

# MATERIAL SAFETY DATA SHEET

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

Click <http://www.lookchem.com/cas-138/13838-16-9.html> for suppliers of this product.

## Composition/Information on Ingredient

**Cas:**

13838-16-9

**Code:**

M

**RTECS:**

KN6800000

**Code:**

M

**Name:**

ENFLURANE

**Other REC Limits:**

C,2PPM/1H (NIOSH)

**OSHA PEL:**

NOT ESTABLISHED

**Code:**

M

**OSHA STEL:****Code:****ACGIH TLV:**

75 PPM; 9192

**Code:**

M

**ACGIH STEL:**

N/P

**Code:**

## Control Measures

**Respiratory Protection:**

NIOSH/MSHA APPROVED RESPIRATORS FOR HALOGENATED ETHERS IF ENGINEERING CONTROLS SUCH AS LOCAL EXHAUST OR AN ENCLOSURE IS NOT USED.

**Ventilation:**

LOCAL EXHAUST RECOMMENDED; WHERE POSSIBLE, ENCLOSE OPERATIONS & USE APPROPRIATE VENTILATION TO MAINTAIN AIR CONTAMT

**Protective Gloves:**

AS REQUIRED FOR TASK AT HAND. (FP D)

**Eye Protection:**

AS REQUIRED FOR TASK AT HAND. (FP D)

**Other Protective Equipment:**

Equipment AS REQUIRED TO MINIMIZE EXPOSURE FOR TASK AT HAND. (FP D)

**Work Hygienic Practices:**

OBSERVE ESTABLISHED PROCEDURES CONSULT W/ YOUR INDUSTRIAL HYGIENE ADVISOR FOR USE OF THIS PRODUCT. 4

**Supplemental Safety and Health:**

READ MANUFACTURER'S PRODUCT DESCRIPTOR & "PDR" ON THE PARTICULARS OF THIS PRODUCT.

## Health Hazards Data

**LD50/LC50 Mixture:**

N/K

**Route Of Entry Inds - Inhalation:**

YES

**Skin:**

NO

**Ingestion:**

YES

**Carcinogenicity Inds - NTP:**

NO

**IARC:**

NO

**OSHA:**

NO

**Health Hazards Acute And Chronic:**

ACUTE: IRRITATION OF EYES, NOSE, MOUTH, & THROAT. PRODUCT IS A POTENT RESPIRATORY DEPRESSANT & CAN IMPAIR CARDIAC PERFORMANCE. READ MFR'S PRODUCT DESCRIPTOR & "PDR" FOR CONTRAINDICATIONS! CONTRAINDICATIONS: SEIZURE DISORDERS; KNOWN SENSITIVITY TO ETHEANE; KNOWN OR SUSPECTED GENETIC SUSCEPTIBILITY TO MALIGNANT HYPERHER

**Explanation Of Carcinogenicity:**

2 N/R

**Signs And Symptoms Of Overexposure:**

INHAL/INGEST: CAN CAUSE IRRITATION OF EYES, NOSE, MOUTH & THROAT. CAN CAUSE HEADACHES, DROWSINESS, UNCONSCIOUSNESS, DEATH; SKIN: MAY IRRITATE & CAUSE ITCHING OR RASHES, DRYING OR CRACKING.

**Medical Cond Aggravated By Exposure:**

WHEN PREVIOUS EXPOSURE TO A HALOGENATED ANESTHETIC IS KNOWN TO HAVE BEEN FOLLOWED BY EVIDENCE OF UNEXPLAINED HEPATIC DYSFUNCTION, USE OF AN ALTERNATE AGENT SHOULD BE CONSIDERED.

**First Aid:**

EYE: IMMEDIATELY FLUSH W/LARGE AMTS. OF TEPID POTABLE WATER FOR AT LEAST 15 MIN-ENSURING RINSE OF INNER SURFACES OF UPPER & LOWER LIDS; SKIN: REMOVE CONTAMINATED CLOTHING. GET MED. ATTN. FOR REDNESS OR R IRRITAT; INHAL: REMOVE FROM EXPOSURE.GIVE CPR/O<sup>2</sup> AS SITUATION DICTATES; INGEST: IF PERSON CONSCIOUS, IMMEDIATELY ADMINISTER LARGE AMTS. OF WATER & INDUCE VOMITING. ((GET MED. ATTN FOR OVEREXPOSURE

**Spill Release Procedures:**

RESTRICT PERSONS NOT WEARING PROTECTIVE EQUIPMENT FROM AREAS OF SPILLS OR LEAKS UNTIL CLEANUP IS COMPLETE. VENTILATE AREA OF SPILL OR LEAK. FOR LARGE SPILLS & FIRES, IMMEDIATELY CALL YOUR LOCAL FIRE D EPT.

**Neutralizing Agent:**

N/K

**Waste Disposal Methods:**

IT MAY BE NECESSARY TO CONTAIN & DISPOSE OF PRODUCT AS A HAZARDOUS WASTE. CONTACT YOUR REGIONAL EPA OFFICE FOR SPECIFIC REGULATIONS.

**Handling And Storage Precautions:**

PRODUCT MUST BE STORED TO AVOID CONTACT W/ PEROXIDES. STORE IN TIGHTLY CLOSED CONTAINERS IN COOL, WELL VENTILATED AREAS AWAY FROM HEAT. DO NOT FREEZE!

**Other Precautions:**

PROTECT PRODUCT FROM FREEZING.

## Fire and Explosion Hazard Information

**Flash Point Method:**

PMCC 3

**Flash Point:**

N/K

**Flash Point Text:**

>200F/>93.3C

**Autoignition Temp:**

N/K

**Autoignition Temp Text:**

N/K

**Lower Limits:**

N/K

**Upper Limits:**

N/K

**Extinguishing Media:**

USE FOAM, DRY CHEMICAL OR LIQUIFIED GAS EXTINGUISHERS.

**Fire Fighting Procedures:**

WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A FULL FACED SELF CONTAINED BREATHING APPARATUS. EVACUATE AREA. COOL FIRE EXPOSED CONTAINERS WITH WATER SPRAY.

**Unusual Fire/Explosion Hazard:**

TOXIC GASES SUCH AS PHOSGENE, HYDROGEN CHLORIDE & HYDROGEN FLUORIDE MAY BE RELEASED IN A FIRE INVOLVING THE PRODUCT.

## Physical/Chemical Properties

**HCC:**

T6

**NRC/State Lic No:**

N/R

**Net Prop WT For Ammo:**

N/K

**Boiling Point:**

N/K

**B.P. Text:**

133.7F/56C

**Melt/Freeze Pt:**

N/K

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

N/A

**Decomp Temp:**

N/K

**Decomp Text:**

UNKNOWN

**Vapor Pres:**

1.75 MM 68F

**Vapor Density:**

6.3

**Volatile Org Content %:**

N/K

**Spec Gravity:**

1.517

**VOC Pounds/Gallon:**

N/K

**PH:**

N/P

**VOC Grams/Liter:**

N/K

**Viscosity:**

N/P

**Evaporation Rate & Reference:**

N/K

**Solubility in Water:**

SLIGHT

**Appearance and Odor:**

COLORLESS LIQUID W/MILD ETHEREAL ODOR.

**Percent Volatile by Volume:**

100

**Corrosion Rate:**

UNKNOWN

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## Toxicological Information

**Information:**

N/P

## MSDS Transport Information

**Information:**

N/P

## Regulatory Information