

# SAFETY DATA SHEET

Preparation Date: 9/10/2015

Revision Date: 9/12/2018

Revision Number: G2

## 1. IDENTIFICATION

### Product identifier

**Product code:** T1368  
**Product Name:** TETRAHYDROFURAN, ANHYDROUS

### Other means of identification

**Synonyms:** 1,4-Epoxybutane  
Butane, 1,4-epoxy-  
Butane, alpha,delta-oxide  
Cyclotetramethylene oxide  
Diethylene oxide  
Furanidine  
Oxacyclopentane  
Oxolane  
Tetrahydrofuranne (French)  
Tétrahydrofurane (French)  
TFH (French)  
Tetramethylene oxide  
Tetrahydrofurano (Spanish)

**CAS #:** 109-99-9  
**RTECS #** LU5950000  
**CI#:** Not available

### Recommended use of the chemical and restrictions on use

**Recommended use:** Solvent.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)


Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 1
Flammable liquids	Category 2

**Label elements**

**Danger**

**Hazard statements**  
Harmful if swallowed  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation. May cause drowsiness or dizziness  
Causes damage to organs through prolonged or repeated exposure  
Highly flammable liquid and vapor



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/.../equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Keep cool  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

*Get medical advice/attention if you feel unwell*  
In case of fire: Use CO2, dry chemical, or foam to extinguish.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.  
If skin irritation occurs: Get medical advice/attention  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store locked up

**Precautionary Statements - Disposal**

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Dispose of contents/container to an approved waste disposal plant

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Tetrahydrofuran	109-99-9	100

### 4. FIRST AID MEASURES

#### First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. If skin irritation persists, call a physician.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

#### Most important symptoms and effects, both acute and delayed

- Symptoms**
- Causes serious eye irritation
  - Causes skin irritation
  - Irritating to respiratory system
  - Inhalation of vapors may cause dizziness or suffocation
  - Inhalation of high concentrations may cause loss of consciousness (anesthesia)
  - Central nervous system effects
  - May cause nausea, headache, vomiting
  - May cause loss of appetite
  - It may affect the kidneys
  - May affect the liver
  - It may affect the heart
  - It may affect the thymus gland
  - It may affect the spleen

#### Indication of any immediate medical attention and special treatment needed

**Notes to Physician:** Treat symptomatically.

#### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream as it may scatter and spread fire.

#### Specific hazards arising from the chemical

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**Hazardous Combustion Products:**

Carbon Monoxide, Carbon Dioxide.

**Specific hazards:**

Highly flammable. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. Vapor may travel considerable distance to source of ignition and flash back. Vapors may form explosive mixtures with air. Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks). Fire may produce irritating, corrosive and/or toxic gases.

**Special Protective Actions for Firefighters****Specific Methods:**

Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

**Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment. In case of large spill, water spray or vapor suppressing foam may be used to reduce vapors, but may not prevent ignition in closed spaces.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not let this chemical enter the environment. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up****Methods for containment**

Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up**

Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE****Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing.

Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials. Protect from light.

**Incompatible Materials:**

- Oxidizing agents
- Acids
- Bases

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**National occupational exposure limits**

**United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Tetrahydrofuran	109-99-9	200 ppm TWA 590 mg/m <sup>3</sup> TWA	200 ppm TWA 590 mg/m <sup>3</sup> TWA 250 ppm STEL 735 mg/m <sup>3</sup> STEL	100 ppm STEL 50 ppm TWA	None

**Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Tetrahydrofuran	109-99-9	50 ppm TWA 147 mg/m <sup>3</sup> TWA 100 ppm STEL 295 mg/m <sup>3</sup> STEL	50 ppm TWA 100 ppm STEL	100 ppm STEL	None

**Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Tetrahydrofuran	109-99-9	100 ppm TWA 295 mg/m <sup>3</sup> TWA	200 ppm TWA 590 mg/m <sup>3</sup> TWA 250 ppm STEL 735 mg/m <sup>3</sup> STEL

**Appropriate engineering controls**

**Engineering measures to reduce exposure:**

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

**Individual protection measures, such as personal protective equipment**

**Personal Protective Equipment**

**Eye protection:** Goggles Safety glasses with side-shields.

**Skin and body protection:** Chemical resistant apron  
Long sleeved clothing  
Gloves

**Respiratory protection:** Vapor respirator. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Liquid	<b>Appearance:</b> No information available.	<b>Color:</b> Colorless. Water-white.
<b>Odor:</b> Ether-like. Fruity.	<b>Taste</b> Pungent.	<b>Formula:</b> C4-H8-O
<b>Molecular/Formula weight (g/mole):</b> 72.11	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> -14.5 deg. C.
<b>Flashpoint (°C/°F):</b> -14.5 °C/5.9 °F -20 °C/-4 °F	<b>Flash Point Tested according to:</b> Closed cup Open cup	<b>Autoignition Temperature (°C/°F):</b> 321 °C/609.8 °F
<b>Lower Explosion Limit (%):</b> 2%	<b>Upper Explosion Limit (%):</b> 11.8%	<b>Melting point/range(°C/°F):</b> -108.44 °C/-163.19 °F
<b>Decomposition temperature(°C/°F):</b> No information available	<b>Boiling point/range(°C/°F):</b> 65-66 °C/149-151 °F	<b>Bulk density:</b> No information available
<b>Density (g/cm3):</b> 0.8833 @ 25 °C	<b>Specific gravity:</b> 0.8892	<b>pH:</b> No information available
<b>Vapor pressure @ 20°C (kPa):</b> 19.3	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 2.5
<b>VOC content (g/L):</b> No information available	<b>Odor threshold (ppm):</b> 20-50	<b>Partition coefficient (n-octanol/water):</b> 0.46
<b>Viscosity:</b> No information available	<b>Miscibility:</b> Miscible with water Miscible with ketones Miscible with ethers Miscible with esters Miscible with alcohols Miscible with hydrocarbons	<b>Solubility:</b> Very soluble in Acetone Very soluble in Benzene Very soluble in Dimethyl Sulfoxide Very soluble in chloroform Very soluble in Ethanol Solubility in Water: 30%

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents, acids, and bases  
Can form explosive peroxides upon exposure to air or light. It may be an explosion hazard when the peroxides are concentrated due to evaporation  
Reacts vigorously with Bromine, Calcium hydride + heat  
Reacts with lithium aluminum hydride and other lithium-aluminum alloys causing fire or explosion

### Chemical stability

**Stability:** It does not contain a stabilizer (inhibitor). Can form explosive peroxides upon exposure to

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air or light. It may be an explosion hazard when the peroxides are concentrated due to evaporation. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Exposure to air. Exposure to light.

**Incompatible Materials:** Oxidizing agents  
Acids  
Bases

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide.

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**

Ingestion. Skin. Inhalation.

### Acute Toxicity

### Component Information

Tetrahydrofuran	
CAS-No.	109-99-9

**LD50/oral/rat** = 1650 mg/kg Oral LD50 Rat

**LD50/oral/mouse** = 2000-2500 mg/kg

**LD50/dermal/rabbit** = No information available

**LD50/dermal/rat** = No information available

**LC50/inhalation/rat** = 180-243 mg/L Inhalation LC50 Rat 1 h

53.9-66 mg/L Inhalation LC50 Rat 4 h

21000 ppm Inhalation LC50 Rat 3 h

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = 2300-2600 mg/kg Oral LD50 Guinea pig

### Product Information

**LD50/oral/rat =**

**VALUE- Acute Tox Oral** = 1650 mg/kg

**LD50/oral/mouse =**

**Value - Acute Tox Oral** = 2000 mg/kg

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**

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**VALUE-Vapor** = No information available

**VALUE-Gas** = 21000 ppm (3-hr)

**VALUE-Dust/Mist** = 53.9 mg/l (4-hr.)

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

**Symptoms**

**Skin Contact:** Irritating to skin. It can be absorbed through the skin.

**Eye Contact:** Causes eye irritation.

**Inhalation** Irritating to respiratory system. Exposure to high concentrations may cause headache, nausea, vomiting. May cause abdominal pain. May cause loss of appetite. It may affect respiration (respiratory stimulation). Can cause dyspnea (shortness of breath and difficulty breathing). It may affect behavior/central nervous system (ataxia, general anesthetic, drowsiness). Inhalation of high concentrations of vapors may cause dizziness or suffocation. Inhalation of high concentrations of vapor may cause anesthetic effects. It may affect behavior/central nervous system (convulsions/seizures). May cause muscle weakness. May affect peripheral nervous system (flaccid paralysis without anesthesia (usually neuromuscular blockage)). May affect behavior/central nervous system (loss of consciousness, coma). May affect the kidneys.

**Ingestion** Harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May affect respiration (respiratory depression). May affect behavior/central nervous system (ataxia). May cause loss of appetite. May cause muscle weakness.

**Aspiration hazard** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Chronic Toxicity** Prolonged or repeated skin contact may cause dermatitis, and dryness and cracking of the skin. Prolonged or repeated inhalation can irritate the lungs. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may cause bronchitis with coughing, phlegm, and/or shortness of breath. Prolonged or repeated inhalation may cause loss of appetite. Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated inhalation may affect the spleen. Prolonged or repeated inhalation may affect the heart. Prolonged or repeated inhalation may affect the thymus gland. Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated ingestion may cause weight loss. Prolonged or repeated ingestion may cause loss of appetite. Prolonged or repeated ingestion may affect the blood (changes in white blood cell count). Prolonged or repeated inhalation may affect the blood (changes in red blood cell count). Prolonged or repeated ingestion may affect the blood (changes in clotting factors). Prolonged or repeated ingestion may affect the liver, and kidneys.

**Sensitization:** No information available.

**Mutagenic Effects:** Mutations in microorganisms  
Experiments with bacteria have shown mutagenic effects



**Carcinogenic effects:** May cause cancer based on animal test data. Confirmed Animal Carcinogen with Unknown Relevance to Humans.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Tetrahydrofuran	109-99-9	Group 2B - Possibly carcinogenic to humans - Monograph 119 [in preparation]	A3 Confirmed Animal Carcinogen with Unknown Relevance to Humans	Not listed	Present	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** There is limited evidence limited evidence that Tetrahydrofuran is a developmental toxin or teratogen in animals

**Teratogenic Effects:** No information on developmental toxicity effects on humans was found  
 No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** STOT - single exposure. Respiratory system. central nervous system.  
**STOT - repeated exposure** Causes damage to organs through prolonged or repeated exposure.  
**Target Organs:** Skin. Respiratory system. Liver. Kidneys.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Tetrahydrofuran - 109-99-9*

**Freshwater Fish Species Data:** 1970 - 2360 mg/L LC50 Pimephales promelas 96 h flow-through 1 2700 - 3600 mg/L LC50 Pimephales promelas 96 h static 1

**Water Flea Data:** 5930 mg/L EC50 Daphnia magna 24 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** Potential for bioconcentration in aquatic organisms is low.

**Mobility:** It is expected to have very high mobility based on estimated Koc.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**  
 Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Tetrahydrofuran	109-99-9	None	None	None	U213 ignitable waste

**14. TRANSPORT INFORMATION****DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Class:** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):** [DOT]: (R4) - Identifies a material that is a hazardous substance that has a reportable quantity (RQ) of 1000 pounds (454 Kilograms).  
**Description:** UN2056,Tetrahydrofuran ,3,,PG II

**TDG (Canada)**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No Information available  
**Description:** TETRAHYDROFURAN,3,UN2056,PG II

**ADR**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Packing Group:** II  
**Subsidiary Risk:** No information available  
**Description:** UN2056 Tetrahydrofuran,3,II

**IMO / IMDG**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Marine Pollutant:** No information available  
**EMS:** F-E

**RID**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Risk:** 3  
**Packing Group:** II  
**Description:** UN2056 Tetrahydrofuran,3,II,RID

**ICAO**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**Description:** Tetrahydrofuran,3,UN2056,PG II

**IATA**

**UN-No:** UN2056  
**Proper Shipping Name:** Tetrahydrofuran  
**Hazard Class:** 3  
**Subsidiary Risk:** No information available  
**Packing Group:** II  
**ERG Code:** 3H  
**Special Provisions** No information available  
**Description:** UN2056,Tetrahydrofuran,3,PG II

<b>15. REGULATORY INFORMATION</b>
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**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Tetrahydrofuran</i>	109-99-9	PresentACTIVE	Present KE-33454	Present	Present (5)-53	Present	Present	Present 203-726-8

**U.S. Regulations***Tetrahydrofuran*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 1823  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 1000 lb RQ  
 100 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** 1000lbfinal RQ  
 454kgfinal RQ  
**California Directors List of Hazardous Substances:** Present

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.****Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
<i>Tetrahydrofuran</i>	109-99-9	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable	Section 302 Extremely Hazardous Substances	Section 302 Extremely Hazardous Substances and	Section 313 - Chemical Category	Section 313 - Reporting de minimis

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		Quantities	and TPQs	RQs		
Tetrahydrofuran	109-99-9	1000 lb final RQ 454 kg final RQ	None	None	None	None

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Tetrahydrofuran	109-99-9	Not Applicable	03/11/199406/30/1998

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Tetrahydrofuran  
109-99-9 ( 100 )

WHMIS 2015 Hazard Classification  
Flammable liquids - Category 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Category 2: H319 Causes serious eye irritation.; Specific target organ toxicity - Single exposure - Category 3: H335 May cause respiratory irritation.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Components	WHMIS Ingredient Disclosure List -
Tetrahydrofuran	1 %

### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Tetrahydrofuran	109-99-9	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Tetrahydrofuran	109-99-9	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Tetrahydrofuran	109-99-9	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Tetrahydrofuran	109-99-9	Flammable liquids - Flam. Liq. 2: H225 Highly flammable liquid and vapour.; Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye irritation. (C >= 25 %); Carcinogenicity - Carc. 2: H351 Suspected of causing cancer.; Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C >= 25 %); Supplemental Hazards: EUH019 May form explosive peroxides.603-025-00-0 Serious Eye Damage/Eye Irritation - Eye Irrit. 2: H319 Causes serious eye

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		irritation. (C >= 25 %); Specific target organ toxicity - Single exposure - STOT SE 3: H335 May cause respiratory irritation. (C >= 25 %)603-025-00-0
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EU - CLP (1272/2008)

**R-phrase(s)**

R11 - Highly flammable.  
R19 - May form explosive peroxides.  
R36/37 - Irritating to eyes and respiratory system.

**S -phrase(s)**

S 2 - Keep out of the reach of children.  
S16 - Keep away from sources of ignition - No smoking.  
S29 - Do not empty into drains.  
S33 - Take precautionary measures against static discharges.  
S36 - Wear suitable protective clothing.  
S37 - Wear suitable gloves.  
S46 - If swallowed, seek medical advice immediately and show this container or label.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Tetrahydrofuran	109-99-9	F; R11-19 Carc.Cat.3; R40 Xi; R36/37	25%<=C Xi; R36/37	S: (2)-13-16-29-33-36-37-46

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

F - Highly flammable.  
Xi - Irritant.



**16. OTHER INFORMATION**

**Preparation Date:** 9/10/2015  
**Revision Date:** 9/12/2018  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be

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**End of Safety Data Sheet**