

CHEMTRONICS[®]

Technical Data Sheet

TDS # 1054

Arctic Blast[™] Freeze Spray

PRODUCT DESCRIPTION

Arctic Blast[™] Freeze Spray is specifically designed for locating thermal intermittent electrical components and cooling printed circuit boards. Utilizing an ultra-low global warming potential coolant, this product offers the best cooling possible with the lowest global warming impact. Arctic Blast[™] Freeze Spray is nonflammable, residue-free and provides fast cooling action.

- Cools surfaces to below -49°F / -45 °C
- Ultra-low global warming impact of 6
- Nonflammable
- High heat transfer
- Pinpoint spray for individual component isolation
- Noncorrosive
- Ultra-pure, filtered to <0.2 microns
- Leaves no residue
- Nonabrasive on most surfaces
- CFC, HCFC and HFC free
- VOC free

TYPICAL APPLICATIONS


Arctic Blast[™] 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

COMPATIBILITY

Arctic Blast[™] 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.

TYPICAL PRODUCT DATA AND PHYSICAL PROPERTIES

Boiling Point	-2 °F / -19 °C
Cools To:	-49 °F / -45 °C
Vapor Density (air=1) @ 70°F	4.0
Solubility in Water @ 70°F /1 atm	>0.10% by weight
Specific Gravity (water = 1 @70°F)	1.17
Evaporation Rate (butyl acetate=1)	>1
Appearance	Clear, Colorless Liquified Gas
Odor	Slight Ethereal
Internal Pressure	47 psia @ 70 °F
Flash Point (TCC)	None
Shelflife	5 years
RoHS/WEEE Status	

<u>Material</u>	<u>Compatibility</u>
Buna-N	Good
Graphite	Excellent
HDPE	Fair
LDPE	Fair
Lexan™	Good
Neoprene	Good
Cross-Linked PE	Good
Polyacrylate	Good
Polystyrene	Good
PVC	Good
Silicone Rubber	Fair
Teflon™	Fair
Viton™	Poor

TECHNICAL & APPLICATION ASSISTANCE

Chemtronics® provides a technical hotline to answer your technical and application related questions. The toll free number is:
1-800-TECH-401.

ENVIRONMENTAL IMPACT DATA

ENVIRONMENTAL IMPACT DATA			
CFC	0.0%	VOC	0.0%
HCFC	0.0%	HFC	0.0%
CL Solv.	0.0%	ODP	0.0

USAGE INSTRUCTIONS

For industrial use only.
 Read MSDS carefully prior to use.
 No special surface preparation is required prior to using Arctic Blast™ Freeze Spray. Direct spray onto the area to instantly cool components, circuit boards or adhesives. For optimum performance and pin point control, use Arctic Blast™ Freeze Spray with the attached extension tube.

AVAILABILITY

ES1054 10 oz. Aerosol

DISTRIBUTED BY:

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 0.0. 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. VOC consideration is based on the materials being not photochemically reactive by Commonly Used Standards (material supplier).

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.

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MANUFACTURED BY:

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 KENNESAW, GA 30152
 1-770-424-4888

REV. A (04/11)



NEW!

Arctic Blast™ and Arctic Storm™

New Ultra-Low Global Warming Freeze Spray

Responding to the new global warming regulations has just become much easier. Arctic Blast™ and Arctic Storm™ Freeze Sprays are the newest class of circuit coolants from ITW Chemtronics®, specifically formulated to quickly cool surfaces while minimizing the use of global warming compounds.

ITW Chemtronics®
Nothing Cleans Like Chemtronics

Chemtronics® Freeze Sprays are exceptionally pure, nonflammable, and provide instantaneous freezing action while leaving no residue. Conveniently packaged and designed for either pinpoint or full board application, these non-reactive circuit refrigerants vaporize instantly while cooling targeted areas. They are used to:

- Test for and locate thermal intermittent components and systems
- Provide heat sink protection for heat sensitive components during soldering and desoldering
- Perform low temperature testing of prototype circuitry and electromechanical systems
- Locate hairline cracks in stressed traces of PC board
- Freeze adhesives for quick removal

Arctic Blast™

The ultra-low GWP freeze spray with pin-point accuracy for isolating individual components

- Ultra-low Global Warming Potential
- Pinpoint spray isolates individual components without freezing surrounding areas
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1054 10 oz. aerosol

Arctic Blast™ Antistat

The ultra-low GWP antistatic freeze spray with pin-point accuracy for isolating individual components

- Ultra-low Global Warming Potential
- Pinpoint spray isolates individual components without freezing surrounding areas
- Antistatic formulation ideal for use on static sensitive components
- Non-frosting
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1055 10 oz. aerosol

Freez-It®

The high-performance, pinpoint-accurate freeze spray for isolating individual components on PC boards

- Pinpoint spray isolates individual components without freezing surrounding areas
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1050 10 oz. aerosol
ES1550 15 oz. aerosol

Freez-It® Antistat

The high-performance, pinpoint-accurate freeze spray that safely cools individual static-sensitive components

- Pinpoint spray isolates individual components without freezing surrounding areas
- Antistatic formulation ideal for use on static sensitive components
- Non-frosting
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1051 10 oz. aerosol
ES1551 15 oz. aerosol

Arctic Storm™

The ultra-low GWP freeze spray with a wide spray for cooling entire PC boards

- Ultra-low Global Warming Potential
- Wide spray for cooling an entire board
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1056 10 oz. aerosol

Freeze Spray

The economical, general purpose freeze spray with a wide spray for cooling entire PC boards

- Wide spray for cooling entire boards
- Safe on plastics
- Nonflammable
- Ozone safe
- Filtered to 0.2 microns

ES1052 10 oz. aerosol



Arctic Blast™ and Arctic Storm™ Freeze Sprays are formulated with HFO-1234ze, a new material that has a significantly lower global warming potential (GWP) than previously used materials. This new material has a GWP of 6, and compares very favorably to HFC-134a (GWP of 1300) and HFC-152a (GWP of 140). In addition, since it has a short atmospheric lifetime with a very low photochemical ozone creation potential, it is not expected to be classified as a VOC.

Product Selection Guide

Product	Application	Global Warming Potential*	Volatile Organic Compound**	Frost Formation	Cooling Speed	Cooling Temperature
Arctic Blast™	Pinpoint	6	0.0%	Yes	Fast	-49°F/-45°C
Arctic Blast™ Antistat	Pinpoint	6	0.9%	No	Fast	-49°F/-45°C
Arctic Storm™	Wide Area	6	0.0%	Yes	Very Fast	-49°F/-45°C
Freeze-It®	Pinpoint	1300	0.0%	Yes	Fast	-60°F/-51°C
Freeze-It® Antistat	Pinpoint	1300	0.9%	No	Fast	-60°F/-51°C
Freeze Spray	Wide Area	1300	0.0%	Yes	Very Fast	-60°F/-51°C

* Global warming potential (GWP) is calculated based on a 100 year time horizon. Carbon dioxide has a GWP of 1.

** VOC is the Volatile Organic Compounds content by weight.



ITW Chemtronics® — Offering you the right products for your applications.

Still not sure which product is right for your application? ITW Chemtronics' sales and technical services staff are ready with expert guidance on product selection — ensuring that you have the information necessary to make the right choice.

Call your local ITW Chemtronics sales representative for expert guidance with your application needs.

Need Technical Information?

Call our Technical Hotline at 1-770-424-4888 ext 137 or e-mail us at AskChemtronics@chemtronics.com

Visit us on the web at www.chemtronics.com



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