

## Freeze Spray

**Product# ES1052**

### Product Description

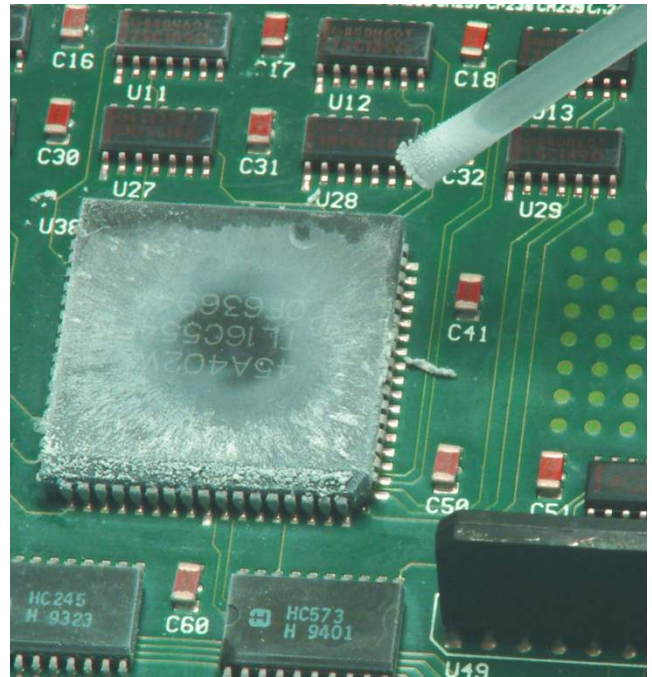
Freeze Spray is engineered for locating thermal intermittent electrical components and cooling printed circuit boards. This circuit refrigerant system is nonflammable, residue-free and provides fast cooling action.

- Nonflammable
- High heat transfer
- Low static generation
- Noncorrosive
- Lowers temperature to -60°F (51°C)
- Ultra pure
- Leaves no residue
- Nonabrasive on most surfaces

### Typical Applications

Freeze Spray can be used to:

- Cool Equipment for Testing
- Dissipate Heat While Soldering or Desoldering
- Isolate Thermal Intermittent Components
- Test Circuit Traces for Continuity
- Test Printed Circuit Boards for Stress Fractures
- Track Intermittent Failures and Shorts



### Typical Product Data and Physical Properties

<b>Boiling Point:</b>	-15.7°F / -26.5°C
<b>Vapor Density (air=1):</b>	3.18
<b>@77°F</b>	
<b>Solubility in Water:</b>	10% by weight
<b>@77°F/1 atm</b>	
<b>Specific Gravity:</b>	1.21
<b>(water = 1@77°F)</b>	
<b>Surface Tension:</b>	7.8
<b>(dynes/cm @ 21.6°F)</b>	
<b>Flash Point (TCC):</b>	None
<b>Evaporation Rate:</b>	>1
<b>(butyl acetate =1)</b>	
<b>Appearance:</b>	Clear, colorless liquified gas
<b>Odor</b>	Slight ethereal
<b>Shelflife</b>	10 years
<b>RoHS Compliant</b>	Yes

## Freeze Spray

**Product# ES1052**

### Compatibility

Freeze Spray is generally compatible with most materials used in printed circuit board fabrication, including sensitive plastics and compounds. With any circuit refrigerant, compatibility must be determined on a non-critical area prior to use.

Material	Compatibility
Buna-N	Fair
Graphite	Good
HDPE	Good
LDPE	Good
Lexan	Poor
Neoprene	Good
Cross-Linked PE	Good
Polyacrylate	Poor
Polystyrene	Good
PVC	Good
Silicone Rubber	Fair
Teflon	Good
Viton	Poor

### Usage Instructions

**For industrial use only. Read SDS carefully prior to use.**

No special surface preparation is required prior to using Freeze Spray. Direct spray onto the area to instantly cool components, circuit boards or adhesives.

### Availability

**ES1052** 10 oz. / 283 g Aerosol

### Environmental Impact Data

CFC	0.0%
HCFC	0.0%
CL Solv.	0.0%
VOC	0.0%
HFC	100.0%
ODP	0.0

CFC, HCFC, CL. SOLV., VOC, and HFC numbers shown are the content by weight. Ozone depletion potential (ODP) is determined in accordance with the Montreal Protocol and U.S. Clean Air Act of 1990. The ODP of this product is zero. It is the sum of the ODP of the substances that may contribute to the depletion of stratospheric ozone, based upon the weight of each substance in the product's formulation.

### Technical and Application Assistance

Chemtronics provides a technical hotline to answer your technical and application related questions.

*The toll free number is: 1-800-TECH-401.*

### Note:

This information is believed to be accurate. It is intended for professional end users having the skills to evaluate and use the data properly. CHEMTRONICS does not guarantee the accuracy of the data and assumes no liability in connection with damages incurred while using it.