

MSDS Information

Section 1. CHEMICAL PRODUCT SECTION

Product Name: FD ELECTRONIC CLEANER 100% Freon TF

Product Number: DIS 1638 Aerosol

General Use:

Product Description:

MANUFACTURER: Tech Spray, Inc.

P.O. Box 949

Amarillo, TX 79105-0949

PHONE: 806/372-8523

FAX: 806/372-8750

For Chemical Emergency, Spill, Leak, Fire

Exposure, or Accident Call CHEMTREC

DAY OR NIGHT 1-800-424-9300.

Section 2. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL	C.A.S. Number	Weight %
1,1,2-Trichlorotrifluoroethane (Freon TF)	76-13-1	80
Chlorodifluoromethane	75-45-6	18
Carbon Dioxide	124-38-9	<2

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

	Exposure Limits 8 Hours TWA (PPM)		
	OSHA PEL	ACGIH TLV	Supplier
1,1,2-Trichlorotrifluoroethane (Freon TF)	OSHA PEL 1000ppm ACGIH TLV 1000ppm (STEL 1250ppm)		
Chlorodifluoromethane	OSHA TWA 1000ppm ACGIH TLV 1000ppm		
Carbon Dioxide	OSHA PEL 10,000ppm ACGIH TLV 5000ppm		

Section 3. HAZARD IDENTIFICATION

Emergency Overview:

Potential Health Effects:

INHALATION: Major route of exposure. Vapor is heavier than air and can cause suffocation by reducing the available oxygen for breathing. Breathing high concentrations of vapor may cause light-headedness, giddiness, shortness of breath, confusion, and may lead to narcosis, cardiac irregularities, unconsciousness or even death.

EYES: Liquid can cause slight, temporary irritation with slight temporary corneal injury. Vapors can irritate eyes.

SKIN: Not a corrosive or irritant; however, repeated or prolonged exposure can cause defatting of skin.

INGESTION: Single dose toxicity is low to moderate. If vomiting occurs the liquid can be aspirated into lungs, which can cause chemical pneumonia and systemic effects. Human psychotropic, gastrointestinal, and central nervous system effects possible.

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Section 4.

FIRST AID MEASURES

Inhalation:

Move to fresh air in case of accidental inhalation of vapors. If victim has stopped breathing, give artificial respiration. Call for prompt medical attention.

Eye Contact:

Flush eyes with large amounts of water for 15 minutes or until irritation subsides. If irritation persists, get medical attention.

Skin Contact:

Remove Contaminated clothing (including shoes) and wash before reuse. Flush with large amounts of water. Use soap if available. If irritation persists, seek medical attention.

Ingestion:

Do not induce vomiting unless directed by a physician. If conscious and alert, give two glasses of water. Seek medical attention immediately.

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Section 5.

FIRE FIGHTING MEASURES

Flash Point & Method: None TCC Method

Flammable Limits: LEL: NA UEL: NA

Autoignition Temperature:

GENERAL HAZARD:

Aerosol cans may erupt with force at temperatures above 120 degrees F.

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear self contained, positive-pressure breathing apparatus and avoid skin contact.

FIRE FIGHTING EQUIPMENT:

Water, foam, dry chemical, carbon dioxide.

HAZARDOUS COMBUSTION PRODUCTS:

Smoke, fumes and oxides of carbon.

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Section 6. ACCIDENTAL RELEASE MEASURES

LAND SPILL:

Evacuate area. Ventilate area well and avoid breathing vapors. Vapor concentration will be highest along floor and in low lying areas. Pick up liquid on suitable absorbent and store in sealed containers.

WATER SPILL:

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Section 7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient

STORAGE PRESSURE: Atmospheric

GENERAL:

Keep container closed when not in use. Store in cool, well ventilated place out of direct sunlight and away from incompatible materials. (See STABILITY AND REACTIVITY Section 10.) Follow all MSD Sheet and Label warnings even after container is emptied.

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Section 8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls:

- (X) Local Exhaust ventilation acceptable.
- () Mechanical ventilation recommended.
- () Use explosion-proof ventilation equipment.
- () Do not use in confined spaces without mechanical ventilation equipment.

See section 2 for component exposure guidelines.

Personal Protection:

RESPIRATOR:

If concentrations are over the exposure limit and are known, air purifying respirator with Organic Vapor Cartridges may be acceptable. Refer to cartridges for acceptable levels. If concentrations are over exposure limit and are unknown, use a supplied air respirator.

HAND PROTECTION:

- (X) Gloves recommended
 - (X) Solvex
 - () Butyl
 - () Natural Latex
 - () Neoprene
 - () Buna
 - () Cotton/Jersey

EYE PROTECTION:

- (X) Safety Glasses
- () Chemical Goggles
- () Full Face Shield

OTHER RECOMMENDATIONS:

() Rubber Boots () Splash-proof chemical resistant suit/apron

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Density.....	NIF	pH.....	NA
Boiling Point.....	47C / 116F	% Volatile.....	100
Freezing Point.....	NIF	% Solids.....	0
Vapor Density (Air=1):..	6.5	Evaporation Rate (H2O=1)...	NIF
Solubility in Water.....	0	Viscosity.....	N/A
Molecular Weight.....	N/A	Physical State.....	LIQUID
Non-Exempt VOC (g/l)....	NIF	Odor.....	NIF

Appearance: Clear water-white mobile liquid with slight ethereal odor.

Section 10. STABILITY AND REACTIVITY

GENERAL:

STABLE

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Contact with open flame, heat.

Reactive alkali metals, strong acids & bases.

HAZARDOUS DECOMPOSITION:

Hydrogen chloride, phosgene, chlorine, carbon dioxide, and carbon monoxide.

Section 11. TOXICOLOGICAL INFORMATION

RESULTS OF COMPONENT TOXICITY TEST PERFORMED:

Information not available.

HUMAN EXPERIENCE:

Information not available.

Section 12. ECOLOGICAL INFORMATION

FURTHER INFORMATION:

Information not available.

Section 13. DISPOSAL CONSIDERATIONS

RCRA 40 CFR 261 Classification:

Federal, State, and Local laws governing disposal of materials can differ.
Ensure proper disposal compliance with proper authorities before disposal.

Section 14. TRANSPORTATION INFORMATION

U.S. DOT Information

Basic Description:

Proper Shipping Name:

Hazard Class:
Packaging Group:
UN Number:
Limitations:

IATA

Proper Shipping Name:
Hazard Class:
Packaging Group:
UN Number:
Limitations:

IMO

Proper Shipping Name:
Class:
UN Number:
Packaging Group:
EMS:
MFAG:
Marine Pollutant:
Canadian TDG:

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Section 15. REGULATORY INFORMATION

UNITED STATES FEDERAL REGULATIONS:

MSDS complies with OSHAs Hazard Communication Rule, 29 CFR 1910.1200.

CERCLA/SUPERFUND, 40 CFR 117, 302:

--- None of the chemicals are Superfund hazards ---

SARA SUPERFUND AND REAUTHORIZATION ACT OF 1986

TITLE III Sections 302, 311, 312 and 313:

Section 302 - Extremely hazardous substances (40 CFR 355):

--- None of the chemicals are Section 302 hazards ---

Section 311/312 - Material Safety Data Sheet Requirements (40 CFR 370)

() By our hazard evaluation, this product is non-hazardous.

(X) By our hazard evaluation, this product is hazardous. It should be reported under the following EPA hazard.

() Immediate (acute) health hazard

() Delayed (chronic) chronic health hazard

() Sudden release of pressure hazard

() Reactive hazard

Section 313 - List of Toxic Chemicals (40 CFC 372)

This product contains the following chemicals (at levels of 1% or greater) which are found on the 313 list of Toxic Chemicals.

CHEMICAL	C.A.S. NUMBER	WEIGHT %
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--- None of the chemicals are 313 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 11. for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15
(FORMERLY SECTION 307), 40 CFR 116 (FORMERLY SECTION 311)

This product contains the following chemicals which are listed:
CHEMICAL C.A.S. NUMBER WEIGHT %

CLEAN AIR ACT: --- No Information ---

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product contains the following ingredients which appear on the
California proposition 65 list:

CHEMICAL C.A.S. NUMBER WEIGHT %

--- None of the chemicals are on the Proposition 65 list ---

INTERNATIONAL REGULATIONS:

CANADA WHIMS: NIF

EUROPE EINECS NUMBERS: NIF

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Section 16.	OTHER INFORMATION
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LABEL INFORMATION:

European risk and Safety Phrases: NIF

European Symbols Needed: NIF

Canadian WHIMS Symbols: NIF

NFPA HAZARD RATING:

() Fire () Health () Reactivity

REVISION DATES, SECTIONS, REVISED BY:

27-JLY-94, CONVERTED TO ANSI STANDARD, B. RIFFEL

ABBREVIATIONS USED IN THIS DOCUMENT:

NE - Not Established, NA - Not Applicable, NIF - No Information Found

REFERENCES:

Code of Federal Regulations (CFR)

The Sigma-Aldrich Library of Regulatory and Safety Data

Chemical Guide and OSHA Hazard Communication Standard

Various Federal, State & Local Regulations

To the best of our knowledge, the information contained herein is accurate.
However, neither Tech Spray, Inc. or 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.
