

# MATERIAL SAFETY DATA SHEET

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

Click <http://www.lookchem.com/cas-422/422-56-0.html> for suppliers of this product.

## Composition/Information on Ingredient

**Cas:**  
422-56-0

**Code:**  
M

**RTECS:**

**Code:**  
X

**Name:**  
3,3-DICHLORO-1,1,1,2,2-PENTAFLUOROPROPANE (HCFC-2

**Other REC Limits:**  
AEL 25 PPM

**OSHA PEL:**  
NOT ESTABLISHED

**Code:**  
M

**OSHA STEL:**

**Code:**

**ACGIH TLV:**  
NOT ESTABLISHED

**Code:**  
M

**ACGIHSTEL:**  
N/P

**Code:**

## Control Measures

**Respiratory Protection:**  
IF ENGINEERING CONTROLS DO NOT MAINTAIN AIRBORNE CONCENTRATIONS TO AN ACCEPTABLE LEVEL, A NIOSH-APPROVED RESPIRATOR MUST BE WORN. A NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS IS REQUIRED IF LAR GE SPILL OCCURS.

**Ventilation:**  
LOCAL EXHAUST IS RECOMMENDED FOR CONFINED AREAS. GENERAL MECHANICAL VENTILATION IS ADEQUATE FOR NORMAL USE.

**Protective Gloves:**  
NITRILE, BUTYL

**Eye Protection:**  
SAFETY GLASSES WITH SIDE SHIELD/GOGGLES

**Other Protective Equipment:**  
Equipment 3 EYE WASH STATION, SAFETY SHOWER, PROTECTIVE CLOTHING

**Work Hygienic Practices:**  
OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. DO NOT EAT/DRINK WHILE WORKING WITH THIS PRODUCT.

**Supplemental Safety and Health:**  
N/P

## Health Hazards Data

**LD50LC50Mixture:**  
LD50 (ORAL, RAT) IS NOT KNOWN.

**Route Of Entry Inds - Inhalation:**  
YES

**Skin:**  
NO

**Ingestion:**  
NO

**Carcinogenicity Inds - NTP:**  
NO

**IARC:**  
NO

**OSHA:**  
NO

**Health Hazards Acute And Chronic:**  
TARGET ORGANS:EYE, SKIN, RESPIRATORY & GI TRACTS. ACUTE- MAY CAUSE EYE & SKIN IRRITATION. INHALATION OF HIGH CONCENTRATIONS OF VAPOR IS HARMFUL & MAY CAUSE HEART IRREGULARITIES, UNCONSCIOUSNESS & DEAT H. INTENTIONAL MISUSE CAN BE FATAL. NOTHAZARDOUS BY INGESTION, BUT ASPIRATION HAZARD. CHRONIC- MAY CAUSE LIVER EFFECTS.

**Explanation Of Carcinogenicity:**  
NONE

**Signs And Symptions Of Overexposure:**  
IRRITATION, HEADACHE, NAUSEA, COMA, DEATH, TEARNING, BLURRED VISION

**Medical Cond Aggravated By Exposure:**  
PERSONS WITH PRE-EXISTING SKIN DISORDERS, EYE PROBLEMS OR IMPAIRED LIVER OR RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE TO THE EFFECTS OF THIS PRODUCT.

**First Aid:**  
GET MEDICAL HELP IF SYMPTOMS PERSIST. INHALED:REMOVE TO FRESH AIR. PROVIDE CPR/OXYGEN IF NEEDED. EYES:FLUSH WITH WATER FOR 15 MINUTES, HOLDING EYELIDS OPEN. SKIN:WASH WITH SOAP & WATER. ORAL:DO NOT IN DUCE VOMITING. IF CONSCIOUS, RINSE MOUTH WITH WATER. SEEK MEDICAL ATTENTION. NO SPECIFIC INTERVENTION IS INDICATED. IF SPONTANEOUS VOMITING OCCURS, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION.

**Spill Release Procedures:**  
WEAR PROTECTIVE EQUIPMENT. REMOVE OPEN FLAMES. VENTILATE AREA. S LEAK IF POSSIBLE. TAKE UP SPILL WITH INERT ABSORBENT MATERIAL. PLACE IN A STEEL DRUM FOR DISPOSAL/RECOVERY. REPORT RELEASES AS REQUI RED. DO NOT FLUSH TO SEWER. 2

**Neutralizing Agent:**  
NOT RELEVANT

**Waste Disposal Methods:**  
RECOVER BY DISTILLATION OR REMOVE TO PERMITTED DISPOSAL FACILITY. COMPLY WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. DO NOT RELEASE TO ENVIRONMENT. THIS SUBSTANCE HARMS PUBLIC HEALTH AND ENVIRONMEN T BY DESTROYING OZONE IN THE UPPER ATMOSPHERE.

**Handling And Storage Precautions:**  
STORE IN COOL, WELL-VENTILATED AREA AWAY FROM OPEN FLAMES AND INCOMPATIBLE MATERIALS. KEEP CONTAINER TIGHTLY CLOSED.

**Other Precautions:**  
WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, SMOKING. KEEP OUT OF REACH OF CHILDREN. AVOID BREATHING VAPORS. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. DO NOT INGES T. USE IN WELL VENTILATED AREA.

## Fire and Explosion Hazard Information

**Flash Point Method:**  
TCC

**Flash Point:**

**Flash Point Text:**  
NONE

**Autoignition Temp:**

**Autoignition Temp Text:**  
N/R

**Lower Limits:**  
NOT RELEVANT

**Upper Limits:**  
NOT RELEVANT

**Extinguishing Media:**  
WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

**Fire Fighting Procedures:**  
WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE POSITIVE PRESSURE MODE.

**Unusual Fire/Explosion Hazard:**  
TOXIC MATERIALS MAY BE FORMED.

## Physical/Chemical Properties

**HCC:**  
N1

**NRC/State LIC No:**  
NOT RELEVANT

**Net Prop WT For Ammo:**

**Boiling Point:**

**B.P. Text:**  
129F,54C

**Melt /Freeze Pt:**

**M.P/F.P Text:**  
-204F,-131C

**Decomp Temp:**

**Decomp Text:**  
UNKNOWN

**Vapor Pres:**  
285 @ 77F

**Vapor Density:**  
7

**Volatile Org Content %:**

**Spec Gravity:**  
1.55

**VOC Pounds/Gallon:**

**PH:** N/R

**VOC Grams/Liter:**

**Viscosity:**  
UNKNOWN

**Evaporation Rate & Reference:**  
0.9 (DIETHYL ETHER=1)

**Solubility in Water:**  
33 MG% @ 25C/77F

**Appearance and Odor:**  
CLEAR COLORLESS LIQUID - SLIGHT ETHEREAL ODOR

**Percent Volatiles by Volume:**  
100

**Corrosion Rate:**  
UNKNOWN

## Reactivity Data

**Stability Indicator:**  
YES

**Stability Condition To Avoid:**  
OPEN FLAME, EXCESSIVE HEAT

**Materials To Avoid:**  
ALKALI OR ALKALINE EARTH METALS, POWDERED ALUMINUM, ZINC, BERYLLIUM, ETC.

**Hazardous Decomposition Products:**  
MAY FORM CARBON MONOXIDE, CARBON DIOXIDE, HYDROGEN FLUORIDE, HYDROCHLORIC ACID AND POSSIBLY CARBONYL HALIDES.

**Hazardous Polymerization Indicator:**  
NO

**Conditions To Avoid Polymerization:**  
NOT RELEVANT

## Toxicological Information

Information:N/P

## MSDS Transport Information

Information:N/P

## Regulatory Information

Sara Title III Information: N/P

Federal Regulatory Information: N/P

State Regulatory Information: N/P

## Other Information

Other Information:N/P