SAFETY DATA SHEET
100%
POLYSORBATE 80

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. PRODUCT IDENTIFIER

Product name: Polysorbate 80

Product No.: TWEEN80

CAS-No.: 9005-65-6

EC No.: 500-019-9

Synonyms: Polyoxyethylene(20)sorbitan monooleate, Montanox 80, Alkest TW 80, Tween 80, PS 80, Surfac T80,

Chemical Formula: $C_{64}H_{124}O_{26}$

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Recommended use: Pharmaceutical production, Cosmetic raw material

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

HD Chemicals LTD
UNIT 9 Scott Business Park
PL2 2PB Plymouth UK

Contact Person responsible for SDS: Mr Peter Konefal, e-mail: contact@hdchemicals.co.uk

SECTION 2: HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification 67/548/EEC: Not classified

Classification – EC 1272/2008: Not classified

2.2. LABEL ELEMENTS

No labelling requirements

SIGNAL WORDS
None

RISK PHRASES

Not classified

HAZARD PHRASES

Not classified

PROTECTION PHRASES

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

SAFETY PHRASES

Not classified

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

67/548/EEC/1999/45/EC

Composition information – main constituents					
Substance name	**Mol. Formula**	**Typical conc. (%w/w)**	**EINECS No.**	**CAS-No.**	**Classification**
Polysorbate 80	$C_{64}H_{124}O_{26}$	100%	500-019-9	9005-65-6	Not classified

EC 1272/2008

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SECTION 4: FIRST AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

First-aid measures general: Consult a physician when you fell unwell. Show this safety data sheet to the doctor in attendance.

Inhalation: Remove victim to fresh air immediately and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Never give anything by mouth to an unconscious person. Clean mouth with water and drink afterwards plenty of water. Do not induce vomiting. Get medical attention if any discomfort continues.

Skin contact: Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. If skin irritation persists, call a physician.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: May be harmful if inhaled. There may be irritation of the throat with a feeling of tightness in the chest. May causes respiratory track irritation.

Ingestion: May be harmful if swallowed. There may be soreness and redness of the mouth and throat. May cause irritation of the digestive tract.

Skin contact: There may be irritation at the site of contact. May be harmful if absorbed through the skin.

Eye contact: There may be irritation and redness eyes.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Adjust extinguishing media to the surrounding fire. Use water spray, carbon dioxide (CO_2), dry chemical powder, alcohol or polymer foam.

Unsuitable extinguishing media: No data available.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Thermal decomposition can lead to release of irritating gases and vapours: carbon monoxide (CO), carbon dioxide (CO_2).

5.3. Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective clothing to prevent contact with skin and eyes.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear suitable protective equipment (splash goggles, protective suit, boots, gloves and self-contained breathing apparatus) to prevent any contamination of skin, eyes and personal clothing. Ensure adequate ventilation of the working area. Avoid contact with skin and eyes. Remove all sources of ignition. Avoid breathing vapours, mist or gas. Avoid formation of dust. Keep unprotected persons away. Evacuate personnel to a safe area. Observe emergency procedures.

For personal protection see section 8.1.

6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter sewers/ surface or ground water. Do not allow to enter into soil/subsoil. Prevent further leakage or spillage if safe to do so. Use appropriate container to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Ventilate and clean the affected area. Do not flush into sewerage system or to drains.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Do not handle in a confined space. Avoid formation of dust and spilling. Do not inhale dust/smoke/mist. Ensure adequate ventilation of the working area. Wear personal protective equipment. Avoid contact with eyes and skin. Do not eat or drink during the process, washing hands afterwards with suitable cleaning products. Remove contaminated clothing and shoes. Wash clothing before re-using. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a cool, dry, well ventilated area. Keep in original tightly closed containers. Keep away from food, drink and animal feeding stuffs. Avoid moisture, heat and other sources of ignition. Avoid exposure to light. Keep away from incompatibles materials such as strong oxidizing agents, bases, heavy metal salts.

7.3. SPECIFIC END USE(S)

See section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS/EXPOSURE GUIDELINES

Occupational Exposure Limit Values (Polysorbate 80):

CAS NO	Exposure limit	Value	Name of Agent
9005-65-6	TWA – 8 Hrs	No data available	No data available
9005-65-6	STEL – 15 Min	No data available	No data available

Engineering controls: Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands before breaks and at the end of the working day.


EYE PROTECTION


FACE SHIELD


RESPIRATOR


PROTECTION WEAR


HAND PROTECTION

Protective equipment: Use protective chemical safety goggles (European standard - EN 166), face shield, gloves (European standard - EN 374), long sleeved clothing to prevent skin, body and eyes exposure.

Respiratory equipment: Respiratory protection not required in normal conditions, but when vapours or aerosols are generated must use appropriate certified respirators, which are NIOSH/MSHA or European Standard EN 149 approved respirator.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure. Wear impervious protective clothing (long sleeved clothing, chemical resistant apron, anti static boots). Wear appropriate protective work

gloves when handling material to prevent skin contact. The glove material has to be impermeable and resistant to the product: recommended are natural rubber, nitrile rubber, neoprene and / or PVC gloves. Protective gloves should be replaced at first signs of wear. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact. Wash and dry hands.

Eye/Face protection: Approved chemical safety goggles or face protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Liquid
Colour:	Yellow, brownish-yellow, amber
Odour:	Mild
Initial boiling point (°C):	> 100 °C
Melting point (°C):	No data available
Freezing point:	No data available
Relative density:	1.1 g/cm^3
Specific gravity / density:	Not available
Vapour density:	Not available
Vapour pressure:	Not available
Flash point (°C):	Not available
Molecular mass:	1310 g/mol
Auto-ignition temperature:	Not applicable
Oxidizing properties:	Not available
Decomposition temperature:	Not available
Molecular formula:	$C_{64}H_{124}O_{26}$

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

Polysorbate 80 is stable under normal conditions of use, storage and transport.

10.2. CHEMICAL STABILITY

This product is stable under normal conditions and under recommended usage and storage.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS

When heated can decompose. May liberate toxic gases.

10.4. CONDITIONS TO AVOID

Keep away from food, drink and animal feeding stuffs. Avoid moisture, heat and other sources of ignition. Avoid exposure to light. Keep away from incompatibles materials.

10.5. INCOMPATIBLE MATERIALS

May liberate toxic gases. Keep away from incompatibles materials such as strong oxidizing agents, bases, heavy metal salts.

10.6. HAZARDOUS DECOMPOSITION

Thermal decomposition can lead to release of irritating gases and vapours: carbon monoxide (CO), carbon dioxide (CO_2).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

TOXIC DOSE **LD50 Oral – Rat – > 34 500 mg/kg**

Inhalation: May be harmful if inhaled. There may be irritation of the throat with a feeling of tightness in the chest. May causes respiratory track irritation.

Ingestion: May be harmful if swallowed. There may be soreness and redness of the mouth and throat. May cause irritation of the digestive tract.

Skin contact: There may be irritation at the site of contact. May be harmful if absorbed through the skin.

Eye contact: There may be irritation and redness eyes.

SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY

Aquatic Toxicity:

Toxicity to freshwater fish: LC50: 471 mg/l, 96h (Rainbow trout)

12.2. PERSISTENCE AND DEGRADABILITY

Readily biodegradable.

12.3. BIOACCUMULATIVE POTENTIAL

Bioaccumulation is unlikely.

12.4. MOBILITY

Soluble in water, anhydrous ethanol, cottonseed oil, corn oil, ethyl acetate and methanol. Practically insoluble in fatty oils and liquid paraffin.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This product is not identified as a PBT/vPvB substance.

12.6. OTHER ADVERSE EFFECTS

Do not empty into drains.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal recommendations: Disposal of Polysorbate 80 should be in accordance with local and national legislation. Processing, use or contamination of this product may change the waste management options. Should not be released into the environment. Do not discharge into waterways or sewer systems. Mixing with other materials or other alterations to pure product may significantly change the characteristics of the material. Empty packaging can have residues and are subject to proper waste disposal. Do not re-use empty containers.

Dispose of as normal industrial waste. Transfer to a suitable container and arrange for collection by specialised disposal company.

Uncleaned packaging: Disposal must be made according to official regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

ADR/RID

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

IATA

UN number	N/A
UN proper shipping name	N/A
Transport hazard class(es)	N/A
Packing group	N/A

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures.

15.2 CHEMICAL SAFETY ASSESSMENT

A Chemical Safety Assessment has not been carried out.

SECTION 16: OTHER INFORMATION

General information

The information contained in this safety data sheet is provided in accordance with the requirements of the regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instruction. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with.

Revision Comments

This information is provided in a revised format to that previously produced.

Revision Date: 01/10/2018

Revision: 01

Safety Data Sheet Status Approved.

Date printed 01/10/2018

Signature Initials P.K.

DISCLAIMER:

If this product is re-distributed and re-formulated for sale, details of its hazards and recommended methods for safe handling must be passed to customers. Customers are urged to ensure that the product is entirely suitable for their own purpose. It is the customer's responsibility to ensure that a suitable and sufficient assessment of the risks created by a work activity using this product is undertaken before this product is used.

NOTE:

The information contained in this Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other Health & Safety Legislation (e.g. the Health and Safety at Work Act,1974;the control of Substances Hazardous to Health Regulations,1988). The data given here is based on current knowledge and experience. The purpose of this data sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the product's properties.