

Material Safety Data Sheet**Section 1 CHEMICAL PRODUCT SECTION**

Identification: Product Name: Freeze Spray
Product Number: 8660, AS1551

Recommend use: Freeze spray and heat sink for PCB rework and repair

Manufacturer: ACL Incorporated
840 W 49th Place
Chicago, Il 60609
PH: (01) 847.981.9212 [U.S.A.]
FAX: (01) 847.981.9278 [U.S.A.]

Emergency telephone: INFOTRAC: (01) 800.535.5053 (day or night)

Section 2 HAZARDOUS IDENTIFICATION

HMIS HAZARD RATING:
(0) Fire (1) Health (1) Reactivity (B) Protective Equipment

Emergency Overview: Product is non-flammable. Pressurized container may explode when exposed to heat or flame. Contact may cause skin and eye irritation. Mist may cause nose and throat irritation. Ingestion may cause nausea, vomiting, pain, upset stomach, and diarrhea.

Potential health effects:

Skin Contact: This product may cause irritation to the skin. Prolonged or repeated contact with this product may dry and/or defat the skin. This product may be harmful if it is absorbed through the skin.

Eye Contact: Liquid or vapors may irritate the eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Eye contact may lead to permanent damage if not treated promptly.

Ingestion: This product is harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, and diarrhea. *Target Organs:* Central Nervous System, lungs, skin, eyes.

Inhalation: This product may cause dizziness, nausea, upper respiratory irritation, drowsiness, mental depression or narcosis, difficulty in breathing, irregular heartbeats. See Section 8 for recommended exposure limits.

Section 3 COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL	C.A.S. Number	EC#	Weight %	EU Classification and Risk phrases
1,1,1,2 Tetrafluoroethane	811-97-2	212-377-0	95 - 99 %	not classified
Methanol	67-56-1	200-659-6	1 - 5%	F; R11 T; R23/24/25 R39/23/24/25

Section 4 FIRST AID MEASURES

Eye: Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately.

Skin: For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.

Inhalation: Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

Ingestion: If the material is swallowed, get immediate medical attention or advice. DO NOT induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek immediate medical attention. Do not give anything.

Section 5	FIRE FIGHTING MEASURES
------------------	-------------------------------

Flash Point: **concentrate:** N/A **propellant:** N/A
Flammability limits in air: N/A upper % by volume propellant N/A lower % by volume propellant

Basic Fire Fighting Procedures: Pressurized Container: DO NOT cut, drill, grind, or weld near full, partially full, or empty product containers.

Fire Fighting Instructions: Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Extinguishing Media: Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools this may results in frothing and increase fire intensity.

Special Fire Fighting Procedures: Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Unusual Fire & Explosion Hazards: During a fire, irritating gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water

Section 6	ACCIDENTAL RELEASE MEASURES
------------------	------------------------------------

Emergency Action: Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Wear appropriate protective equipment and clothing during clean-up.

Containment: Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with non-flammable absorbent and place in closed chemical waste containers.

Section 7	HANDLING AND STORAGE
------------------	-----------------------------

Handling: Keep this product away from heat, sparks or open flame. Avoid getting this material into contact with your skin and eyes. Avoid breathing mists or aerosols of this product. Use this product with adequate ventilation.

Storage: Store in a cool, dry, well-ventilated area. Keep away from direct sunlight.

Storage Temperatures: Ambient. Avoid freezing and do not store at temperatures above 120 ° F (48.9°C)

General: Read and follow the directions on the product label.

Empty Container Precautions: Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container.

Section 8	EXPOSURE CONTROL / PERSONAL PROTECTION
------------------	---

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): Exposure Limits 8 Hours TWA (ppm)

Component(s)	TLV	OSHA-STEL
1,1,1,2 Tetrafluoroethane	1000ppm	
Methanol	200ppm	250ppm

Engineering Controls: Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product.

Personal Protection:

General: Use good hygiene practices in handling this material.

Respiratory Protection: Use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA).

Skin and Body Protection: Impervious gloves should be used when handling this product. Use of protective coveralls and long sleeves is recommended.

Eye Protection: Wear goggles or safety glasses with side shields.

Section 9	PHYSICAL AND CHEMICAL PROPERTIES
------------------	---

Solids: N/A	Evaporation Rate: <1 (butyl acetate=1)
PH: N/A	Boiling Point: N/A
Specific Gravity: 1.24	Color: Clear
Physical State: Liquid	Odor: Slight Ether
%VOC: 2	

Section 10	STABILITY AND REACTIVITY
-------------------	---------------------------------

General: This product is stable under normal storage conditions. Hazardous polymerization will not occur.

Incompatible Materials: Strong oxidizing agents, reducing agents, acids, alkalis.

Conditions to Avoid: Keep away from heat, direct sunlight, open flames, sparks, or sources of ignition.

Section 11	TOXICOLOGY INFORMATION
-------------------	-------------------------------

1,1,1,2 Tetrafluoroethane: No information available.

Methanol: Oral LD50: 6.2 g/kg (rat)

Inhalation LC50: >22500 ppm/8H (rat)

Dermal LD50: 15.89 g/kg (rabbit)

Section 12	ECOLOGICAL INFORMATION
-------------------	-------------------------------

No information

Section 13	DISPOSAL CONSIDERATIONS
-------------------	--------------------------------

Do not puncture, incinerate or compact aerosol can.

When contents are depleted continue to depress button until all gas is expelled.

RCRA 40 CFR 261 Classifications: As packaged and after use, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it has neither the characteristics of Subpart C nor is listed in Subpart D.

Federal, State, and Local laws governing disposal of material can differ.

Ensure proper disposal compliance with proper authorities before disposal.

Section 14	TRANSPORTATION INFORMATION
-------------------	-----------------------------------

U.S. DOT Information: Basic Description: NON HAZARDOUS MATERIAL
 Proper Shipping Name: Consumer Commodity
 Hazard Class: NA
 Packaging Group: NA
 UN Number: NA
 Limitations: NA

IATA: Proper Shipping Name: Aerosols, Non-Flammable
 Hazard Class: 2.2
 Packing Group: NA

UN Number: 1950
 Limited Quantity: Y203

Ocean: Proper Shipping Name: Aerosols, Non-Flammable
 Hazard Class: 2.2
 Packing Group: NA
 UN Number: 1950
 Limited Quantity: Y203

Section 15	REGULATORY INFORMATION
-------------------	-------------------------------

US Federal Regulations: MSDS complies with the OSHA Hazard Communication Rule, 29 CFR 1910.1200.
 CERCLA/Superfund, 40 CFR 117. 302: **---None of the chemicals have a reportable quantity---**

SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:

Section 302 – None of the chemicals are EPCRA hazards

CERCLA/Superfund, 40 CFR 117, 302: Methanol 5,000 RQ

CHEMICAL	C.A.S. Number	Weight %	Section 311/312
Methanol	67-56-1	<5%	Acute Health Hazard; Fire Hazard

Section 313 – List of Toxic Chemicals (40CFR 372): This product **does not** contain any chemicals on the 313 list of Toxic Chemicals.

Toxic Substance Control Act (TSCA): **All substances are TSCA listed.**

Resource Conservation and Recovery Act (RCRA 40 CFR 261) Subpart C & D: Refer to Section 13

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (formerly section 307) 40 CFR 116

(formerly section 311): This product contains no chemicals which are listed

California Proposition 65: **--- None of the chemicals are on the Proposition 65 list---**

INTERNATIONAL REGULATIONS:

Canada WHMIS: This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

REACH: To the best of our ability, this MSDS is written in accordance to REACH Directive EC1907/2006 Annex II and GHS requirements. There are no substances in this product on the Candidate List of Substances of Very High Concern (SvHC).

Sections 16	OTHER INFORMATION
--------------------	--------------------------

REVISION DATES, SECTIONS, REVISED BY:

19-Aug-13	Original Preparer: Steve Allen
09-OCT-13	Review, mkb
10-Jan-14	Changed name and part#, mkb

ABBREVIATIONS USED IN THIS DOCUMENT:

NE – Not Established, NA – Not Applicable, NIF – No Information Found, ND – Not Determined

ABRIDGED LIST OF REFERENCES:

Code of Federal Regulations (CFR)
 The Sigma-Aldrich Library of Regulatory and Safety Data
 Chemical Guide and OSHA Hazardous Communication Standard
 The Environmental Protection Agency (www.epa.gov)
http://oehha.ca.gov/prop65/prop65_list
<http://orise.orau.gov/emi/hazards-assessment/files/resources/epa-title3.pdf>

To the best of our knowledge, the information contained herein is accurate. **However, neither ACL STATICIDE nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.** Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.