

# MATERIAL SAFETY DATA SHEET

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

Click <http://www.lookchem.com/cas-690/690-39-1.html> for suppliers of this product.

## Composition/Information on Ingredient

**Cas:**  
690-39-1  
**Code:**  
M

**RTECS:**

**Code:**  
X

**Name:**  
1,1,1,3,3,3-HEXAFLUROPROPANE % low Wt: 99. Cod

**Other REC Limits:**  
NONE RECOMMENDED

**OSHA PEL:**  
100 PPM  
**Code:**  
M

**OSHA STEL:**  
N/P  
**Code:**

**ACGIH TLV:**  
100 PPM; 9596  
**Code:**  
M

**ACGIHSTEL:**  
N/P  
**Code:**

## Control Measures

**Respiratory Protection:**  
WEAR NIOSH APPROVED RESIRATORY PROTECTION, AS APPROPRIATE.

**Ventilation:**  
4 KEEP CONTAINER TIGHTLY CLOSED. VAPORS OF THE COMPOUND ARE HEAVIER THAN AIR, POSING A HAZARD OF ASPHYXIA IF THEY ARE TRAPPED IN ENCLOSED OR LOW PLACES.

**Protective Gloves:**  
IMPERVIOUS GLOVES.

**Eye Protection:**  
SAFETY GLASSES OR COVERALL CHEMICAL SPLASH GOGGLES

**Other Protective Equipment:**  
Equipment WEAR IMPERVIOUS CLOTHING,APRON, BOOTS, WHOLE BODYSUIT AS APPROPRIATE

**Work Hygienic Practices:**  
USE ONLY WITH ADEQUATE VENTILATION.

**Supplemental Safety and Health:**  
NOTE TO PHYSICIAN: THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRYTHMIAS. CATECHOLAMINE SUCH AS ADRENALINE, AND OTHER COMPOUNDS HAVING SIMILAR EFFECTS, SHOULD BE RESERVED FOR EMERGENCY AND THEN USED ONLY WITH SPECIAL CAUTION.

## Health Hazards Data

**LD50LC50Mixture:**  
NOT PROVIDED.

**Route Of Entry Inds - Inhalation:**  
N/P

**Skin:**  
N/P

**Ingestion:**  
NO

**Carcinogenicity Inds - NTP:**  
NO

**IARC:**  
NO

**OSHA:**  
NO

**Health Hazards Acute And Chronic:**  
POTENTIAL HEALTH HAZARD: INHALATION: BASED ON ANIMAL DATA, THIS MATERIAL MAY CAUSE: SUFFOCATION, IF AIR IS REPLACED BY VAPORS, IRREGULAR HEART BEAT WITH A STRANGE SENSATION IN THE CHEST, "HEART THUMPING", APPREHENSION, LIGHTHEADEDNESS, FEELING OF FAINTING, DIZZINESS, WEAKNESS, SOMETIMES PROGRESSING TO LOSS OF CONSCIOUSNESS AND DEATH. SKIN CONTACT: FROSTBITE, IF LIQUID OR ESCAPING VAPOR CONTACTS THE SKIN. EYE CONTACT: "FROSTBITE-LIKE" EFFECTS MAY OCCUR IF THE LIQUID OR ESCAPING VAPOR CON

**Explanation Of Carcinogenicity:**  
NONE OF THE COMPONENTS PRESENT IN THIS MATERIAL AT CONCENTRATIONS EQUAL TO OR GREATER THAN 0.1% ARE LISTED BY IARC, NTP, OSHA OR ACGIH AS A CARCINOGEN.

**Signs And Symptions Of Overexposure:**  
INHALATION: BASED ON ANIMAL DATA, THIS MATERIAL MAY CAUSE: SUFFOCATION, IF AIR IS REPLACED BY VAPORS, IRREGULAR HEART BEAT WITH A STRANGE SENSATION IN THE CHEST, "HEART THUMPING", APPREHENSION, LIGHTEADEDNESS, FEELING OF FAINTING, DIZZINESS, WEAKNESS, SOMETIMES PROGRESSING TO LOSS OF CONSCIOUSNESS AND DEATH. SKIN CONTACT: FROSTBITE, IF LIQUID OR ESCAPING VAPOR CONTACTS THE SKIN. EYE CONTACT: "FROSTBITE-LIKE" EFFECTS MAY OCCUR IF THE LIQUID OR ESCAPING VAPOR CONTACTS THE EYES.

**Medical Cond Aggravated By Exposure:**  
THIS MATERIAL MAY MAKE THE HEART MORE SUSCEPTIBLE TO ARRYTHMIAS.

**First Aid:**  
INHALATION: IF INHALED, REMOVE TO FRESH AIR. KEEP PERSON CALM. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION . IF BREATHING IS DIFFICULT, GIVE OXYGEN . CALL A PHYSICIAN. SKIN CONTACT: FUSH AREA WITH LUKEWARM WATER. DO NOT USE HOT WATER. IFFROSTBITE HAS OCCURED, CALL A PHYSICIAN. EYE CONTACT: IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN. INGESTION: INGESTION IS NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE.

**Spill Release Procedures:**  
NOTE: REVIEW FIRE FIGHTING MEASURE AND HANDLING SECTIONS BEFORE PROCEEDING WITH CLEAN-UP. USE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT DURING CLEAN-UP. KEEP UPWIND OF LEAK. EVACUATE UNTIL GAS HAS DISPERSED. VENTILATE AREA BEFORE RE-ENTERING.

**Neutralizing Agent:**  
NOT RELEVANT. 3

**Waste Disposal Methods:**  
TREATMENT, STORAGE, TRANSPORTATION AND DISPOSAL MUST BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE/PROVINCIAL AND LOCAL REGULATIONS.

**Handling And Storage Precautions:**  
KEEP CONTAINER IN A COOL PLACE. KEEP CONTAINER TIGHTLY CLOSED. KEEP AWAY FROM HEAT, SPARKS, AND FLAMES. DO NOT BREATHE GAS. DO NOT GET IN EYES, ON SKIN OR ON CLOTHES. WASH THOROUGHLY AFTER HANDLING.

**Other Precautions:**  
DO NOT BREATHE GAS. DO NOT GET IN EYES, ON SKIN OR ON CLOTHES. WASH THOROUGHLY AFTER HANDLING.

## Fire and Explosion Hazard Information

**Flash Point Method:**  
N/A

**Flash Point:**

**Flash Point Text:**  
NON-FLAMMABLE

**Autoignition Temp:**

**Autoignition Temp Text:**  
N/P

**Lower Limits:**  
N/P

**Upper Limits:**  
N/P

**Extinguishing Media:**  
USE MEDIA APPROPRIATE FOR SURROUNDING MATERIAL.

**Fire Fighting Procedures:**  
WEAR SELF-CONTAINED BREATHING APPARATUS. WEAR FULL PROTECTIVE EQUIPMENT. COOL TANK/CONTAINER WITH WATER SPRAY.

**Unusual Fire/Explosion Hazard:**  
WILL NOT BURN. NOT A FIRE OR EXPLOSION HAZARD. HAZARDOUS GASES/VAPORS PRODUCED IN FIRE ARE HYDROGEN FLUORIDE.

## Physical/Chemical Properties

**HCC:**  
G3

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

**Net Prop WT For Ammo:**

**Boiling Point:**  
=-1.3C, 29.5F

**B.P. Text:**

**Melt /Freeze Pt:**  
=-93.C, -135.4F

**M.P/F.P Text:**  
-93.6-98C

**Decomp Temp:**

**Decomp Text:**  
N/P

**Vapor Pres:**  
2043 @ 25C

**Vapor Density:**  
NOT PROVIDED

**Volatile Org Content %:**

**Spec Gravity:**  
1.370

**VOC Pounds/Gallon:**

**PH:** NOT APPLICABLE.

**VOC Grams/Liter:**

**Viscosity:**  
NOT APPLICABLE. 5

**Evaporation Rate & Reference:**  
NOT APPLICABLE.

**Solubility in Water:**  
NOT PROVIDED.

**Appearance and Odor:**  
LIQUEFIED GAS, COLORLESS

**Percent Volatiles by Volume:**  
99-100

**Corrosion Rate:**  
NOT PROVIDED.

## Reactivity Data

**Stability Indicator:**  
N/P

**Stability Condition To Avoid:**  
NOT PROVIDED.

**Materials To Avoid:**  
INCOMPATIBLE WITH STRONG BASES, METALLIC SODIUM, POTASSIUM, LITHIUM.

**Hazardous Decomposition Products:**  
DECOMPOSES WITH HEAT. HAZARDOUS GASES/VAPORS PRODUCED ARE HYDROGEN FLUORIDE.

**Hazardous Polymerization Indicator:**  
NO

**Conditions To Avoid Polymerization:**  
POLYMERIZATION WILL NOT OCCUR.

## 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