Material Safety Data Sheet

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Version 1.3
According to 91/155/EEC

1 - Product and Company Information

Product Name	TWEEN 80
Product Number	63161
Company	Sigma-Aldrich Pty. Ltd. 12 Anella Avenue Castle Hill NSW 2154 Australia
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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
POLYOXYETHYLENE SORBITAN MONOLEATE	9005-65-6	None	None

Synonyms: Armotan pmo-20 * Atlox 1087 * Atlox 8916TF * Capmul poe-O * Crill 10 * Crill 11 * Crillet 4 * Crill S 10 * Drewmulse poe-smo * Durfax 80 * Emsorb 6900 * Ethoxylated sorbitan monooleate * Glycosperse O-20 * Glycosperse O-20 VEG * Glycosperse O-20X * Hodag SVO 9 * MO 55F * Monitan * Montanox 80 * NCI-C60286 * Nikkol TO * Nikkol TO 10 * Olothorb * Polyethylene oxide sorbitan mono-oleate * Polyoxyethylene sorbitan monooleate * Polyoxyethylene (20) sorbitan mono-oleate * Polyoxyethylene sorbitan oleate * Polysorban 80 * Polysorbate 80 * Polysorbate 81 * Polysorbate 80 B.P.C. * Polysorbate 80, U.S.P. * Protasorb O-20 * Romulgin O * Sorbimacrogol oleate * Sorbimacrogol oleate 300 * Sorbital 0 20 * Sorbitan mono-9-octadecenoate poly(oxy-1,2-ethanediyl) derivatives * Sorbon T 80 * Sorethytan (20) monooleate * Sorlate * SVO 9 * TO 10 * Tween 80 * Tween 81 * Tween 80 A

3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Not hazardous according to Directive 67/548/EEC.

4 - First Aid Measures

AFTER INHALATION
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS
Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

METHODS FOR CLEANING UP
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING
Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE
Conditions of Storage: Keep tightly closed.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS
Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT
Hand Protection: Protective gloves.
Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Liquid Color: Yellow

Property	Value	At Temperature or Pressure
pH	N/A	

BP/BP Range	100 °C	
MP/MP Range	N/A	
Flash Point	113 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	< 1 mmHg	20 °C
SG/Density	1.064 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:soluble	

10 - Stability and Reactivity

STABILITY
Stable: Stable.
Materials to Avoid: Bases, Heavy metal salts, Strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: WG2932500

ACUTE TOXICITY
LD50
Oral
> 15,000 mg/kg

LD50
Oral
Rat
34500 UL/KG

LD50
Intraperitoneal
Rat
6804 MG/KG

LD50
Intravenous
Rat
1790 MG/KG

LD50

Oral
Mouse
25000 mg/kg

LD50
Intraperitoneal
Mouse
7600 MG/KG

LD50
Intravenous
Mouse
4500 MG/KG

LD50
Oral
Mammal
25000 mg/kg

LD50
Intravenous
Mammal
5800 MG/KG

IRRITATION DATA
Eyes
Rabbit
Remarks: Mild irritation effect
Skin
Rabbit
24 HOUR
Remarks: Mild irritation effect

Eyes
Rabbit
150 mg
Remarks: Mild irritation effect

SIGNS AND SYMPTOMS OF EXPOSURE
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE
Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Rat
Route of Application: Oral
Exposure Time: 2Y
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Endocrine:Adrenal cortex tumors.

Rat

Route of Application: Subcutaneous
Exposure Time: 27W
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Tumorigenic:Tumors at site or application.

CHRONIC EXPOSURE - MUTAGEN

Human
20 PPM
Cell Type: lymphocyte
DNA inhibition

Mouse
20 PPM
Cell Type: Other cell types
DNA inhibition

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 635 GM/KG
Route of Application: Oral
Exposure Time: (MULTIGENERATIONS)
Result: Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Weaning or lactation index (e.g., # alive at weaning per # alive at day 4).

Species: Rat
Dose: 1270 GM/KG
Route of Application: Oral
Exposure Time: (84D PRE-21D POST)
Result: Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive).

Species: Rat
Dose: 80 UL/KG
Route of Application: Intraperitoneal
Exposure Time: (4D POST)
Result: Maternal Effects: Uterus, cervix, vagina. Maternal Effects: Menstrual cycle changes or disorders. Effects on Newborn: Physical.

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR
Non-hazardous for road transport.

IMDG
Non-hazardous for sea transport.

IATA
Non-hazardous for air transport.

15 - Regulatory Information

Not hazardous according to Directive 67/548/EEC.

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1

SWITZERLAND
SWISS POISON CLASS: FREI

16 - Other Information

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

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