

# MATERIAL SAFETY DATA SHEET

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

Click <http://www.lookchem.com/cas-354/354-33-6.html> for suppliers of this product.

### Composition/Information on Ingredient

354-33-6

**Code:**  
M

**RTECS:**

**Code:**  
X

**Name:**  
ETHANE,PENTAFLUORO- (HFC-125)/PENTAFLUOROETHANE

**Other REC Limits:**  
NONE RECOMMENDED

**OSHA PEL:**  
1000 PPM

**Code:**  
M

**OSHA STEL:**

**Code:**

**ACGIH TLV:**  
ASPHYXIAN; 9596

**Code:**  
M

**ACGIHSTEL:**  
N/P

**Code:**

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Control Measures

UNDER NORMAL MANUFACTURE  
PRODUCT SELF-CONTAINED

**Ventilation:**  
USE WITH SUFFICIENT VENTILATION TO KEEP EMPLOYEE EXPOSURE BELOW THE RECOMMENDED LIMITS. LOCAL EXHAUST FOR LARGE RELEASES. MECHANICAL FOR ENCLOSED SPACES.

**Protective Gloves:**  
IMPERVIOUS GLOVES.

**Eye Protection:**  
CHEMICAL SPLASH GOGGLES.

**Other Protective Equipment:**  
Equipment REFRIGERANT CONCENTRATION MONITORS MAY BE NECESSARY TO DETERMINE VAPOR CONCENTRATIONS IN WORK AREAS PRIOR TO USE OF TORCHES OR OTHER OPEN FLAMES, OR IF EMPLOYEES ARE ENTERING ENCLOSED AREAS.

**Work Hygienic Practices:**  
WASH THOROUGHLY AFTER HANDLING.

**Supplemental Safety and Health:**  
NONE SPECIFIED BY MANUFACTURER.

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**Health Hazard Data**

**LD50LC50Mixture:**  
TLV 1,000 PPM/3540 MG/M3,8H TWA(I

**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:CNS, CVS. ACUTE- HARMFUL

PROSTBITE. VAPORS CAN CAUSE EYE IRRITATION. INGESTION IS UNLIKELY. CHRONIC- UNKNOWN.

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

**Signs And Symptoms Of Overexposure:**  
TEMPORARY NERVOUS SYSTEM DEPRESSION WITH ANAESTHETIC EFFECTS SUCH AS DIZZINESS, HEADACHE, CONFUSION, INCOORDINATION, LOSS OF CONSCIOUSNESS, IRREGULAR PULSE, PALPITATIONS, INADEQUATE CIRCULATION, FROST BITE, IRRITATION, BLURRED VISION, TEARING.

**Medical Cond Aggravated By Exposure:**  
2 INDIVIDUALS WITH PREEXISTING DISEASES OF THE CENTRAL NERVOUS OR CARDIOVASCULAR SYSTEM MAY HAVE INCREASED SUSCEPTIBILITY TO THE TOXICITY OF EXCESSIVE EXPOSURE.

**First Aid:**  
EYE: IMMEDIATELY FLUSH WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF NEEDED. SKIN: IMMEDIATELY FLUSH WITH PLENTY OF LUKEWARM WATER. GET MEDICAL ATTENTION IF FROSTBITE OCCURS. INHALED: REMOVE TO FRESH AIR & PROVIDE OXYGEN/ARTIFICIAL RESPIRATION IF NEEDED. INGESTION: NOT CONSIDERED A POTENTIAL ROUTE OF EXPOSURE. NOTE TO PHYSICIAN: CATECHOLAMINE DRUGS, SUCH AS ADRENILINE, SHOULD BE USED WITH SPECIAL CAUTION ONLY IN SITUATIONS OF EMERGENCY LIFE SUPPORT.

**Spill Release Procedures:**  
VENTILATE AREA, ESPECIALLY LOW PLACES WHERE VAPORS MIGHT COLLECT. REMOVE OPEN FLAMES. USE SELF-CONTAINED BREATHING APPARATUS FOR LARGE SPILLS OR RELEASES.

**Neutralizing Agent:**  
NONE SPECIFIED BY MANUFACTURER.

**Waste Disposal Methods:**  
RECLAIM BY DISTILLATION OR REMOVE TO A PERMITTED WASTE DISPOSAL FACILITY. COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS.

**Handling And Storage Precautions:**  
STORE IN A COOL, DRY AREA. DO NOT HEAT ABOVE 125F (52C).

**Other Precautions:**  
AVOID BREATHING VAPORS. AVOID EYE OR SKIN CONTACT WITH LIQUID. WASH THOROUGHLY AFTER HANDLING. USE WITH ADEQUATE

## Flash Point Method: N/D

**Flash Point:**

**Flash Point Text:**  
WILL NOT BURN

**Autoignition Temp:**

**Autoignition Temp Text:**  
N/P

**Lower Limits:**  
N/A

**Upper Limits:**  
N/A

**Extinguishing Media:**  
AS APPROPRIATE FOR COMBUSTIBLES IN AREA.

**Fire Fighting Procedures:**  
KEEP CYLINDERS COOL WITH WATER SPRAY OR FOG. SELF-CONTAINED BREATHING APPARATUS (SCBA) IS REQUIRED IF CYLINDERS RUPTURE AND CONTENTS ARE RELEASED UNDER FIRE CONDITIONS. WATER RUNOFF SHOULD BE CONTAINED AND NEUTRALIZED PRIOR TO RELEASE.

**Unusual Fire/Explosion Hazard:**  
CYLINDERS MAY RUPTURE UNDER FIRE CONDITIONS. PRODUCT SHOULD NOT BE USED OR ALLOWED TO EXIST WITH HIGH CONCENTRATIONS OF AIR ABOVE ATMOSPHERIC PRESSURE.

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**Physical/Chemical Properties**

HCC:  
G3

**MRC/State LLC NO:**  
N/P

**Net Prop WT For Ammo:**

**Boiling Point:**  
=-47.2C, -53.F

**B.P. Text:**

**Melt / Freeze Pt:**

**M.P/F.P Text:**  
N/P

**Decomp Temp:**

**Decomp Text:**  
N/P

**Vapor Pres:**  
9257 MM HG @ 77F

**Vapor Density:**  
>1

**Volatile Org Content %:**

**Spec Gravity:**  
1.14 @ 77F LIQ.

**VOC Pounds/Gallon:**

**PH:** N/R

**VOC Grams/Liter:**

**Viscosity:**  
N/P

**Evaporation Rate & Reference:**  
>1 (CCL4=1)

**Solubility in Water:**  
NOT DETERMINED

**Appearance and Odor:**  
CLEAR, COLORLESS LIQUEFIED GAS - SLIGHT ETHEREAL ODOR.

**Percent Volatiles by Volume:**  
100 %

**Corrosion Rate:**  
N/P

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**Reactivity Data**

YES

MATERIAL IS STABLE. HOWEVER, AVOID OPEN FLAMES AND HIGH TEMPERATURES.

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

**Hazardous Decomposition Products:**  
DECOMPOSITION PRODUCTS ARE HAZARDOUS. "SUVA" HP 81 CAN BE DECOMPOSED BY HIGH TEMPERATURES (OPEN FLAMES, GLOWING METAL SURFACES, ETC.) FORMING HYDROCHLORIC AND HYDROFLUORIC ACIDS AND IRRITATING. 4

**Hazardous Polymerization Indicator:**  
NO

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

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## Toxicological Information

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Information N/A

## MSDS Transport Informa

**Information:**N/P

## Regulatory Information

**Sara Title III III**

**State Regulatory Information:** N/P

## Other Information



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## WARRANTY

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