NTP OR IARC.

-- FREEZ-IT ES1050, ES1550, ES1050C, ES1550C CHEMTRONICS INC ______ MSDS Safety Information ______ FSC: 6850 NIIN: 01-333-1841 MSDS Date: 10/01/2000 MSDS Num: CLHDF Product ID: FREEZ-IT ES1050, ES1550, ES1050C, ES1550C Responsible Party Cage: 21267 Name: CHEMTRONICS INC Address: 8125 COBB CENTER DRIVE City: KENNESAW GA 30152 Info Phone Number: 800-TECH-401;800-645-5244 Emergency Phone Number: 800-645-5244 Resp. Party Other MSDS No.: MSDS # 0602 (FORMALLY FREEZ-IT 2000) ______ Item Description Information ______ Item Manager: S9G Item Name: FREEZING COMPOUND Specification Number: NONE Type/Grade/Class: NONE Unit of Issue: BX Quantitative Expression: 0000000012EA UI Container Qty: 1 Type of Container: IP.7B IN 4G ______ Ingredients Cas: 811-97-2 Name: TETRAFLUOROETHANE Percent by Wt: 100. Other REC Limits: AEL:1000 PPM(DUPONT) OSHA PEL: NOT ESTABLISHED ACGIH TLV: NOT ESTABLISHED ______ Health Hazards Data ______ LD50 LC50 Mixture: ALC (RATS) = 567,000 PPM/4 HOURS Carcinogenicity Inds - NTP: NO Effects of Exposure: EYE: 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. CONT ACT WITH LIQUID MAY CAUSE FROSTBITE TO MOUTH AND THROAT TISSUES. INHALATION: HARMFUL IF INHALED. HIGH CONCENTRATIONS OF VAPOR IN IMMEDIATE AREA CAN DISPLACE OXYGEN AND CAUSE HEART PROBLEMS, DIZZINESS, UNCONSCIOUSNESS, AND EVEN DEATH WITH LONGER EXPOSURE. KEEP PEOPLE AWAY FROM SUCH VAPORS WITHOUT SELF-CONTAINED BREATHING APPARATUS. Explanation Of Carcinogenicity: NO INGREDIENTS LISTED AS HUMAN CARCINOGENS BY

Medical Cond Aggravated By Exposure: HEART, LUNG, SKIN, EYE.

First Aid: EYES-TREAT FOR POSSIBLE FROSTBITE, THEN FLUSH WITH PLENTY OF WATER. AFTER INITIAL FLUSHING, REMOVE ANY CONTACT LENSES & CONTINUE FLUSHING FOR 15 MINS. SKIN-TREAT FOR POSSIBLE FROSTBITE, THEN WASH SK IN WITH SOAP & WATER. REMOVE CLOTHING. GET MEDICAL AID FOR IRRITATION. INHALE-REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, PROVIDE OXYGEN. GET MEDIC AL AID. INGESTION-TREAT FOR POSSIBLE FROSTBITE. SWALLOWING < 1 OZ. WILL NOT CAUSE SIGNIFICANT HARM. FOR LARGER AMOUNTS, DO NOT INDUCE VOMITING. GET MEDICAL AID.

Handling and Disposal

Spill Release Procedures: SMALL SPILLS: USE INERT ABSORBENT MATERIAL. PLACE INTO PROPER WASTE DISPOSAL CONTAINERS WITH LIDS TIGHTLY COVERED. LARGE SPILLS: SHUT OFF LEAK IF POSSIBLE AND SAFE TO DO SO. WEAR SELF-CONTAINED BREATH ING APPARATUS AND APPROPRIATE PERSONAL EQUIPMENT. ABSORB SPILL WITH INERT MATERIAL (E.G. DRY SAND OR EARTH), THEN PLACE IN A CHEMICAL WASTE CONTAINER FOR DISPOSAL. AVOID RUNOFF TO SEWER, WATERWAYS.

Waste Disposal Methods: DISPOSE OF WASTE IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS. WATER RUN-OFF CAN CAUSE ENVIRONMENTAL DAMAGE.

Handling And Storage Precautions: AVOID PROLONGED OR REPEATED CONTACT WITH EYES, SKIN, & CLOTHING. WASH HANDS BEFORE EATING. USE WITH ADEQUATE VENTILATION. AVOID BREATHING PRODUCT VAPOR OR MIST.DO NOT REUSE CONTAINER. STORE IN A COOL DRY PLACE AWAY FROM HEAT, SPARKS & FLAME. KEEP CONTAINER CLOSED WHEN NOT IN USE.

Other Precautions: DO NOT STORE IN DIRECT SUNLIGHT. KEEP OUT OF REACH OF CHILDREN.

Fire and Explosion Hazard Information

Flash Point Method: TCC

Flash Point Text: NONE TO BOILING

Lower Limits: NONFLAMMABLE Upper Limits: NONFLAMMABLE

Extinguishing Media: USE ALCOHOL FOAM, CARBON DIOXIDE OR WATER SPRAY WHEN FIGHTING FIRES INVOLVING THIS MATERIAL.

Fire Fighting Procedures: AS IN ANY FIRE, WEAR SELF-CONTAINED BREATHING APPARATUS (PRESSURE-DEMAND, MSHA/NIOSH APPROVED OR EQUIVALENT) & FULL PROTECTIVE GEAR.

Control Measures

Ventilation: GOOD GENERAL VENTILATION SHOULD BE SUFFICIENT. USE LOCAL EXHAUST TO CONTROL CONTAMINANTS TO BELOW THEIR TLV'S.

Protective Gloves: RUBBER OR OTHER CHEMICALLY RESISTANT GLOVES WHEN HANDLING THIS MATERIAL.

Eye Protection: WEAR SAFETY GLASSES WITH SIDE SHIELDS (OR GOGGLES).

Work Hygienic Practices: WASH CLOTHING SEPERATELY BEFORE RESUE.

Supplemental Safety and Health: FREEZ-IT (FORMERLY FREEZ-IT 2000).

Physical/Chemical Properties

HCC: V2

NRC/State LIC No: NONE

Boiling Point: =-26.5C, -15.6F

Decomp Text: NOT GIVEN

Vapor Pres: 4730MM/HG @ 77 DEG F

Vapor Density: 3.18 @ 77F Spec Gravity: 1.21 (H20=1)

Evaporation Rate & Reference: >1 (N-BUTYL ACETATE=1)

Solubility in Water: 67 MG/L @ 77F

Appearance and Odor: CLEAR, COLORLESS LIQUIFIED GAS, SLIGHT ETHEREAL ODOR.

Percent Volatiles by Volume: 100

Reactivity Data

Stability Indicator: YES

Stability Condition To Avoid: DO NOT SPRAY NEAR OPEN FLAMES, RED HOT SURFACES OR OTHER SOURCES OF IGNITION.

Materials To Avoid: DO NOT MIX WITH POWDERED ALKALI AND ALKALINE EARTH METALS, STRONG OXIDIZING AGENTS.

Hazardous Decomposition Products: THERMAL DECOMPOSITION MAY RELEASE HYDROFLUORIC ACID VAPOR.

Hazardous Polymerization Indicator: NO

Conditions To Avoid Polymerization: WILL NOT OCCUR.

Toxicological Information

Toxicological Information: INHALATION: TETRAFLUOROETHANE, RATS, ALC 567,000PPM/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.

Ecological Information

Ecological: ENVIRONMENTAL IMPACT INFORMATION. ENVIRONMENTAL IMPACT DATA: AVOID RUNOFF INTO STORM SEWERS AND DITCHES WHICH LEAD TO (PERCENT BY WEIGHT) WATERWAYS. WATER RUNOFF CAN CAUSE ENVIRONMENTAL DAMAGE.CFC 0.0 %. VOC 0.0.%. REPORTING HCFC 0.0%. HFC 100.0%. US REGULATIONS REQUIRE REPORTING SPILLS OF THIS MATERIAL THAT CL. SOLV. 0.0% ODP 0.00 COULD REACH ANY SURFACE WATERS. THE TOLL FREE NUMBER FOR THE US COA ST GUARD NATIONAL RESPONSE CENTER IS: 1-800-424-8802.

MSDS Transport Information

Transport Information: 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; NONFLAMMABL E GAS; 200; 75KG;150KG. GROUND: CONSUMER COMMODITY; ORM-D; ORM-D; PKG. AUTH. 173.306, ORM-D DOT-E-10232.

Regulatory Information

Sara Title III 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.

Federal Regulatory Information: TOXIC SUBSTANCES CONTROL ACT (TSCA): ALL INGREDIENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.

Other Information

Other Information: W: 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. 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.

Transportation Information

Responsible Party Cage: 21267

Trans ID NO: 157996

Product ID: FREEZ-IT ES1050, ES1550, ES1050C, ES1550C

MSDS Prepared Date: 10/01/2000

Review Date: 07/26/2001

MFN: 5

Net Unit Weight: 14.2 LBS Multiple KIT Number: 0

Review IND: Y Unit Of Issue: BX Container QTY: 1

Type Of Container: IP.7B IN 4G

Detail DOT Information

DOT PSN Code: DTJ

Symbols: D

DOT Proper Shipping Name: CONSUMER COMMODITY

Hazard Class: ORM-D

Label: NONE

Non Bulk Pack: 156,306

Bulk Pack: NONE

Max Qty Pass: 30KGGROSS
Max Qty Cargo: 30KGGROSS

Vessel Stow Req: A

______ Detail IMO Information ______ IMO PSN Code: AKD IMO Proper Shipping Name: AEROSOLS o IMDG Page Number: 2102 UN Number: 1950 UN Hazard Class: 2(T) IMO Packaging Group: -Subsidiary Risk Label: T EMS Number: 2-13 MED First Aid Guide NUM: 620 ______ Detail IATA Information ______ IATA PSN Code: XRL IATA UN ID Num: 3159 IATA Proper Shipping Name: 1,1,1,2-\$TETRAFLUOROETHANE IATA PSN Modifier: (R134A) IATA UN Class: 2.2 IATA Label: NON-FLAMMABLE GAS Packing Note Passenger: 200 Max Quant Pass: 75 KG Max Quant Cargo: 150 KG Packaging Note Cargo: 200 ______ Detail AFI Information ______ AFI PSN Code: ANB AFI Proper Shipping Name: AEROSOLS, NON-FLAMMABLE, N.O.S. AFI PSN Modifier: ,(EACH NOT EXCEEDING 1L CAPACITY) AFI Hazard Class: 2.2 AFI UN ID NUM: UN1950 Special Provisions: P4 Back Pack Reference: A6.3

HAZCOM Label

Product ID: FREEZ-IT ES1050, ES1550, ES1050C, ES1550C

Cage: 21267

Company Name: CHEMTRONICS INC Street: 8125 COBB CENTER DRIVE

City: KENNESAW GA Zipcode: 30152

Health Emergency Phone: 800-645-5244

Label Required IND: Y

Date Of Label Review: 07/26/2001

Status Code: A
Origination Code: F
Eye Protection IND: YES
Skin Protection IND: YES
Signal Word: CAUTION

Respiratory Protection IND: NO

Health Hazard: Slight Contact Hazard: Slight

Fire Hazard: None

Reactivity Hazard: Slight

Hazard And Precautions: EMERGENCY OVERVIEW: CLEAR, COLORLESS LIQUEFIED GAS. THIS

PRODUCT IS NONFLAMMABLE. EXPOSURE TO LIQUID MAY CAUSE FROSTBITE.

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