



## **Section 1. Identification**

**Product identifier**

**Product Identity**

1,3,5 Trioxane

**Other means of identification**

1,3,5-Trioxacyclohexane, S-Trioxane,  
Metaformaldehyde, Trioxymethylene, Triformol

**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 Solid, category 1;H228  
Reproductive toxicity, category 2;H361D  
Specific target organ toxicity, Single exposure category 3;H335

Flammable solid.  
Suspected of damaging the unborn child.  
May cause respiratory irritation.

**Label elements**



H228 Flammable solid.

H335 May cause respiratory irritation.

H361d Suspected of damaging 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.

P240 Ground, bond container and receiving equipment.

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

P261 Avoid breathing dust, fume, gas, mist, vapors, spray.

P271 Use only outdoors or in a well-ventilated area.



**SILVER FERN**  
CHEMICAL INC

**Silver Fern Chemical, Inc.**  
**Safety Data Sheet**  
**1,3,5 Trioxane**

**Revision Date: 05/20/2025**

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

**[Response]**

P304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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

P312 Call a POISON CENTER, doctor or physician if you feel unwell.

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

**[Storage]**

P403+233 Store in a well ventilated place. Keep container tightly closed.

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.

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
1,3,5-trioxan CAS Number: 110-88-3 Synonyms: Trioxane	80 - 100	Flammable Solid, category 1;H228 Reproductive toxicity, category 2;H361d Specific target organ toxicity, Single exposure category 3;H335	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.

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

**Inhalation** May cause respiratory irritation.

### Section 5. Fire-fighting measures



**SILVER FERN**  
CHEMICAL INC

**Silver Fern Chemical, Inc.**  
**Safety Data Sheet**  
**1,3,5 Trioxane**

**Revision Date: 05/20/2025**

**Extinguishing media**

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, 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.

Ground, bond container and receiving equipment.

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

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

**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.

ERG Guide No. 133

**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**

Sweep up or pick up.

**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

**Section 8. Exposure controls / personal protection**

**Control parameters**

**Exposure Limits**

CAS No.	Ingredient	Source	Value
110-88-3	1,3,5-trioxan	OSHA	No Established Limit
		ACGIH	No Established Limit
		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**

<b>Physical State</b>	Solid
<b>Color</b>	Off-white plate crystal
<b>Odor</b>	Slightly smell of formaldehyde
<b>Melting point / freezing point</b>	62°C (143.6°F)
<b>Initial boiling point and boiling range</b>	114-116°C (237.2-240.8°F)
<b>Flammability (solid, gas)</b>	Solid
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit:</b> No available information <b>Upper Explosive Limit:</b> No available information
<b>Flash Point</b>	45°C (113°F)
<b>Auto-ignition temperature</b>	410°C (770.0°F)
<b>Decomposition temperature</b>	No available information
<b>pH</b>	No available information
<b>Viscosity (cSt)</b>	No available information
<b>Solubility in Water</b>	Slightly soluble in water
<b>Partition coefficient n-octanol/water (Log Kow)</b>	No available information
<b>Vapor pressure (Pa)</b>	1.73 @ 25°C (77.0°F)
<b>Relative Density</b>	1.17 @ 65°C (149.0°F)
<b>Vapor Density</b>	3.1
<b>Particle Characteristics</b>	---
<b>Evaporation rate (Ether = 1)</b>	No available information
<b>Oxidising properties</b>	No available information
<b>Explosive properties</b>	No available information
<b>Other information</b>	No other relevant information.

### **Section 10. Stability and reactivity**

#### **Reactivity**

Hazardous Polymerization will not occur.

#### **Chemical stability**

Stable under normal circumstances.

#### **Possibility of hazardous reactions**

No available information

#### **Conditions to avoid**

Avoid high temperatures and contact with incompatible material

#### **Incompatible materials**

No available information



**SILVER FERN**  
CHEMICAL INC

**Silver Fern Chemical, Inc.**  
**Safety Data Sheet**  
**1,3,5 Trioxane**

**Revision Date: 05/20/2025**

**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
1,3,5-trioxan - (110-88-3)	8,500.00, Rat - Category: NA	15,000.00, Rat - Category: NA	26.00, Rat - Category: NA	No data available.	No data available.

**Carcinogen Data**

CAS No.	Ingredient	Source	Value
110-88-3	1,3,5-trioxan	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	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	2	Suspected of damaging the unborn child.
STOT-single exposure	---	Not Applicable
STOT-single exposure	3	May cause respiratory irritation.
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.

**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
1,3,5-trioxan - (110-88-3)	16,350.00, Cyprinodon variegatus	15,200.00, Daphnia magna	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.

#### **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**

	<b>DOT (Domestic Surface Transportation)</b>	<b>IMO / IMDG (Ocean Transportation)</b>	<b>ICAO/IATA</b>
<b>UN number</b>	UN1325	UN1325	UN1325
<b>UN proper shipping name</b>	UN1325, Flammable solids, organic, n.o.s. (CHEMICAL NAME),4.1,III	Flammable solids, organic, n.o.s. (CHEMICAL NAME)	Flammable solids, organic, n.o.s. (CHEMICAL NAME)
<b>Transport hazard class(es)</b>	Class: 4.1 Sub Class: Not Applicable	Class: 4.1 Sub Class: Not Applicable	Class: 4.1 Sub Class: Not Applicable
<b>Packing group</b>	III	III	III

#### **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)

#### **Toxic Substance Control Act (TSCA)**

CAS Number	Ingredient	Toxic Substance Control Act (TSCA)	Comments	Status
0000110-88-3	1,3,5-trioxan	Yes		ACTIVE



**SILVER FERN**  
CHEMICAL INC

**Silver Fern Chemical, Inc.**  
**Safety Data Sheet**  
**1,3,5 Trioxane**

**Revision Date: 05/20/2025**

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.

**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%) :**

1,3,5-trioxan

**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%):**

1,3,5-trioxan

**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.

**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.



### **Section 16. Other information**

**Revision Date** 05/20/2025

#### **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:

H228 Flammable solid.

H335 May cause respiratory irritation.

H361 Suspected of damaging fertility or the unborn child.

End of Document