

Safety Data Sheet

Tetrahydrofuran

SECTION I - IDENTIFICATION



Transchem, Inc.
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Carlsbad, CA 92011
(800) 783-2436
Chemtel Emergency Response :. (800) 255-3924

PRODUCT NUMBER: THF
PRODUCT NAME: Tetrahydrofuran
CHEMICAL FAMILY:
CAS NUMBER: 109-99-9
DATE PREPARED: 12/2/1994
REVISION NUMBER: 5/28/2014

SECTION II - HAZARDOUS IDENTIFICATION

GHS CLASSIFICATION:

Classification

Flammable Liquids	Category 2
Serious Eye Damage/Eye Irritation	Category 2A
Specific target organ toxicity, single exposure, R	Category 3
Carcinogenicity	Category 2

DANGER!

GHS LABEL:



Hazard Statements

H225	Highly flammable gas and vapor
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H351	Suspected of causing cancer

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Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surface - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/light/equipment, etc.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.
P303+361+353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so - continue rinsing.
P308+313	IF exposed or concerned: get medical advice/attention.
P312	Call a POISON CENTER or a doctor/physician if you feel unwell.
P337+313	If eye irritation persists get medical advice/attention.
P370+378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.
P403+233	Store in a well ventilated place. Keep container tightly closed.
P403+235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal plant.

SECTION III - COMPOSITION/INFORMATION ON INGREDIENTS

The precise composition of this product is proprietary information. In the event of a medical emergency, a complete disclosure will be provided to medical personnel.

Component Name	CAS #	Component%	OSHA PEL	ACGIH TLV
Furan, tetrahydro-	109-99-9	100%	200 ppm	50 ppm

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SECTION IV - FIRST AID MEASURES

Contact with eyes: Flush with water for 15 minutes. Seek immediate medical attention.

Skin contact: Wash exposed areas with water and mild soap. Remove contaminated clothing immediately and launder before reuse. If irritations persist, seek immediate medical attention.

Inhalation: Remove victim to fresh air. Administer oxygen or artificial respiration if breathing is affected or stopped. Seek immediate medical attention.

Ingestion: If swallowed. Do not induce vomiting. Seek immediate medical attention.
Give large quantities of water. Never give anything by mouth to an unconscious person.

SECTION V - FIREFIGHTING MEASURES

Suitable Extinguishing Media: Water fog, foam, CO₂, dry chemical.

Special Fire Fighting Procedures Use self-contained breathing apparatus and full bunker gear in fire areas. Evacuate all unprotected personnel from area. Keep containers cool with water fog to minimize swelling taking care not to spread flames with water used for cooling.

Unusual Fire Fighting Hazards: Product is flammable and may be ignited by heat, sparks, flames or other sources of ignition (e.g., static electricity, pilot lights or mechanical/electrical equipment). Vapors are heavier than air and may accumulate in low areas. Vapors may travel considerable distances to a source of ignition where they can ignite, flashback or explode. May create vapor/air explosion hazard indoors, outdoors or in sewers. If container is not properly cooled, it can explode in the heat of a fire.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep all sources of ignition and hot metal surfaces away from spill or release.
Evacuate all unprotected personnel from the area.

Environmental Precautions: Prevent liquid from entering drains, sewers, waterways, ground and surface water or soil.
Contain spill if it can be done with minimal risk.
Notify proper authorities. Reportable quantity is 1000 pounds or 135 gallons.

Methods for Cleaning Up: Use foam on spills to minimize vapors.
Using only non-sparking tools and explosion proof equipment, collect spill on absorbent material and put into approved container.

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SECTION VII - HANDLING AND STORAGE

- Handling and Storage:**
- Vent container carefully before opening.
 - Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended.
 - "Empty" containers retain residue and/or vapor and may be dangerous. Do not cut, weld, braze solder, drill, grind or expose such containers to heat, flames, sparks, or other ignition sources.
 - Keep containers tightly closed when not in use.
 - Avoid prolonged breathing of mist or vapor. Wash thoroughly after handling.
 - NFPA Class III B storage.

SECTION VIII - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:

Component Name	CAS #	OSHA PEL	ACGIH TLV
Furan, tetrahydro-	109-99-9	200 ppm	50 ppm

Engineering Controls: Adequate local or mechanical ventilation to reduce vapor or mist to below the PEL or TLV.

Monitoring: Follow accepted work practices for handling a flammable material. Do not eat, drink or smoke in areas where this chemical is used or stored. Wash hands prior to eating, drinking or using the restroom. Have eye wash stations and safety showers readily available.

Personal Protective Equipment (PPE)

Eye Protection: Goggles or approved OSHA device with side shields; do not wear contact lenses when handling this product.

Skin Protection: Impervious solvent resistant gloves.
Impervious apron and work boots recommend where splashing may occur.

Respiratory Protection: Use the proper respirator in areas where the chemical exposure is unknown or above the OSHA PEL or ACGIH TLV.

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SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, Colorless Liquid
Odor	Ether-Like Odor
pH@25°C	-
Melting/Freezing Point	-
Flashpoint	-7°F (-21°C), TCC
Specific Gravity	0.89
Solubility	Complete
Auto-Ignition Temperature	-
Decomposition Temperature	-
VOC Content	100% (7.41#/gal)
Odor Threshold	-
Boiling Range	149°F
Evaporation Point	>1 (Butyl Acetate=1)
Flammable Limits - Upper	11.8%
Flammable Limits - Lower	2.3%
Vapor Pressure	129 MMHG @ 20°C
Vapor Density (Air=1)	2.5 (Air=1)
Viscosity	-

SECTION X - STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Extreme heat and ignition sources.

Hazardous Decomposition/Byproducts: CO, CO₂, and various hydrocarbons under combustion conditions.

Hazardous Polymerization: Polymerization can occur in the presence of strong acids.

Polymerization Conditions to Avoid: Contact with strong acids.

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SECTION XI - TOXICOLOGICAL INFORMATION

Likely Route of Exposure: Contact and inhalation; ingestion possible.

Inhalation: May cause respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.

Eye Contact: This material can cause significant eye irritation.

Skin Contact: Irritating and degreasing effect.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

Toxicity:

Component Name	LD50	LC50
Furan, tetrahydro-	Oral - rat - 2,050 - 2,850 mg/kg - Dermal - rat - > 2,000 mg/kg	Inhalation - rat - 4 h - 54 mg/l

Reproductive Effects	Teratogenicity	Mutagenicity	Embryotoxicity	Sensitization to Product	Synergistic Products
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION XII - ECOLOGICAL INFORMATION

Ecotoxicity: Information not available.

Mobility: The substance is heavier than water and may penetrate into ground waters.

Degradability: The product is moderately biodegradable.

BioAccumulation: Information not available.

SECTION XIII - WASTE DISPOSAL CONSIDERATIONS

Follow Federal, state, and local regulations.

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SECTION XIV - TRANSPORT INFORMATION

DOT SHIPPING INFORMATION

Proper Shipping Name: Tetrahydrofuran

Contains:

Hazard Class and Label: 3

Identification Number: UN 2056

Packaging Group: II

SECTION XV - REGULATORY INFORMATION

TSCA STATUS:..... The components of this product are listed on the TSCA Inventory

SARA TITLE III SECTION 302/304 EXTREMELY HAZARDOUS SUBSTANCE:

No chemicals in this material are subject to the reporting requirements.

SARA TITLE III SECTION 311/312 HAZARD CATEGORIZATION:

Acute	Chronic	Fire	Pressure	Reactive
X	X	X		

SARA TITLE III SECTION 313 SUPPLIER INFORMATION:

No chemicals in this material are subject to the reporting requirements.

CERCLA SECTION 102(a) HAZARDOUS SUBSTANCE:

Component Name	CAS #	% by wt.	RQ (lbs.)
Furan, tetrahydro-	109-99-9	100%	1,000

SECTION XVI - OTHER INFORMATION

HMIS Health: 2

HMIS Flammability: 3

HMIS Reactivity: 1

Additional:

Specification Information

Department issuing data sheet: Compliance

Email address: compliance@transcheminc.com

Training necessary: Follow all Federal, State and local regulations.

Disclaimer:

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