



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

**Revision Date: 21/1/2026**

**Section 1. Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

<b>Product Identity</b>	Polysorbate 80
<b>Alternate Names</b>	Polyoxyethylene (20) sorbitan monooleate; Alkest TW 80; Tween 80
<b>Unique Formula Identifier</b>	

**1.2. Relevant identified uses of the substance or mixture**

Industrial use

**1.3. Details of the supplier of the safety data sheet**

<b>Company Name</b>	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
---------------------	---

**Customer Service:**

**1.4. Emergency telephone number**

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

**Section 2. Hazard identification of the product**

**2.1. Classification of the substance or mixture**  
**REGULATIONS (EU) 2024/2865, (EU) 2023/707, (EU) 2020/878 amending Regulations EU 2015/830 and (EC) No 1907/2006 of the European Parliament and**



Silver Fern Chemical, Inc.  
Safety Data Sheet  
Polysorbate 80

Revision Date: 21/1/2026

of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). REGULATION (EC) 1272/2008 on the classification, labeling and packaging of substances and mixtures (CLP).

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

## 2.2. 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

## 2.3. Other hazards

This product contains no PBT/vPvB/vPvM chemicals.  
This product contains no endocrine disrupting chemicals.

## Section 3. Composition/information on ingredients



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

**Revision Date: 21/1/2026**

### 3.1. Substances

If the product contains substances that present a hazard according to Regulation (EC) No. 1272/2008 [CLP/GHS], they are listed below.

Ingredient/Chemical Designations	Weight %	EC No. 1272/2008 Classification	Notes
Polyoxyethylene 20 sorbitan monooleate CAS Number: 9005-65-6 EC No. 500-019-9	100%	Not Classified	

<sup>^</sup>CLP <sup>31</sup>Reference EC No. 1272/2008 1.1.3.1. Notes relating to the identification, classification and labelling of substances (Table 3.1).

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

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

## Section 4. First aid measures

### 4.1. 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.

**Eye** 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.

### 4.2. 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.



#### 4.3. Indication of any immediate medical attention and special treatment needed

##### Notes to physician

Treat symptomatically.

### Section 5. Fire-fighting measures

#### 5.1. Extinguishing media

Recommended extinguishing media; alcohol resistant foam, CO<sub>2</sub>, powder, water spray.  
Unsuitable extinguishing media: Do not use; water jet.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Product is not flammable.  
In case of combustion it may generate carbon monoxide, besides CO<sub>2</sub>.

#### 5.3. 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.

### Section 6. Accidental release measures

#### 6.1. 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.

#### 6.2. Environmental precautions

Do not allow spills to enter drains or waterways.



### 6.3. 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.

### 6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

## Section 7. Handling and storage

### 7.1. 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.

### 7.2. 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.

### 7.3. Specific end use(s)

No available information

## Section 8. Exposure controls / personal protection



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

**Revision Date: 21/1/2026**

## 8.1. Control parameters

### Exposure Limits

CAS No.	Ingredient	Source	Value
9005-65-6	Polyoxyethylene 20 sorbitan monooleate	ACGIH	No Established Limit
		DNEL Local Exposure	No Established Limit
		DNEL Systematic Exposure	No Established Limit
		National	No Established Limit

## 8.2. Exposure controls

<b>Respiratory</b>	If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators.
<b>Eyes</b>	Protective safety glasses recommended
<b>Skin</b>	Avoid skin contact. Protective gloves recommended.
<b>Engineering Controls</b>	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.
<b>Other Work Practices</b>	Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

## Section 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

<b>Physical State</b>	Liquid
<b>Color</b>	Yellowish. Amber.
<b>Odor</b>	No available information
<b>Odor threshold</b>	No available information
<b>Melting point / freezing point</b>	> 20 °C.
<b>Initial boiling point and boiling range</b>	> 100 °C.
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	Lower Explosive Limit: No available information
<b>Flash Point</b>	Upper Explosive Limit: No available information > 149 °C (open cup).



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

**Revision Date: 21/1/2026**

<b>Auto-ignition temperature</b>	No available information
<b>Decomposition temperature</b>	No available information
<b>pH</b>	6.0 - 7.0 (sol. 5%).
<b>Viscosity (cSt)</b>	300 - 500 cSt (25 °C).
<b>Solubility in Water</b>	Soluble in water (20 ° C for 1 hour / concentration of 0.5%). Soluble in ethanol (25 ° C).
<b>Partition coefficient n-octanol/water (Log Kow)</b>	No available information
<b>Vapor pressure (Pa)</b>	0.001 kPa (25 °C).
<b>Relative Density (Water = 1)</b>	1.07 g/cm <sup>3</sup> (25 °C).
<b>Vapor Density (Air = 1)</b>	45.
<b>Evaporation rate (Ether = 1)</b>	No available information
<b>Oxidising properties</b>	No available information
<b>Explosive properties</b>	No available information

**9.2. Other information**

No other relevant information.

**Section 10. Stability and reactivity**

**10.1. Reactivity**

Hazardous Polymerization will not occur.

**10.2. Chemical stability**

Stable under normal circumstances.

**10.3. Possibility of hazardous reactions**

No available information

**10.4. Conditions to avoid**

Avoid high temperatures and contact with incompatible material

**10.5. Incompatible materials**

Avoid contact with: Strong oxidizing agents.

**10.6. Hazardous decomposition products**

In case of combustion it may generate carbon monoxide, besides CO<sub>2</sub>.

**Section 11. Toxicological information**

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**



Silver Fern Chemical, Inc.  
Safety Data Sheet  
Polysorbate 80

Revision Date: 21/1/2026

## 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 Vapour LC50, mg/L/4hr	Inhalation Dust/Mist LC50, mg/L/4hr	Inhalation Gas LC50, ppm
Polyoxyethylene 20 sorbitan monooleate - (9005-65-6)	58,860.00, Rat - Category: NA	No data available.	No data available.	No data available.	No data available.

Classification	Category	Hazard Description
Acute toxicity (oral)	---	---
Acute toxicity (dermal)	---	---
Acute toxicity (inhalation)	---	---
Skin corrosion/irritation	3	Causes mild skin irritation
Serious eye damage/irritation	2B	Causes eye irritation
Respiratory sensitization	---	---
Skin sensitization	---	---
Germ cell mutagenicity	---	---
Carcinogenicity	---	---
Reproductive toxicity	---	---
STOT-single exposure	---	---
STOT-repeated exposure	---	---
Aspiration hazard	---	---

## 11.2 Information on other hazards

### 11.2.1. Endocrine disrupting properties

This product contains no endocrine disrupting chemicals.

## Section 12. Ecological information

### 12.1. Toxicity

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

### Aquatic Ecotoxicity





Silver Fern Chemical, Inc.  
Safety Data Sheet  
Polysorbate 80

Revision Date: 21/1/2026

Ingredient	96 hr LC50 fish, mg/L	48 hr EC50 crustacea, mg/L	ErC50 algae, mg/L	3hr IC50 Bacteria mg/L	Biodegradability %
Polyoxyethylene 20 sorbitan monooleate - (9005-65-6)	>100.00, Fish	>10,000.00, Daphnia magna	58.94, Algae	16.84	61.00

**12.2. Persistence and degradability**

There is no data available on the preparation itself.

**12.3. Bioaccumulative potential**

No available information

**12.4. Mobility in soil**

No available information

**12.5. Results of PBT and vPvB assessment**

This product contains no PBT/vPvB/vPvM chemicals.

**12.6 Endocrine disrupting properties**

This product contains no endocrine disrupting chemicals.

**12.7. Other adverse effects**

No available information

**Section 13. Disposal considerations**

**13.1. Waste treatment methods**

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

**Section 14. Transport information**

	ADR/RID	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Regulated	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated
14.3. Transport hazard class(es)	<b>Class:</b> Not Applicable	<b>Class:</b> Not Applicable <b>Sub Class:</b> Not Applicable	<b>Class:</b> Not Applicable



Silver Fern Chemical, Inc.  
Safety Data Sheet  
Polysorbate 80

Revision Date: 21/1/2026

Sub Class: Not  
Applicable

Sub Class: Not  
Applicable  
Not Applicable

14.4. Packing group Not Applicable Not Applicable

14.5. Environmental hazards

IMDG Marine Pollutant: No;

14.6. Special precautions for user

No available information

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not Applicable

Section 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Legislation

REGULATIONS (EU) 2024/2865 , (EU) 2023/707, (EU) 2020/878 amending Regulations EU 2015/830 and (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). REGULATION (EC) 1272/2008 on the classification, labeling and packaging of substances and mixtures (CLP).

Candidate List of SVHC for Authorization: Not Applicable

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not Applicable

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out.

Section 16. Other information

Revision Date  
Revision Number

21/1/2026  
1



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

**Revision Date: 21/1/2026**

**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:

Not Applicable

ACGIH - American Conference of Governmental Industrial Hygienists  
ADR - International Carriage of Dangerous Goods by Road (Accord Dangereux Routier)  
CAS - Chemical Abstracts Service  
CLP - Classification Labeling and Packaging  
DOT - Department of Transportation  
EC - European Commission  
EC50 - Half maximal effective concentration  
ErC50 - EC50 in terms of reduction of growth rate  
GHS - Globally Harmonized System  
IARC - International Agency for Research on Cancer  
IATA - International Air Transport Association  
IC50 - Half Maximal Inhibitory Concentration  
ICAO - International Civil Aviation Organization  
IMDG - International Maritime Dangerous Goods Code  
IMO - International Maritime Organization  
LC50 - Lethal Concentration of a substance at which 50% of test animals die  
LD50 - Lethal Dose at which 50% of the animals will be expected to die  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PBT - Persistent, Bioaccumulative and Toxic Chemicals  
PEL - Permissible Exposure Limit



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

**Revision Date: 21/1/2026**

REACH - Registration, Evaluation, Authorization and Restriction of Chemicals  
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail  
STEL - Short Term Exposure Limit  
TWA - Time Weighted Average  
vPvB - Very Persistent and very Bio-accumulative  
WGK - Water Hazard Class

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

No applicable GHS categories. Classification

Justification

**End of Document**