconds (time taken is dependent on size, material and operating conditions of component being cooled).
- \* Prevents component damage from overheating during soldering.
- \* Extension tube aids access to components in confined and 'difficult to reach' areas.
- \* Saves time - 'dry' joint location involves measuring electrical resistance at each joint in a faulty circuit, which is both time consuming and not always conclusive due to parallel resistance

TECHNICAL  
DATA  
SHEET



**Copyright  
Electrolube  
2003**

All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.



## Minimal Charging FREEZER – Page 2

paths making measurement of true joint resistance difficult, if not impossible. Using **MCF** eliminates this time consuming method.

\* Compatible with most conformal coatings.

### TYPICAL PROPERTIES

Form:	Colourless Gas
Density:	1.13
Flashpoint:	None
Boiling Point:	-26.5°C
Ozone Depleting Potential:	Zero

### DIRECTIONS FOR USE

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 **Freezer**. 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.

### PACKAGING

200ml Aerosol  
400ml Aerosol

### ORDER CODE

MCF200  
MCF400

TECHNICAL  
DATA  
SHEET



**Copyright  
Electrolube  
2003**

All information is given in good faith but without warranty. Properties are given as a guide only and should not be taken as a specification. Electrolube cannot be held responsible for the performance of its products within any application determined by the customer, who must satisfy themselves as to the suitability of the product.

