

# MATERIAL SAFETY DATA SHEET

Tetrahydrofuran

## SECTION 1 . Product and Company Identification

Product Name and Synonym: Tetrahydrofuran  
Product Code: T5110  
Material Uses:  
Manufacturer: Science Stuff  
1104 Newport Ave  
Austin, TX 78753  
(512) 837-6020  
Entry Date : 7/1/2013  
Print Date: 7/1/2013  
24 Hour Emergency Assistance : Chemtrec 800-424-9300  
Canutec 613-996-6666

Health:	2
Flammability:	3
Reactivity:	0

Hazard Rating:  
Least Slight Moderate High Extreme  
0 1 2 3 4

NA=Not Applicable NE=Not Established

## SECTION 2 HAZARD IDENTIFICATION

Keep away from heat and ignition sources. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

## SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Tetrahydrofuran (Stabilized)	CAS# 109-99-9	100%	V/V	OSHA TWA 200 ppm (590 mg/mf)

## SECTION 4 FIRST AID MEASURES

Keep away from heat and ignition sources. May be harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. if irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: Give several glasses of milk or water. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person.

## SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Carbon Dioxide, dry chemical powder or appropriate foam  
Fire / Explosion Hazards: Vapor may travel considerable distance to source of ignition and flash back.  
Fire Fighting Procedure: Use water spray to cool fire exposed containers.

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**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Evacuate area. Wear self-contained breathing apparatus and protective clothing. Eliminate all sources of ignition.

**SECTION 7 HANDLING AND STORAGE**

Store in a cool dry place. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory Protection: Organic Vapor Cartridge  
Ventilation  
Local Exhaust   
Mechanical   
Protective Gloves: NIOSH Approved Gloves  
Eye Protection: Splash Goggles  
Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Melting Point:	-108° C	Percent Volatile by Volume:	100
Boiling Point:	65°C	Evaporation Rate	>1
Vapor Pressure:	129-160	Evaporation Standard	Butylacetate =1
Vapor Density:	2.5	Auto Ignition Temp	321° C
Solubility in Water:	Soluble	Lower Flamm. Limit in Air	2
Appearance /Odors:	Colorless , mobile liquid, ether like odor	Upper Flamm. Limit in Air	11.8
Flash Point:	-17°C		
Specific Gravity:	0.9		

**SECTION 10 STABILITY AND REACTIVITY INFORMATION**

Stability: Stable  
Conditions to Avoid: Avoid contact with heat, sparks, flames, or other sources of ignition.  
Materials to Avoid: Strong oxidizing agents, metals, acids.  
Hazardous Decomposition Products: Peroxides  
Hazardous polymerization: Will Not Occur  
Conditions to Avoid: None known

**SECTION 11 Toxicological Information**

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact.  
Toxicity to Animals:  
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 1650 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 24000 mg/m3 2 hours

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[Mouse].  
Chronic Effects on Humans:  
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood, kidneys, lungs, liver, upper respiratory tract, skin, eyes, central nervous system (CNS).  
Other Toxic Effects on Humans:  
Hazardous in case of skin contact (irritant). Slightly hazardous in case of skin contact (permeator), of ingestion, of inhalation.  
Special Remarks on Toxicity to Animals: Not available. Special Remarks on Chronic Effects on Humans:  
It is excreted in mother's milk. May cause cancer based on animal data. No human data found at this point. May cause adverse reproductive effects (fetotoxicity) based on animal data. No human data found at this point. May affect genetic material.

Special Remarks on other Toxic Effects on Humans:  
Acute Potential Health Effects: Skin: Causes skin irritation. May be absorbed through skin and cause symptoms similar those of inhalation and ingestion. Eyes: Contact with eyes may cause severe irritation with possible eye burns. Vapors may cause eye irritation. Inhalation: May cause upper respiratory tract (nose, throat) irritation. High concentrations may affect behavior/central nervous system (central nervous system depression/effects characterized by headache, general anesthetic, dizziness, somnolence, muscle weakness, loss of consciousness, and coma), respiration (respiratory stimulation, dyspnea), and gastrointestinal tract (nausea, vomiting). Ingestion: May cause gastrointestinal irritation with nausea, vomiting, and diarrhea, abdominal pain. May also affect the liver and behavior/central nervous system with symptoms similar to inhalation. Chronic Potential Health Effects: Skin: Prolonged or repeated skin contact may cause defatting and dermatitis. Eyes: Prolonged or repeated eye contact may cause conjunctivitis. Inhalation: Prolonged or repeated exposure to vapors may affect the liver, kidneys, musculoskeletal system, endocrine system (spleen and thymus), blood, cardiovascular system, thymus, spleen, and lungs (lung damage). Ingestion: Prolonged or repeated exposure from ingestion may affect the blood, and metabolism.

**SECTION 12 Ecological Information**

Ecotoxicity: Ecotoxicity in water (LC50): 2160 mg/l 96 hours [Fish (Fathead Minnow)].  
BOD5 and COD: Not available.  
Products of Biodegradation:  
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.  
Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.  
Special Remarks on the Products of Biodegradation: Not available.

**SECTION 13 Disposal Considerations**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

**SECTION 14 Transport Information**

DOT Classification: UN2056, Tetrahydrofuran, 3, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

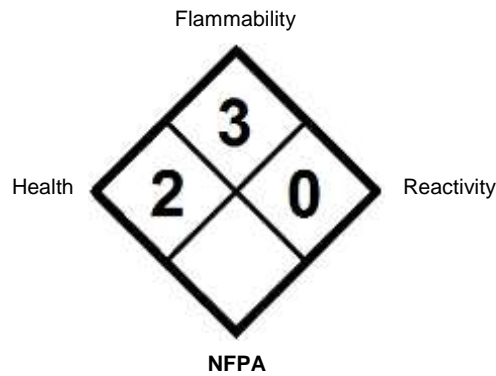
**SECTION 15 Regulatory Information**

Federal and State Regulations:  
Connecticut hazardous material survey.: Tetrahydrofuran Illinois toxic substances disclosure to employee act: Tetrahydrofuran  
Illinois chemical safety act: Tetrahydrofuran New York release reporting list: Tetrahydrofuran  
Rhode Island RTK hazardous substances: Tetrahydrofuran Pennsylvania RTK: Tetrahydrofuran Minnesota: Tetrahydrofuran  
Massachusetts RTK:  
Tetrahydrofuran Massachusetts spill list: Tetrahydrofuran New Jersey: Tetrahydrofuran New Jersey spill list: Tetrahydrofuran

## Tetrahydrofuran

Louisiana spill reporting: Tetrahydrofuran California Director's List of Hazardous Substances: Tetrahydrofuran TSCA 8(b)  
inventory: Tetrahydrofuran TSCA 4(a) proposed test rules: Tetrahydrofuran TSCA 8(a) PAIR: Tetrahydrofuran TSCA 8(a) IUR:  
Tetrahydrofuran TSCA 8(d) H and S data reporting: Tetrahydrofuran: effective data: 3/11/94; sunset date: 6/30/98 CERCLA:  
Hazardous substances.: Tetrahydrofuran: 1000 lbs. (453.6 kg)  
Other Regulations:  
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).  
EINECS: This product is on the  
European Inventory of Existing Commercial Chemical Substances.  
Other Classifications:  
WHMIS (Canada):  
CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-2B: Material causing other toxic effects (TOXIC).  
DSCL (EEC):  
R11- Highly flammable. R19- May form explosive peroxides. R36/37- Irritating to eyes and respiratory system. S16- Keep away from sources of ignition - No smoking. S29- Do not empty into drains. S33- Take precautionary measures against static discharges.

### SECTION 16 Additional Information



#### Revisions

3/4/2009	0	Creation date LS
6/11/2012	0.1	Revised to 16 sections LS

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