

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name:

Polysorbate 80

Chemical name:

Polyoxyethylene sorbitan fatty acid ester

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

Identified uses: Industrial Use

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet

Company Name	Imperial Supply Ltd. Common Lane, Industrial Estate, Kenilworth, CV8 2EL, United Kingdom
--------------	--

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has not been classified as hazardous according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Not classified

2.2 Label Elements Not applicable

2.3 Other hazards None known.

SECTION 3: Composition/information on ingredients

Chemical name:

Polyoxyethylene sorbitan fatty acid ester

3.1 Substances

REACH Registration No.: No data available.

SECTION 4: First aid measures

General: Remove soiled or soaked clothing immediately

4.1 Description of first aid measures

Inhalation: Remove the casualty into fresh air and keep him calm. In the event of symptoms seek medical advice.

Skin Contact: In case of contact with skin wash off immediately with soap and water. Consult a doctor if skin irritation persists.

Eye contact: In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice

Ingestion: Rinse out mouth and give plenty of water to drink. Do not induce vomiting. Take medical treatment.

4.2 Most important symptoms and effects, both acute and delayed: No information is on file to date regarding acute and/or delayed post-exposure symptoms and effects.

4.3 Indication of any immediate medical attention and special treatment needed

Hazards: No data available.

Treatment: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: foam, carbon dioxide, dry powder, water spray.

Unsuitable extinguishing media: Not applicable

5.2 Special hazards arising from the substance or mixture: In the event of fire the following can be released: - carbon dioxide, carbon monoxide

5.3 Advice for firefighters

Special fire fighting procedures: No specific precautions.

Special protective equipment for fire-fighters: Self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures: Use personal protective equipment.

6.1.1 For non-emergency personnel: No data available.

6.1.2 For emergency responders: No data available.

- 6.2 Environmental Precautions:** Do not allow to enter drains or waterways Do not discharge into the subsoil/soil.
- 6.3 Methods and material for containment and cleaning up:** Contain with absorbent material (eg sand, peat, earth) and take up Dispose of absorbed material in accordance with the regulations.
- 6.4 Reference to other sections:** For further information on exposure monitoring and disposal see sections 8 and 13.

SECTION 7: Handling and storage:

- 7.1 Precautions for safe handling:** Avoid contact with skin and eyes. No data available.
- 7.2 Conditions for safe storage, including any incompatibilities:** No data available.
- 7.3 Specific end use(s):** No further recommendations.

SECTION 8: Exposure controls/personal protection

**8.1 Control Parameters
Occupational Exposure Limits**

DNEL-Values

Remarks: No DNEL/DMEL values on file.

PNEC-Values

Remarks: No PNEC values on file.

8.2 Exposure controls

Appropriate Engineering Controls: No data available.

Individual protection measures, such as personal protective equipment

Eye/face protection: goggles with side pieces

Hand Protection: Additional Information: Rubber gloves

Skin and Body Protection: light protective clothing

Respiratory Protection: None required

Hygiene measures: Do not eat, drink or smoke when working. Wash hands before breaks and immediately after handling the product. Remove soiled or soaked clothing immediately.

Environmental Controls: The environmental regulations on the control and monitoring of environmental exposures are to be observed.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state: liquid

Form: liquid

Color:	slightly yellow
Odor:	Characteristic
Odor Threshold:	not measured
pH:	5.5 - 7 (100 g/l,)
Freezing point:	not measured
Boiling Point:	> 100 °C
Flash Point:	> 149 °C (DIN EN 22719 (DIN 51758))
Evaporation Rate:	not measured
Flammability (solid, gas):	no data available
Flammability Limit - Upper (%):	not measured
Flammability Limit - Lower (%):	not measured
Vapor pressure:	< 133.3 Pa (20 °C)
Vapor density (air=1):	not measured
Density:	approx. 1.08 g/cm ³ (25 °C)
Relative density:	No data available.
Solubility(ies)	
Solubility in Water:	Soluble
Solubility (other):	not measured
Partition coefficient (n-octanol/water):	not measured
Self Ignition Temperature:	not measured
Decomposition Temperature:	not measured
Kinematic viscosity:	No data available.
Dynamic viscosity:	300 - 500 mPa.s (25 °C)

9.2 Other information

Explosive properties:	not measured
Oxidizing properties:	not measured
Minimum ignition temperature:	not measured
Metal Corrosion:	not measured

SECTION 10: Stability and reactivity

10.1 Reactivity:	see section "Possibility of hazardous reactions"
10.2 Chemical Stability:	The product is stable under normal conditions.
10.3 Possibility of hazardous reactions:	No hazardous reactions with proper storage and handling.
10.4 Conditions to avoid:	Unknown
10.5 Incompatible Materials:	Unknown
10.6 Hazardous Decomposition Products:	None with proper storage and handling.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation:	If handled correctly, not a relevant route of exposure. Information on effects are given below.
Skin Contact:	Relevant route of exposure. Information on effects are given below.
Eye contact:	Relevant route of exposure. Information on effects are given below.

Ingestion: If handled correctly, not a relevant route of exposure. Information on effects are given below.

11.1 Information on toxicological effects

Acute toxicity

Oral

Product: LD 50 (Rat): > 30 g/kg

Dermal

Product: no data available

Inhalation

Product: no data available

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation:

Product: non-irritant
(Rabbit): non-irritant

Serious Eye Damage/Eye Irritation:

Product: non-irritant
(rabbit eye): non-irritant

Respiratory or Skin Sensitization:

Product: Did not cause sensitisation on laboratory animals.

(human being)non-sensitizing

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Carcinogenicity

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: no data available

Specific Target Organ Toxicity - Repeated Exposure

Product: no data available

Aspiration Hazard
Product: Not classified

Other adverse effects: Proper use provided, no adverse health effects have been observed or have been come to our knowledge.

SECTION 12: Ecological information

12.1 Toxicity

Acute toxicity

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Toxicity to microorganisms
Product: No data available.

Chronic Toxicity

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

12.2 Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product No data available.

12.3 Bioaccumulative potential
Product: No data available.

12.4 Mobility in soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: Do not allow to enter soil, waterways or waste water canal. The product is classified as slightly hazardous to waters (according to the German Regulation on the Classification of Substances Hazardous to Waters (WwSV)).

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: No data available.

Disposal methods: In accordance with local authority regulations, take to special waste incineration plant

Contaminated Packaging: If empty contaminated containers are recycled or disposed of, the receiver must be informed about possible hazards.

SECTION 14: Transport information

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

EU. Directive 2012/18/EU (SEVESO III) on major accident hazards involving dangerous substances, Annex I: Not applicable

15.2 Chemical safety assessment: No chemical safety assessment was carried out for this product.

International regulations

SECTION 16: Other information

Abbreviations and acronyms

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; **ADN** - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; **AGW** - Occupational exposure limit; **ASTM** - American Society

for Testing and Materials; **AwSV** - Ordinance on facilities for handling substances that are hazardous to water; **BSB** - Biochemical oxygen demand; **c.c.** - closed cup; **CAS** - Chemical Abstract Services; **CESIO** - European Committee of Organic Surfactants and their Intermediates; **CSB** - Chemical oxygen demand; **DMEL** - Derived minimum effect level; **DNEL** - Derived no effect level; **EbC50** - median concentration in terms of reduction of growth; **EC** - Effective concentration; **EINECS** - European Inventory of Existing Commercial Chemical Substances; **EN** - European norm; **ErC50** - median concentration in terms of reduction of growth rate; **GGVSEB** - German ordinance for road, rail and inland waterway transportation of dangerous goods; **GGVSee** - German ordinance for sea transportation of dangerous goods; **GLP** - Good Laboratory Practice; **GMO** - Genetic Modified Organism; **IATA** - International Air Transport Association; **ICAO** - International Civil Aviation Organization; **IMDG** - International Maritime Dangerous Goods; **ISO** - International Organization For Standardization; **LD/LC** - lethal dosis/concentration; **LOAEL** - Lowest observed adverse effect level; **LOEL** - Lowest observed effect level; **M-Factor** - multiplying factor; **NOAEL** - No observed adverse effect level; **NOEC** - no observed effect concentration; **NOEL** - no observed effect level; **o.c.** - open cup; **OECD** - Organisation for Economic Cooperation and Development; **OEL** - Occupational Exposure Limit; **PBT** - Persistent, bioaccumulative, toxic; **PNEC** - Predicted no effect concentration; **REACH** - REACH registration; **RID** - Convention concerning International Carriage by Rail; **SVHC** - Substances of Very High Concern; **TA** - Technical Instructions; **TRGS** - Technical Rules for Hazardous Substances; **vPvB** - very persistent, very bioaccumulative; **WGK** - Water Hazard Class

Key literature references and sources for data: No data available.

Wording of the H-statements in section 2 and 3: none

Training information: Comply with national laws regulating employee instruction.

SDS No.:

Disclaimer:

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.