CHEMTRONICS®

MSDS #0614

SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Company Address:
8125 Cobb Center Drive
Kennesaw, GA 30152

Product Information: 800-TECH-401
Customer Service: 800-645-5244

Emergency: (Chemtrec) 800-424-9300
Revision Date: October 1, 2000

Product Identification

FREEZE SPRAY

Product Code: ES1052 , ES1052C

SECTION 2: COMPOSTION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Wt. % Range
Tetrafluoroethane	811-97-2	100%

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: Clear, colorless liquified gas. This product is nonflammable. Exposure to liquid may cause frostbite.
Eyes: Contact with liquid is irritating and may cause frostbite.
Skin: Contact causes frostbite; prolonged contact can cause skin irritation.
Ingestion: Unlikely due to volatile nature of product. Contact with liquid may cause frostbite to mouth and throat tissues.
Inhalation: Harmful if inhaled. High concentrations of vapors in immediate area can displace oxygen and can cause dizziness, unconsciousness, and even death with longer exposure. Keep people away from such vapors without self-contained breathing apparatus.
Pre-Existing Medical Conditions Aggravated by Exposure: Heart, lung, skin, eye.

SECTION 4: FIRST AID MEASURES

Eyes: Treat for possible frostbite, then flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Have eyes examined and tested by medical personnel if irritation develops or persists.
Skin: Treat for possible frostbite, then wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persist. Wash clothing separately before reuse.
Ingestion: Treat for possible frostbite. Swallowing less than an ounce will not cause significant harm. For larger amounts, do not induce vomiting. Get immediate medical attention.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: None to boiling (TCC) LEL/UEL: Nonflammable
Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Large Spills: Shut off leak if possible and safe to do so. Wear self-contained breathing apparatus and appropriate personal protective equipment. Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal. Do not flush to sewer. Avoid runoff into storm sewers and ditches which lead to waterways.
Small Spills: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container for proper disposal.

SECTION 7: HANDLING AND STORAGE

Avoid prolonged or repeated contact with eyes, skin, and clothing. Wash hands before eating. Use with adequate ventilation. Avoid breathing product vapor or mist. Do not reuse this container. Store in a cool dry place away from heat, sparks and flame. Keep container closed when not in use. Do not store in direct sunlight.
KEEP OUT OF REACH OF CHILDREN.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Guidelines:

CHEMICAL NAME	ACGIH TWA	OSHA PEL	OTHER (DUPONT) AEL
Tetrafluoroethane	NA	NA	1,000 ppm

Work/Hygienic Practices: Good general ventilation should be sufficient to control airborne levels. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Wear a positive pressure air-supplied respirator in situations where there may be potential for airborne exposure. Wear safety glasses with side shields (or goggles) and a full face shield. Wear rubber or other chemically resistant gloves when handling this material.

NFPA and HMIS Codes:		
Health	1	1
Flammability	0	0
Reactivity	1	1
Personal Protection	-	B

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Clear, colorless liquified gas
Odor: Slight ethereal odor
pH: NA
Vapor Pressure: 82 psig @ 77 F
Percent Volatile: 100%
Boiling Point: -15.7°F

Solubility in Water: 0.10% by weight @ 77°F/1 atm
Specific Gravity: (Water =1) 1.21
Evaporation Rate: >1
(Butyl acetate=1)
Vapor Density: 3.18 @ 77F° (Air = 1)

20-3000

SECTION 10: STABILITY AND REACTIVITY

Stability - This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.
Incompatibility: Do not mix with powdered alkali and alkaline earth metals or strong oxidizing agents.
Products of Decomposition: Thermal decomposition may release hydrofluoric acid vapor.
Hazardous Polymerization: Will not occur
Conditions to Avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATION

Inhalation:

Tetrafluoroethane	Rats ALC	567,000 ppm/4hrs

Information from Dupont.
Cancer Information: No ingredients listed as human carcinogens by NTP or IARC
Reproductive effects: none Teratogenic effects: none Mutagenic effects: none

SECTION 12: ECOLOGICAL INFORMATION

Environmental Impact Information
Avoid runoff into storm sewers and ditches which lead to waterways. Water runoff can cause environmental damage.

REPORTING
US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is:
1-800-424-8802

Environmental Impact Data
(percent by weight)

CFC	0.0%	VOC	0.0.%
HCFC	0.0%	HFC	100.0%
Cl. Solv.	0.0%	ODP	0.00

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

	Proper Shipping Name	UN Number	Hazard Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
Air:	1,1,1,2-Tetrafluoroethane	UN 3159	2.2	NA	NA	Nonflammable Gas	200	75kg;150kg
Ground:	Consumer Commodity ORM-D	NA	NA	NA	NA	ORM-D	173.306 DOT-E-10232	

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).
None
This information should be included on all MSDSs copied and distributed for this material.
TOXIC SUBSTANCES CONTROL ACT (TSCA).
All ingredients of this product are listed on the TSCA Inventory.
WHMIS: Class A; Class D2B
This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

SECITON 16: OTHER INFORMATION

Product is a Level 1 aerosol. Do not puncture or incinerate containers. Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.
REFERENCES: 29 CFR 1910.1200 40 CFR 300-700 ANSI Z400.1-1998
NIOSH RTECS provided by CHEM-BANK by SILVERPLATTER
Guide to Occupational Exposure Values 1997

To the best of our knowledge, the information contained herein is accurate. However, all materials may present unknown hazards and should be used with caution. In particular, improper use of our products and their inappropriate combination with other products and substances may produce harmful results which cannot be anticipated. Final determination of the suitability of any material is the sole responsibility of the user. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that may exist.

20-3000

pH: NA
Vapor Pressure: 493 @ 70F (Liquid)
Vapor Density: >1
(Air = 1)
Boiling Point: 90F (Dichlorofluoroethane)
Evaporation Rate: >1
(Butyl acetate=1):
Viscosity: 1 (Approximately)
(Water = 1)
Percent Volatile: 100%
Melting Point: N/A

SECTION 10: STABILITY AND REACTIVITY

Stability: - This product is stable. Conditions to Avoid: Do not spray near open flames, red hot surfaces or other sources of ignition.
Incompatibility: Do not mix with powdered alkali and alkaline earth metals or strong oxidizing agents.
Products of Decomposition: Thermal decomposition may release carbon monoxide, carbon dioxide and incompletely burned hydrocarbons as well as hydrochloric and hydrofluoric acid vapor.
Hazardous Polymerization: Will not occur Conditions to Avoid: NA

SECTION 11: TOXICOLOGICAL INFORMATION:

Inhalation:

Dichlorofluoroethane*	LC50 rats	62,000ppm/4hrs
Carbon Dioxide	LCLo/Human	9pph/5min
Ethanol	LC50 rats	20,000ppm/10hr
Methylcyclohexane	LC50 mouse	41,500 mg/m3/2hrs
Carbon Dioxide	LCLo/Human	9pph/5min

Skin

Dichlorofluoroethane*	LD50 rats	> 2mg/kg
Methylcyclohexane	rabbit LD	> 86700 mg/kg
Ethanol	rabbit	400 mg open MLD

Ingestion:

Dichlorofluoroethane*	LD50 rats >	5mg/kg
Ethanol	LD50 rat	7060mg/kg
Methylcyclohexane	LDLo Mouse	2,250mg/kg

Eye:
Ethanol rabbit 500 mg SEV

*Information provided by manufacturer.
Cancer Information: No ingredients listed as human carcinogens by NTP or IARC

SECTION 12: ECOLOGICAL INFORMATION

Environmental Impact Information
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REPORTING
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1-800-424-8802

Environmental Impact Data
(percent by weight)

CFC	0.0%	VOC	5.0%
HCFC	92.5%	HFC	0.0%
Cl. Solv.	0.0%	ODP	0.10

For more information call:
1-800-645-5244

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all federal, state and local regulations. Water runoff can cause environmental damage.

SECTION 14: TRANSPORTATION INFORMATION

	Proper Shipping Name	UN Number	Class	Sub. Risk	Pkg. Group	Hazard Label	Pkg. Instr.	Max. Quantity
Air:	Aerosols, nonflammable n.o.s	UN1950	2.2	NA	NA	Nonflammable Gas	203	75kg;150kg
Ground:	Consumer Commodity ORM-D	NA	NA	NA	NA	ORM-D	Pkg. Auth.	173.306

SECTION 15: REGULATORY INFORMATION

SECTION 313 SUPPLIER NOTIFICATION This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

Chemical Name	CAS#	Wt. % Range
Dichlorofluoroethane	1717-00-6	90.0-95.0

This information should be included on all MSDSs copied and distributed for this material.
TOXIC SUBSTANCES CONTROL ACT (TSCA). All ingredients of this product are listed on the TSCA Inventory.

SECTION 16: OTHER INFORMATION:

Product is a Level 1 aerosol. Do not puncture or incinerate containers. Normal ventilation for standard manufacturing practices is usually adequate. Local exhaust should be used when large amounts are released.
REFERENCES: 29 CFR 1910.1200 40 CFR 300-700 ANSI Z400.1-1993
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