ELECTROLUBE
THE SOLUTIONS PEOPLE

# FRE
## Freezer Spray

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.

- 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** **NATO Stock Numbers:** **6850-99-225-3691 (FRE200)**
**1045-99-282-1231 (FRE400)**

**Typical Properties**

| | |
|---|---|
| Form | Colourless Gas |
| Density (g/ml) | 1.17 |
| Flashpoint (°C) | None |
| Boiling Point (°C) | -26.5 |
| Ozone Depleting Potential | Zero |
| GWP (vs. $CO_2$, 100yr ITH) | <1 |

| Description | Packaging | Order Code | Shelf Life |
|---|---|---|---|
| Freezer Spray | 200ml Aerosol | FRE200 | 48 Months |
| | 400ml Aerosol | FRE400 | 48 Months |

**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 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.

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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.

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