

A. G. Layne, Inc.

SAFETY DATA SHEET

SDS Distribution: The information in this document should be made available to all who may handle the product.

A.G. Layne, Inc. urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. It is the Buyer's/User's responsibility to ensure that his activities comply with all Federal, State, Provincial or Local laws. The information presented here pertains only to the product as shipped. The information contained herein is based on our current knowledge of the underlying data and is intended to describe the product for the purpose of health, safety and environmental requirements only. NO warranty or guarantee is expressed or implied regarding the accuracy of this data or the results to be obtained from the use of the product.

Product ID Tetrahydrofuran

SAFETY DATA SHEET

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: Tetrahydrofuran
Product Name: Tetrahydrofuran
Revision Date: Mar 10, 2017 **Date Printed:** Mar 10, 2017
Version: 1.0 **Supersedes Date:** N.A.
Manufacturer's Name: A. G. Layne, Inc.
Address: 4578 Brazil Street Los Angeles, CA, US, 90039
Emergency Phone: CHEMTREC US : 1-800-424-9300, INTERNATIONAL CALLS : 1-703-527-3887
Information Phone Number: 323-245-2345
Fax:
Product/Recommended Uses: Industrial Solvent

SECTION 2) HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity -Single Exposure (Respiratory Tract Irritation) - Category 3
Specific Target Organ Toxicity -Single Exposure (Narcotic Effects) - Category 3
Serious Eye Damage - Category 1
Carcinogenicity - Category 2
Flammable Liquids - Category 2
Acute toxicity Oral - Category 4

Pictograms:



Signal Word:

Danger

Hazardous Statements - Physical:

Highly flammable liquid and vapor

Hazardous Statements - Health:

May cause respiratory irritation
May cause drowsiness or dizziness
Causes serious eye damage
Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
Harmful if swallowed

Precautionary Statements - General:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.

Precautionary Statements - Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.
Keep container tightly closed.

Wear protective gloves/protective clothing/eye protection/face protection.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take action to prevent static discharges.

Wash with soap and water thoroughly after handling.

Do not eat, drink or smoke when using this product.

Precautionary Statements - Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor.

IF exposed or concerned: Get medical advice/attention.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse with water or shower.

In case of fire: Use DRY chemical, alcohol-resistant foam, water spray/fog or carbon-dioxide to extinguish.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

Rinse mouth.

Precautionary Statements - Storage:

Store in a well-ventilated place. Store locked up.

Store locked up.

Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal:

Dispose of contents/container to disposal recycling center.

Waste management should be in full compliance with federal, state and local laws.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000109-99-9	TETRAHYDRO-FURAN	100.000%

SECTION 4) FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If victim is not breathing, call 911 and administer CPR as directed.

Eliminate all ignition sources if safe to do so.

Skin Contact:

Rinse/wash with lukewarm, gently flowing water (and mild soap) for 15-20 minutes or until product is removed. If skin irritation occurs or you feel unwell: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Get immediate medical attention.

Ingestion:

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Unsuitable Extinguishing Media:

No data available.

Specific Hazards in Case of Fire:

No data available.

Fire-fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

RELEASE CAN CAUSE FIRE/EXPLOSION. LIQUIDS/VAPORS MAY IGNITE.

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Use explosive proof equipment. Avoid inhalation of dust and contact with skin and eyes. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning up:

Sand, clay and absorbent socks can be used to contain a spill.

SECTION 7) HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.

Use good personal hygiene practices.

Eating, drinking and smoking in work areas is prohibited.

Remove contaminated clothing and protective equipment before entering eating areas.

Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty container retain residue and may be dangerous.

Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

Ground and bond containers and receiving equipment. Avoid static electricity by grounding.

Electrostatic charges may be generated during pumping. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Appropriate Engineering Controls:

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

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA Tables (Z1, Z2, Z3)	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
TETRAHYDRO-FURAN	200	590			1			200	590	250	735	

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)	ACGIH Carcinogen	ACGIH Notations	ACGIH TLV Basis
TETRAHYDRO-FURAN	50		100		A3	Skin, A3	URT irr; CNS impair; kidney dam

A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, CNS - Central nervous system, dam - Damage, impair - Impairment, irr - Irritation, URT - Upper respiratory tract

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Specific Gravity	0.89
Density	7.43 lb/gal
% VOC	100.00%
Density VOC	7.43 lb/gal
% Solids By Weight	0.00%

Appearance	Colorless Liquid
Odor Threshold	N/A
Odor Description	Ether-like
pH	N/A

Water Solubility	Miscible
Flammability	Flashpoint below 73 °F
Flash Point Symbol	N/A
Flash Point	-20 °C
Viscosity	456 mPa-s at 24 deg C
Lower Explosion Level	N/A
Upper Explosion Level	N/A
Vapor Pressure	N/A
Vapor Density	N/A
Freezing Point	-108.3 °C
Melting Point	-108.5 °C
Low Boiling Point	N/A
High Boiling Point	N/A
Auto Ignition Temp	321 °C
Decomposition Pt	N/A
Evaporation Rate	N/A
Coefficient Water/Oil	N/A
VOC Composite Partial Pressure	129.632 mmHg

SECTION 10) STABILITY AND REACTIVITY

Stability:

Stable under normal conditions of use.

Conditions to Avoid:

Avoid heat, sparks, open flames and other ignition sources.

Hazardous Reactions/Polymerization:

No data available.

Incompatible Materials:

Strong oxidizing agents.

Hazardous Decomposition Products:

Thermal decomposition may yield carbon dioxide and/or carbon monoxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Acute toxicity:

No data available

Skin Corrosion/Irritation:

No data available

Serious eye damage/irritation:

Causes serious eye damage

Germ cell mutagenicity:

No data available

Respiratory/Skin Sensitization:

Slightly irritating to respiratory system.

Carcinogenicity:

Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Reproductive toxicity:

No data available

Specific Target Organ Toxicity - Repeated Exposure:

No data available

Aspiration hazard:

No data available

Specific Target Organ Toxicity - Single Exposure:

May cause respiratory irritation

May cause drowsiness or dizziness

0000109-99-9

TETRAHYDRO-FURAN

SECTION 12) ECOLOGICAL INFORMATION

Bio-accumulative Potential:

No data available.

Persistence and Degradability:

No data available.

Mobility in Soil:

No data available.

Toxicity:

No data available

Other adverse effects:

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information:

UN2056, Tetrahydrofuran, 3, PG II

Emergency Response Guide (ERG):

Emergency Response Guide 127

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000109-99-9	TETRAHYDRO-FURAN	100.000%	CERCLA,SARA312,VOC,TSCA,RCRA,OSHA

SECTION 16) OTHER INFORMATION

General:

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HMIS

Health	/	
FLAMMABILITY		
Physical Hazard		
Personal Protection		H

(*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

Version 1.0:

Revision Date: Mar 10, 2017

First Edition.

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