MATERIAL SAFETY DATA SHEET For R&D use only. Not for drug, household or other uses.

Composition/Information on Ingredient

NONE RECOMMENDED

NOT ESTABLISHED

OSHA PEL:

OSHA STEL:

ACGIH TLV:

ACGIHSTEL:

Ventilation:

Protective Gloves:

Eye Protection:

Equipment NONE

LD50LC50Mixture:

REUSE.

Skin: NO

IARC: NO

OSHA: NO

Ingestion:

1000 PPM (PER MFR)

Control Measures

SPILLS-LINED BUTYL GLOVES

SPILLS-SPLASH GOGGLES

Other Protective Equipment:

Supplemental Safety and Health:

Health Hazards Data

ORAL LD50 (RAT) IS UNKNOWN

Carcinogenicity Inds - NTP:

Health Hazards Acute And Chronic:

Signs And Symptions Of Overexposure:

Medical Cond Aggravated By Exposure: NONE SPECIFIED BY MANUFACTURER.

WARM WATER. GET IMMEDIATE MEDICAL ATTENTION.

REMOVE ANY SOURCE OF OPEN FLAMES. ALLOW TO VAPORIZE.

ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

STORE IN A COOL, DRY, WELL-VENTILATED PLACE. STORE BELOW 130F.

Fire and Explosion Hazard Information

Explanation Of Carcinogenicity:

Spill Release Procedures:

Waste Disposal Methods:

NONE SPECIFIED BY MANUFACTURER.

Handling And Storage Precautions:

Neutralizing Agent:

Other Precautions:

Flash Point Method:

Flash Point:

NONE 3

N/A

N/R

HCC: G3

NRC/State LIC No:

Boiling Point: =3.7C, 38.8F

Melt/Freeze Pt: =-94.C, -137.2F

M.P/F.P Text:

Decomp Temp: =146.C, 294.8F

Decomp Text:

Vapor Pres: 1444 MM HG

Vapor Density: 5.9(AIR=1)

Spec Gravity: 1.44 (WATER=1)

PH: 7

Viscosity: 0.38 CST @77F

NEGLIGIBLE

100

YES

130F.

NO 5

NONE

Information:N/P

Information:N/P

VOC Pounds/Gallon:

VOC Grams/Liter:

Solubility in Water:

Corrosion Rate: UNKNOWN

Stability Indicator:

Materials To Avoid:

Appearance and Odor:

Percent Volatiles by Volume:

Reactivity Data

Stability Condition To Avoid:

STRONG ALKALIS AND ALKALI METALS

Hazardous Decomposition Products:

Hazardous Polymerization Indicator:

Conditions To Avoid Polymerization:

Toxicological Information

Regulatory Information

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

Other Information

Look for Chemicals

www.lookchem.com

Other Information:N/P

MSDS Transport Information

FORMS HYDROCHLORIC ACID, HYDROFLUORIC ACID, AND PHOSGENE

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

COLORLESS LIQUID WITH SLIGHT ETHERAL ODOR

Volatile Org Content %:

B.P. Text:

Net Prop WT For Ammo:

Lower Limits:

Upper Limits:

Extinguishing Media:

Fire Fighting Procedures:

Unusual Fire/Explosion Hazard:

MEDIA APPROPRIATE FOR SURROUNDING FIRE.

Physical/Chemical Properties

WEAR SELF-CONTAINED BREATHING APPARATUS AND BUNKER GEAR.

Flash Point Text:

Autoignition Temp:

Autoignition Temp Text:

INGESTION. CHRONIC: NONE SPECIFIED BY MANUFACTURER.

Route Of Entry Inds - Inhalation:

Work Hygienic Practices:

PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.

NORMAL VENTILATION. USE ONLY IN WELL-VENTILATED AREAS.

4 MSDS DATED 1-27-86. VAPOR PRESSURE=1444MMHG.

Respiratory Protection:

Code:

Code:

Code: M

NΡ Code:

Click http://www.lookchem.com/cas-132/1320-37-2.html for suppliers of this product.

1320-37-2 Code:

RTECS: KI1100000

Code: Name: DICHLOROTETRAFLUOROETHANE Other REC Limits:

FOR FIRES AND SPILLS USE SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACE PIECE OPERATED IN

WASH HANDS AFTER USE AND BEFORE EATING, DRINKING, OR SMOKING. LAUNDER CONTAMINATED CLOTHES BEFORE

ACUTE: INHALATION MAY CAUSE ASPHYXIATION. CONTACT MAY CAUSE FROSTBITE OF SKIN AND EYES. NO HEALTH EFFECTS GIVEN FOR

DICHLOROTETRAFLUOROETHANE IS NOT LISTED BY NTP OR IARC AS A CARCINOGEN OR SUSPECTED CARCINOGEN. 2

BLISTERS/BURNS, REDNESS. SKIN: REDNESS, BLISTERS; IF SEVERE SKIN TURNS WHITE THEN BLACK.

INHALED: DROWSINESS, SHORTNESS OF BREATH, CARDIAC IRREGULARITIES, UNCONSCIOUSNESS, OR DEATH. EYES: PAIN,

INHALED: REMOVE TO FESH AIR. GIVE ARTIFICIAL RESPIRATION IF BREATHING SPED; GIVE OXYGEN IF BREATHING DIFFICULT. SEE DOCTOR. DO NOT GIVE EPHINEPHRINE OR SIMILAR DRUGS-MAY INCREASE RISK OF ELICITING CARDIAC DYSRYTHMIAS. SKIN: FLUSH WITH WARM WATER (NOT HOT!) OR TOWELS DAMP WITH WARM WATER. GET IMMEDIATE MEDICAL ATTENTION. EYES: FLUSH WITH

PERSONNEL NOT WEARING RESPIRATORY PROTECTION SHOULD BE RETRICTED FROM AREA OF SPILL. VENTILATE SPILL AREA AND

ALLOW SPILLED MATERIAL TO VAPORIZE IN A WELL-VENTIALTED AREA. DO NOT PNCTURE OR INCINERATE CANS. DISPOSE OF IN

WILL ATACK SOME FORMS OF PLASTIC, RUBBER AND COATINGS. FEDERAL LAW PROHIBITS DISPENSING WITHOUT PRESCRIPTION.

CONTENTS UNDER PRESSURE AND MAY EXPLODE UNDER FIRE CONDITIONS. DECOMPOSITION MAY OCCUR. DO NOT STORE ABOVE 130F.

AVOID OPEN FLAMES AND HIGH TEMPERATURES. AVOID CONTACT WITH STRONG ALKALIS OR ALKALI METALS. DO NOT STORE ABOVE

For R&D use only. Not for drug, household or other uses.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any

guarantee of the properties of the product. Lookchem shall not be held liable for any damage resulting from

handling or from contact with the above product. See reverse side of invoice or packing slip for additional

WARRANTY

terms and conditions of sale.