



Silver Fern Chemical, Inc.
Safety Data Sheet
1,3-Dioxolane

Revision Date: 05/30/2025

Section 1. Identification

Product identifier

Product Identity	1,3-Dioxolane
Other means of identification	Not Applicable

Relevant identified uses of the substance or mixture and uses advised against

See Technical Data Sheet.

Details of the supplier of the safety data sheet

Company Name	Silver Fern Chemical, Inc. 121 W. De La Guerra Street, Suite B Santa Barbara, CA 93101 USA Customer Service: 1-866-282-3384 / info@silverfernchemical.com Website - www.silverfernchemical.com
Emergency 24 hour Emergency Telephone No.	Emergency telephone number Infotrac: 1-800-535-5053; Outside USA & Canada +1-352- 323-3500
Customer Service:	

Section 2. Hazard(s) identification

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)

Flammable Liquid, category 2;H225	Highly Flammable liquid and vapor.
Serious eye damage / eye irritation, category 1;H318	Causes serious eye damage.
Reproductive toxicity, category 1B;H360	May damage fertility or the unborn child.



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Label elements



Danger

H225 Highly flammable liquid and vapor.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child.

[Prevention]

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, and other ignition sources - No smoking.

P233 Keep container tightly closed.

P235 Keep cool.

P240 Ground, bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, light, equipment.

P242 Use only non-sparking tools.

P243 Take action to prevent static discharges.

P280 Wear protective gloves, eye protection, and face protection.

[Response]

P303+361+353 IF ON SKIN (or hair): Remove, take off immediately all contaminated clothing. Rinse skin with water, shower.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+313 IF exposed or concerned: Get medical advice or attention.

P310 Immediately call a POISON CENTER, doctor or physician.

P370+378 In case of fire: Use extinguishing media listed in section 5 of SDS for extinction.

[Storage]

P403+235 Store in a well ventilated place. Keep cool.

P405 Store locked up.

[Disposal]

P501 Dispose of contents or container in accordance with local and national regulations.

Other hazards

This product contains no PBT/vPvB/vPvM chemicals.

This product contains no endocrine disrupting chemicals.



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Does not contain component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS) per US or Canadian regulations.

Section 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7).

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
1,3-Dioxolane CAS Number: 646-06-0 Synonyms: No available information	80 - 100	Flammable Liquid, category 2;H225 Reproductive toxicity, category 1B;H360 Serious eye damage / eye irritation, category 1;H318	No data available

The actual concentration or concentration range is withheld as a trade secret.

*PBT/vPvB - PBT, vPvM or vPvB-substance.

The full texts of the phrases are shown in Section 16.

Section 4. First aid measures

Description of first aid measures

General In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.

Inhalation Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes Rinse with plenty of clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Overview No specific symptom data available.



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Reproductive or genetic defect hazard. Treat symptomatically. See section 2 for further details.

Eyes Causes serious eye damage.

Section 5. Fire-fighting measures
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Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO₂, powder, water spray.
Unsuitable extinguishing media: Do not use; water jet.

Special hazards arising from the substance or mixture

Hazardous decomposition: No hazardous decomposition data available.
Keep away from heat, sparks, open flames, and other ignition sources - No smoking.
Keep container tightly closed.
Keep cool.
Ground, bond container and receiving equipment.
Use explosion-proof electrical, ventilating, light, equipment.
Use only non-sparking tools.
Take action to prevent static discharges.

Advice for fire-fighters

As with all fires, wear positive pressure, self-contained breathing apparatus, (SCBA) with a full face piece and protective clothing. Persons without respiratory protection should leave area. Wear SCBA during clean-up immediately after fire. No smoking.

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Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

Environmental precautions

Do not allow spills to enter drains or waterways.

Methods and material for containment and cleaning up

Ventilate the area and avoid breathing vapors. Take the personal protective measures listed in section 8.
Contain and absorb spillage with non-combustible materials e.g. sand, earth, and vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations.

Section 7. Handling and storage

Precautions for safe handling

Handle containers carefully to prevent damage and spillage.
See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: No available information
See section 2 for further details. - [Storage]

Specific end use(s)

No available information



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Section 8. Exposure controls / personal protection

Control parameters

Exposure Limits

CAS No.	Ingredient	Source	Value
646-06-0	1,3-Dioxolane	OSHA	No Established Limit
		ACGIH	TWA: 20 ppm
		NIOSH	No Established Limit

Exposure controls

Respiratory	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
Eyes	Protective safety glasses recommended
Skin	Avoid skin contact. Protective gloves recommended.
Engineering Controls	Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
Other Work Practices	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details.

Section 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State	Liquid
Color	Colorless
Odor	No available information



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Melting point / freezing point	-90 °C (at 1014 hPa (OECD TG 102))
Initial boiling point and boiling range	76 °C (at 1014 hPa (OECD TG 103))
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: No available information Upper Explosive Limit: No oxidising properties ≤ 2.5 °C (at 1026.2 hPa(EU, ISO TG))
Flash Point	Ignition temperature: 250 °C
Auto-ignition temperature	No available information
Decomposition temperature	No available information
pH	No available information
Viscosity (cSt)	Dynamic at 25 °C: 0.589 mPas
Solubility in Water	Highly Soluble
Partition coefficient n-octanol/water (Log Kow)	n-octanol/water: -0.37 log POW
Vapor pressure (Pa)	20 °C: 76 mmHg (OECD TG 104, EU methodA.4)
Relative Density	No available information
Vapor Density	20 °C: 1.06 g/cm ³ (OECD TG 109, EU methodA.3)
Evaporation rate (Ether = 1)	No available information
Oxidising properties	No available information
Explosive properties	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
Surface Tension	Surface Tension : 71.7 mN/m at 20°C and 1000 mg/L
Dissociation Constant	Dissociation constant : 1,3-Dioxolane has no pKa values within the range of 2 to 11 (OECD TG 112).
Other information	No other relevant information.

Section 10. Stability and reactivity

Reactivity

Hazardous Polymerization will not occur.

Chemical stability

Stable under normal circumstances.



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Possibility of hazardous reactions

No available information

Conditions to avoid

Avoid high temperatures and contact with incompatible material

Incompatible materials

No available information

Hazardous decomposition products

No hazardous decomposition data available.

Section 11. Toxicological information

Acute toxicity

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
1,3-Dioxolane - (646-06-0)	3,000.00, Rat - Category: 5	8,480.00, Rabbit - Category: NA	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
646-06-0	1,3-Dioxolane	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No;
		ACGIH	No Established Limit

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	1	Causes serious eye damage.



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Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	1B	May damage fertility or the unborn child.
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Possible routes of entry:No available information

Symptoms and effects, both acute and delayed:

No specific symptom data available.

Reproductive or genetic defect hazard. Treat symptomatically.

Eyes Causes serious eye damage.

Section 12. Ecological information

Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L
1,3-Dioxolane - (646-06-0)	No data available.	No data available.	No data available.

Persistence and degradability

There is no data available on the preparation itself.

Bioaccumulative potential

No available information

Mobility in soil

No available information

Results of PBT and vPvB assessment

This product contains no PBT/vPvB/vPvM chemicals.



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Other adverse effects

No available information

Section 13. Disposal considerations

Waste treatment methods

Observe all federal, provincial and local regulations when disposing of this substance.

Section 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	UN1166	UN1166	UN1166
UN proper shipping name	UN1166,Dioxolane,3,II	Dioxolane	Dioxolane
Transport hazard class(es)	Class:3 Sub Class: Not Applicable	Class:3 Sub Class: Not Applicable	Class:3 Sub Class: Not Applicable
Packing group	II	II	II

Environmental hazards

IMDG Marine Pollutant: No;
Special precautions for user

No available information

Section 15. Regulatory information

Regulatory Overview The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Classification of the substance or mixture under OSHA's Hazard Communication Standard (1910.1200) revised 2024 (GHS revision 7)



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Toxic Substance Control Act (TSCA)

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0000646-06-0	1,3-Dioxolane	Yes		ACTIVE

The following flags are used:

- Active - indicates commercial status designation of active
- E - indicates a substance that is the subject of a Section 5(e) Consent Order under TSCA.
- F - indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - indicates a polymeric substance containing no free-radical initiator in its Inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - indicates a commenced Premanufacture Notice (PMN) substance.
- R - indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - indicates a substance that is identified in a final Significant New Uses Rule.
- SP - indicates a substance that is identified in a proposed Significant New Uses Rule.
- T - indicates a substance that is the subject of a final Section 4 test rule under TSCA.
- UVCB Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials
- XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).
- Y1 - indicates a polymer that has a number-average molecular weight greater than 1,000 and that was exempt under the 1984 polymer exemption rule.
- Y2 - indicates a polymer that is a polyester and that was exempt under the 1984 polymer exemption rule.

EPCRA 302 Extremely Hazardous:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 Label Warning:

This product contains no chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Mass RTK Substances (>1%) :

(No Product Ingredients Listed)

New Jersey RTK Substances (>1%) :

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Pennsylvania RTK Substances (>1%) :

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

OSHA Process Safety Management Standard Highly Hazardous Chemicals, Toxics and Reactives:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US EPA List of Regulated Substances under the Risk Management Plan (RMP) Program:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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US EPA Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) under the Minimum Risk Exemption:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA List II or Essential Chemicals:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

U.S. - DEA - Exempt Chemical Mixtures - List 1 and 2:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

US DHS Chemical Facility Anti-Terrorism Standards (CFATS):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 311/312 Chemicals and RQs:

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.



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Section 16. Other information

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DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

The full text of the phrases appearing in section 3 is:

H225 Highly flammable liquid and vapor.

H318 Causes serious eye damage.

H360 May damage fertility or the unborn child.

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