



**Silver Fern Chemical, Inc.
Safety Data Sheet
Polysorbate 80**

**Revision Date:
21 January, 2026**

Section 1. Identification

Product identifier

Product Identity	Polysorbate 80
Other means of identification	Polyoxyethylene (20) sorbitan monooleate; Alkest TW 80; Tween 80

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

Industrial use

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
24-hour Emergency Telephone No.	Emergency telephone number Infotrac: 1-800-535-5053 Outside USA & Canada +1-352-323-3500

Section 2. Hazard(s) identification

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

The substance is not classified according to the OSHA Hazcom or WHMIS regulations.

Skin corrosion/irritation, Category 3
Serious eye damage/eye irritation, Category 2B



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Label elements



WARNING

[Prevention]

H316 Causes mild skin irritation.

H320 Causes eye irritation.

[Response]

P264 Wash thoroughly after handling.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact

lenses, if present and easy to do. Continue rinsing.

P332+P313 If skin irritation occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

[Storage]

No GHS storage statements

[Disposal]

No GHS disposal statements

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 the US EPA PFASMASTER combined list of PFAS chemicals.

Section 3. Composition/information on ingredients



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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
Polyoxyethylene 20 sorbitan monooleate CAS Number: 9005-65-6 Synonyms: Sorbitan monooleate, ethoxylated, Sorbitan, mono-(9z)-9-octadecenoate, poly(oxy-1,2-	100%	Not Classified	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.
No chronic toxicity or long-term toxicity information available. Treat symptomatically. See section 2 for further details.

Section 5. Fire-fighting measures



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: Product is not flammable.
In case of combustion it may generate carbon monoxide, besides CO₂.

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. Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire.

ERG Guide No.

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.
Isolate and signalize area. Keep heat and/or ignition sources away.

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.

Use in a well-ventilated area.

Avoid inhalation and contact with eyes, skin or clothing through proper protection.

If accidental contact occurs, exposed area should be washed immediately.

Emergency eyewashes and showers shall be located in accessible locations.

Wash hands and face thoroughly after handling.

Wash contaminated clothing before reuse.

See section 2 for further details. - [Prevention]

Conditions for safe storage, including any incompatibilities

Incompatible materials: Avoid contact with: Strong oxidizing agents.

Store in a covered and well-ventilated area, away from sunlight and sources of heat or open flames.

Ensure that the storage location has adequate moisture, pressure and temperature.

Keep containers tightly closed when not in use.

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
9005-65-6	Polyoxyethylene 20 sorbitan monooleate	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

Physical State	Liquid
Color	Yellowish. Amber.
Odor	No available information
Odor threshold	No available information
Melting point / freezing point	> 20 °C.
Initial boiling point and boiling range	> 100 °C.
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: No available information
Flash Point	Upper Explosive Limit: No available information > 149 °C (open cup).
Auto-ignition temperature	No available information
Decomposition temperature	No available information
pH	6.0 - 7.0 (sol. 5%).
Viscosity (cSt)	300 - 500 cSt (25 °C).
Solubility in Water	Soluble in water (20 °C for 1 hour / concentration of 0.5%). Soluble in ethanol (25 °C).
Partition coefficient n-octanol/water (Log Kow)	No available information
Vapor pressure (Pa)	0.001 kPa (25 °C).



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Relative Density (Water = 1) 1.07 g/cm³(25 °C).
Vapor Density (Air = 1) 45.

Evaporation rate (Ether = 1) No available information
Oxidising properties No available information
Explosive properties No available information

Other information

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

Avoid contact with: Strong oxidizing agents.

Hazardous decomposition products

In case of combustion it may generate carbon monoxide, besides CO₂.

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 LD ₅₀ , mg/kg	Skin LD ₅₀ , mg/kg	Inhalation Vapor LC ₅₀ , mg/L/4hr	Inhalation Dust/Mist LC ₅₀ , mg/L/4hr	Inhalation Gas LC ₅₀ , ppm
Polyoxyethylene 20 sorbitan monooleate - (9005-65-6)					



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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
	58,860.00, Rat - Category: NA	No data available.	No data available.	No data available.	No data available.

Carcinogen Data

CAS No.	Ingredient	Source	Value
9005-65-6	Polyoxyethylene 20 sorbitan monooleate	OSHA	Regulated Carcinogen: No;
		NTP	Known: No; Suspected: No;
		IARC	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	3	Causes mild skin irritation
Serious eye damage/irritation	2B	Causes eye irritation
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

Possible routes of entry:

Inhalation, ingestion, skin contact, and skin absorption.

Symptoms and effects, both acute and delayed:

No specific symptom data available.

No chronic toxicity or long term toxicity information available. Treat symptomatically.

Section 12. Ecological information

Toxicity



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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
Polyoxyethylene 20 sorbitan monooleate - (9005-65-6)	101.00, Fish	> 10,000, Daphnia magna	58.94, Algae

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

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
UN number	Not Regulated	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
Transport hazard class(es)	Class: Not Applicable Sub Class: Not Applicable	Class: Not Applicable Sub Class: Not Applicable	Class: Not Applicable Sub Class: Not Applicable



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Packing group Not Applicable Not Applicable Not Applicable

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
0009005-65-6	Polyoxyethylene 20 sorbitan monooleate	Yes	XU	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.



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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:



WARNING! This product contains 1,4-Dioxane, and Ethylene oxide, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.



WARNING! This product contains Ethylene Oxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

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:



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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.

CERCLA 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

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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



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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:

Not Applicable

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