

ENGINEERED AIR SYSTEMS INC -- 62001-100 R134A -- 4120-01-368-8257

===== Product Identification =====

Product ID:62001-100 R134A

MSDS Date:04/12/1996

FSC:4120

NIIN:01-368-8257

MSDS Number: CDRWL

=== Responsible Party ===

Company Name:ENGINEERED AIR SYSTEMS INC

Address:1270 N PRICE RD

City:SAINT LOUIS

State:MO

ZIP:63132-5000

Country:US

Info Phone Num:314-993-5885

Emergency Phone Num:314-993-5885

CA

GE:90598

=== Contractor Identification ===

Company Name:ENGINEERED AIR SYSTEMS INC

Address:1270 N PRICE RD

Box:City:SAINT LOUIS

State:MO

ZIP:63132

Country:US

Phone:314-993-5885

CAGE:90598

===== Composition/Information on Ingredients =====

Ingred Name:1,1,1,2-TETRAFLUOROETHANE (R134A)

CAS:811-97-2

Fraction by Wt: 100%

===== Hazards Identification =====

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO

Reports of Carcinogenicity:NTP:NO

IARC:NO OSHA:NO

Health Hazards Acute and Chronic:INHALATION: OVEREXPOSURE MAY CAUSE CNS DEPRESSION & DEATH. SKIN/EYES: FROSTBITE.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:DIZZINESS, CONFUSION, INCOORDINATION, DROWSINESS, UNCONSCIOUSNESS, IRREGULAR HEART BEAT, HEART THUMPING, APPREHENSION, LIGHTHEADEDNESS, FEELING OF FAINTING, WEAKNESS, LOSS OF CONSCIOUSNESS, SUFFOCATIO N.

Medical Cond Aggravated by Exposure:PRE-EXISTING DISEASE OF THE CNS, CARDIOVASCULAR SYSTEM.

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===== First Aid Measures =====

First Aid:INHALATION: REMOVE TO FRESH AIR. KEEP CALM & QUIET. GIVE CPR/OXYGEN IF NEEDED. SKIN: FLUSH W/PLENTY OF WATER FOR 15 MINS. TREAT FOR FROSTBITE IF NECESSARY BY GENTLY WARMING AREA. EYES: FLUSH W/PLENTY OF WATER FOR 15 MINS. OBTAIN MEDICAL ATTENTION IN ALL CASES. MEDICAL USE: DON'T USE IN MEDICAL APPLICATIONS INVOLVING PERMANENT IMPLANTATION IN THE HUMAN BODY.

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===== Fire Fighting Measures =====

Extinguishing Media:USE MEDIA APPROPRIATE FOR SURROUNDING MATERIAL. Fire Fighting Procedures:COOL TANK/CONTAINER W/WATER SPRAY. SCBA MAY BE REQUIRED IF CYLINDERS RUPTURE/RELEASE UNDER FIRE CONDITIONS. Unusual Fire/Explosion Hazard:CYLINDERS MAY RUPTURE UNDER FIRE CONDITIONS & DECOMPOSITION MAY OCCUR. WELDING/SOLDERING TORCH FLAME MAY CHANGE THE SIZE & COLOR. AUTOIGNITION TEMP: >1369F.

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===== Accidental Release Measures =====

Spill Release Procedures:USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEAN UP. VENTILATE AREA, ESPECIALLY LOW/ENCLOSED PLACES WHERE HEAVY VAPORS MIGHT COLLECT. REMOVE OPEN FLAMES. USE SCBA IF LARGE LEAKS OCCUR.

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===== Handling and Storage =====

Handling and Storage Precautions:STORE IN A CLEAN, DRY PLACE. DON'T HEAT >126F. USE W/SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW RECOMMENDED LIMITS.

Other Precautions

:ETHANE-134A SHOULDN'T BE MIXED W/AIR FOR LEAK TESTING/USED FOR ANY OTHER PURPOSE ABOVE ATMOSPHERIC PRESSURE. CONTACT W/CHLORINE/OTHER STRONG OXIDIZING AGENTS SHOULD ALSO BE AVOIDED.

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===== Exposure Controls/Personal Protection =====

Respiratory Protection:SCBA IS REQUIRED IF A LARGE RELEASE OCCURS.
Ventilation:NORMAL FOR STANDARD PROCEDURES. LOCAL EXHAUST WHEN LARGE AMOUNTS ARE RELEASED. MECHANICAL (GENERAL)IN LOW/ENCLOSED AREAS
Protective Gloves:IMPERVIOUS
Eye Protection:CHEMICAL SPLASH GOGGLES WHEN HANDLING
Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health
NOTES TO PHYSICIAN: BECAUSE OF POSSIBLE DISTURBANCES OF CARDIAC RHYTHM, CATECHOLAMINE DRUGS, SUCH AS EPINEPHRINE SHOULD ONLY BE USED W/SPECIAL CAUTION IN SITUATIONS OF EMERGENCY LIFE SUPPORT.

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===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:-15.7F
Vapor Pres:96
Vapor Density:3.6
Solubility in Water:0.15%/WT
Appearance and Odor:COLORLESS LIQUIFIED GAS W/SLIGHT ETHER ODOR
Percent Volatiles by Volume:100/WT

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===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES
INCOMPATIBLE W/ALKALI/ALKALINE EARTH METALS, POWDERED ALUMINUM, ZINC, BERYLLIUM.
Stability Condition to Avoid:OPEN FLAMES, HIGH TEMPS.
Hazardous Decomposition Products:HYDROFLUORIC ACID & CARBONYL FLUORIDE.

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===== Disposal Considerations =====

Waste Disposal Methods:CONTAMINATED ETHANE-134A CAN BE RECOVERED BY DISTALLATION/REMOVED TO A PERMITTED WASTE DISPOSAL FACILITY IAW/FEDERAL, STATE & LOCAL REGULATIONS. NONFLAMMABLE GAS UN3159.

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