

NATIONAL REFRIGERANTS -- 1,1,1,2-TETRAFLUOROETHANE, REFRIGERANT 134A - TETRAFLUOROETHANE, REFRIGERANT 134A
MATERIAL SAFETY DATA SHEET
NSN: 6830013706207
Manufacturer's CAGE: 7Y146
Part No. Indicator: A
Part Number/Trade Name: 1,1,1,2-TETRAFLUOROETHANE, REFRIGERANT 134A

General Information

Item Name: TETRAFLUOROETHANE, TECHNICAL
Company's Name: NATIONAL REFRIGERANTS INC
Company's Street: 11401 ROOSEVELT BLVD
Company's City: PHILADELPHIA
Company's State: PA
Company's Country: US
Company's Zip Code: 19154
Company's Emerg Ph #: 215-834-0200
Company's Info Ph #: 215-834-0200
Record No. For Safety Entry: 007
Tot Safety Entries This Stk#: 008
Status: SE
Date MSDS Prepared: 01SEP95
Safety Data Review Date: 24FEB97
Supply Item Manager: CX
MSDS Preparer's Name: M. BEATTY/G. WILSON
Preparer's Company: NATIONAL REFRIGERANTS
Preparer's City: ROSENHAYN
Preparer's State: NJ
Preparer's Zip Code: 08352
MSDS Serial Number: BZLNY
Specification Number: ARI STD. 700-93
Spec Type, Grade, Class: TYPE 134A
Hazard Characteristic Code: G3
Unit Of Issue: CY
Unit Of Issue Container Qty: UNKNOWN
Type Of Container: 01-370-8189
Net Unit Weight: 43 POUNDS
NRC/State License Number: NONE
Net Propellant Weight-Ammo: NONE

Ingredients/Identity Information

Proprietary: NO
Ingredient: 1,1,1,2-TETRAFLUOROETHANE
Ingredient Sequence Number: 01
Percent: 100
NIOSH (RTECS) Number: 1008365TE
CAS Number: 811-97-2
OSHA PEL: NOT ESTABLISHED
ACGIH TLV: NOT ESTABLISHED
Other Recommended Limit: NONE RECOMMENDED

Physical/Chemical Characteristics

Appearance And Odor: CLEAR, COLORLESS LIQUIFIED GAS, SLIGHTLY ETHEREAL
ODOR
Boiling Point: -16F, -27C
Melting Point: UNKNOWN
Vapor Pressure (MM Hg/70 F): 96.15 PSIA
Vapor Density (Air=1): 1.93LB/FT3
Specific Gravity: UNKNOWN
Decomposition Temperature: UNKNOWN
Evaporation Rate And Ref: >1 (CCL4=1)

Solubility In Water: 0.15%
Viscosity: UNKNOWN
pH: NEUTRL
Corrosion Rate (IPY): UNKNOWN
Autoignition Temperature: N/A

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Fire and Explosion Hazard Data
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Flash Point: NONE
Lower Explosive Limit: N/A
Upper Explosive Limit: N/A
Extinguishing Media: USE EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING FIRE.
Special Fire Fighting Proc: SELF-CONTAINED BREATHING APPARATUS REQUIRED IF CYLINDERS RUPTURE & CONTENTS RELEASED. USE WATER SPRAY OR FOG TO COOL CONTAINERS.
Unusual Fire And Expl Hazrds: CYLINDERS MAY RUPTURE UNDER FIRE CONDITIONS. PRODUCT IS COMBUSTIBLE ABOVE 5.5 PSI WITH >60% AIR @ 351F.

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Reactivity Data
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Stability: YES
Cond To Avoid (Stability): AVOID OPEN FLAMES & HIGH TEMPERATURES
Materials To Avoid: ALKALI OR ALKALINE EARTH METALS.
Hazardous Decomp Products: MATERIAL MAY DECOMPOSE IF EXPOSED TO HIGH TEMPERATURES FORMING HYDROFLUORIC ACIDS & POSSIBLY CARBONYL FLUORIDE.
Hazardous Poly Occur: NO
Conditions To Avoid (Poly): WILL NOT OCCUR.

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Health Hazard Data
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LD50-LC50 Mixture: 4 HOUR ALC (RATS) = 567,000 PPM
Route Of Entry - Inhalation: YES
Route Of Entry - Skin: YES
Route Of Entry - Ingestion: NO
Health Haz Acute And Chronic: INHALING HIGH CONCENTRATION OF VAPOR IS HARMFUL & MAY CAUSE LIGHT HEADEDNESS, SHORTNESS OF BREATH, HEART IRRIGULARITIES, UNCONSCIOUSNESS OR DEATH. VAPOR IS HEAVIER THAN AIR & MAY REDUCE OXYGEN AVAILABLE FOR BREATHING. INTENTIONAL MISUSE CAN BE FATAL. HUMAN HEALTH EFFECTS MAY BE TEMPORARY ALTERATION OF HEART, PULSE.
Carcinogenicity - NTP: NO
Carcinogenicity - IARC: NO
Carcinogenicity - OSHA: NO
Explanation Carcinogenicity: NOT LISTED AS A CARCINOGEN BY IARC, NTP, OSHA OR ACGIH.
Signs/Symptoms Of Overexp: INHALING HIGH CONCENTRATION: LIGHT HEADEDNESS, SHORTNESS OF BREATH, HEART IRRIGULARITIES, UNCONSCIOUSNESS OR DEATH. TEMPORARY ALTERATION OF HEART, PULSE. INTENTIONAL MISUSE MAY CAUSE DEATH.
Med Cond Aggravated By Exp: INDIVIDUALS WITH PRE-EXISTING DISEASES OF CVS OR CNS MAY HAVE INCREASED SUSCEPTABILITY TO THE TOXICITY OF EXCESSIVE EXPOSURES.
Emergency/First Aid Proc: IF IRRITATION PERSISTS OR IS SEVERE, GET MEDICAL ATTN. EYE-FLUSH WITH WATER FOR 15 MIN. SKIN-FLUSH AFFECTED AREA WITH WATER. TREAT FOR FROSTBITE BY GENTLY WARMING OFFECTED AREA. INHALED- REMOVE FROM EXPOSURE. KEEP VICTIM CALM. AID OR RESTORE BREATHING AS NEEDED. INGESTED-NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE. NOTE-CATECHOLAMINE DRUGS SUCH AS EPINEPHRINE SHOULD BE USED WITH SPECIAL CAUTION!

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Precautions for Safe Handling and Use
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Steps If Matl Released/Spill: VENTILATE AREA. USE SELF-CONTAINED BREATHING APPARATUS IN CASE OF LARGE SPILLS. COMPLY WITH FEDERAL, STATE & LOCAL REGULATIONS ON REPORTING RELEASES.
Neutralizing Agent: NONE SPECIFIED BY MANUFACTURER.

Waste Disposal Method: COMPLY WITH FEDERAL, STATE & LOCAL REGULATIONS.
REMOVE TO A PERMITTED WASTE DISPOSAL FACILITY.
Precautions-Handling/Storing: NONE SPECIFIED BY MANUFACTURER.
Other Precautions: AVOID BREATHING VAPORS & PROLONGED SKIN EXPOSURE. USE
WITH SUFFICIENT VENTILATION. DO NOT MIX WITH AIR FOR LEAK TESTING OR USE
WITH AIR FOR ANY PURPOSE ABOVE ATMOSPHERIC PRESSURE.

Control Measures

Respiratory Protection: UNDER NORMAL USE, NO RESPIRATORY PROTECTION IS
REQUIRED FOR THIS CHEMICAL. SELF-CONTAINED BREATHING APPARATUS IS REQUIRED
IF A LARGE SPILL OR RELEASE OCCURS.
Ventilation: NORMAL VENTILATION IS GENERALLY ADEQUATE. USE LOCAL EXHAUST
FOR LARGE QUANTITIES OR MECHANICAL VENTILATION FOR LOW AREAS.
Protective Gloves: BUTYL GLOVES.
Eye Protection: CHEMICAL SPLASH GOGGLES.
Other Protective Equipment: NONE SPECIFIED BY MANUFACTURER.
Work Hygienic Practices: NONE SPECIFIED BY MANUFACTURER.
Suppl. Safety & Health Data: NONE

Transportation Data

Trans Data Review Date: 97055
DOT PSN Code: OAB
DOT Proper Shipping Name: 1, 1, 1, 2- TETRAFLUOROETHANE OR REFRIGERANT GAS
R 134A *
DOT Class: 2.2
DOT ID Number: UN3159
DOT Label: NON-FLAMMABLE GAS
IMO PSN Code: OKL
IMO Proper Shipping Name: 1,1,1,2- TETRAFLUOROETHANE *
IMO Regulations Page Number: 2181
IMO UN Number: 3159
IMO UN Class: 2(2.2)
IMO Subsidiary Risk Label: -
IATA PSN Code: XRL
IATA UN ID Number: 3159
IATA Proper Shipping Name: 1,1,1,2- TETRAFLUOROETHANE *
IATA UN Class: 2.2
IATA Label: NON-FLAMMABLE GAS
AFI PSN Code: XRL
AFI Prop. Shipping Name: 1,1,1,2- TETRAFLUOROETHANE *
AFI Class: 2.2
AFI ID Number: UN3159
AFI Basic Pac Ref: A6.7
MMAC Code: NK
N.O.S. Shipping Name: NONE
Additional Trans Data: NONE

Disposal Data

Label Data

Label Required: YES
Technical Review Date: 24FEB97
MFR Label Number: NONE
Label Status: F
Common Name: 1,1,1,2-TETRAFLUOROETHANE, REFRIGERANT 134A
Chronic Hazard: NO
Signal Word: CAUTION!
Acute Health Hazard-Slight: X
Contact Hazard-Slight: X
Fire Hazard-None: X

Reactivity Hazard-None: X

Special Hazard Precautions: TARGET-ORGANS:SKIN, CVS INHALING HIGH CONCENTRATION OF VAPOR IS HARMFUL & MAY CAUSE LIGHT HEADEDNESS, SHORTNESS OF BREATH, HEART IRRIGULARITIES, UNCONSCIOUSNESS OR DEATH. VAPOR IS HEAVIER THAN AIR & MAY REDUCE OXYGEN AVAILABLE FOR BREATHING. INTENTIONAL MISUSE CAN BE FATAL. HUMAN HEALTH EFFECTS MAY BE TEMPORARY ALTERATION OF HEART, PULSE. MFR GAVE NO INFORMATION OF MSDS.

Protect Eye: Y

Protect Skin: Y

Protect Respiratory: Y

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Label Street: 11401 ROOSEVELT BLVD

Label City: PHILADELPHIA

Label State: PA

Label Zip Code: 19154

Label Country: US

Label Emergency Number: 215-834-0200

Year Procured: 1996