1. IDENTIFICATION

Product identifier

Product code: PO138
Product Name: POLYSORBATE 80, NF

Other means of identification

Synonyms:
TWEEN 80
Polyoxyethylene 20 sorbitan monooleate
Polyethylene oxide sorbitan mono-oleate
Polyoxyethylene sorbitan monooleate
Polyoxyethylene sorbitan oleate
Sorbitan mono-9-octadecenoate poly(oxy-1,2-ethanediyl) derivatives
Sorethytan (20) monoooleate

CAS #: 9005-65-6
RTECS #: WG2932500
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Emulsifying agent.
Uses advised against: No information available

Supplier: Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: https://www.spectrumchemical.com
Emergency telephone number: Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not classified

Hazards not otherwise classified (HNOC)
3. COMPOSITION/INFORMATION ON INGREDIENTS

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<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
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<td>Polysorbate 80</td>
<td>9005-65-6</td>
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4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops.

Eye Contact: Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Symptoms: May cause eye/skin irritation

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon Monoxide, Carbon Dioxide.

Specific hazards: May be combustible at high temperatures. May be ignited by heat, sparks or flames.
Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Remove all sources of ignition.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment: Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth).

Methods for cleaning up: Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions: Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Keep away from heat and sources of ignition. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials: Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

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<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WEEL</th>
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Canada

Product code: PO138     Product name: POLYSORBATE 80, NF
### Components

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<th>Canada - Alberta</th>
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### Australia and Mexico

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### Appropriate engineering controls

**Engineering measures to reduce exposure:**

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

**Personal Protective Equipment**

**Eye protection:**

Goggles or Safety glasses with side-shields

**Skin and body protection:**

- Long sleeved clothing
- Chemical resistant apron
- Gloves

**Respiratory protection:**

Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

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<th>Appearance:</th>
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</table>

**Odor:**

No information available.

**Taste:**

No information available.

**Formula:**

No information available

**Flammability:**

No information available

**Flash point (°C):**

>149

**Flash Point Tested according to:**

Not available

**Autoignition Temperature (°C/°F):**

No information available

**Flashpoint (°C/°F):**

>149 °C/>300 °F

**Lower Explosion Limit (%):**

No information available

**Upper Explosion Limit (%):**

No information available

**Melting point/range(°C/°F):**

-20.56 °C/-5 °F

**Decomposition temperature(°C/°F):**

Boiling point/range(°C/°F):

>100 °C/>212 °F

**Bulk density:**

No information available

**Density (g/cm3):**

No information available

**Product code:** PO138

**Product name:** POLYSORBATE 80, NF
10. STABILITY AND REACTIVITY

Reactivity
May react with strong oxidizers

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur


Incompatible Materials: Strong oxidizing agents

Hazardous decomposition products: Carbon oxides. When heated to decomposition it emits acrid smoke and irritating fumes.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure: Skin. Ingestion. Eyes.

Acute Toxicity

Component Information

<table>
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<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>LD50/oral/rat</th>
<th>LD50/oral/mouse</th>
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<td>34500 µL/kg Oral LD50 Rat; &gt;38000 mg/kg</td>
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Product code: PO138  Product name: POLYSORBATE 80, NF
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat = VALUE - Acute Tox Oral = > 38000 mg/kg
LD50/oral/mouse = Value - Acute Tox Oral = 25000 mg/kg
LD50/dermal/rabbit VALUE - Acute Tox Dermal = No information available
LD50/dermal/rat VALUE - Acute Tox Dermal = No information available
LC50/inhalation/rat VALUE - Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available
LC50/Inhalation/mouse VALUE - Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: May cause skin irritation.
Eye Contact: May cause eye irritation.
Inhalation May cause irritation of respiratory tract. However, no irritation is expected to be associated with the inhalation of this material. No toxic effects are known to be associated with the inhalation of this material.
Ingestion Health injuries are not known or expected under normal use. Not expected to be a health hazard. This material is not likely to cause irritation upon ingestion. It is classified as "relatively harmless" by ingestion and considered to be a low ingestion hazard. Ingestion of very large doses may cause abdominal spasms and diarrhea. Animal studies have shown it to cause cardiac changes, changes in behavior (altered sleep time) upon IV administration. However, no similar human data has been reported.
Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity La ingestión prolongada o repetida puede causar hipermotilidad y diarrea. Prolonged or repeated ingestion may cause weight loss.
Sensitization: No information available.
Mutagenic Effects: May affect genetic material

Product code: PO138  Product name: POLYSORBATE 80, NF
Carcinogenic effects: Not considered carcinogenic. Equivocal tumorigenic agent by Registry of Toxic Effects of Chemical Substances (RTECS) criteria.

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<th>ACGIH - Carcinogens</th>
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ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity: No data is available

Reproductive Effects: No information available

Developmental Effects: No information available

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure: No information available.

STOT - repeated exposure: No information available.

Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products: Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging: Empty containers should be taken for local recycling, recovery or waste disposal

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14. TRANSPORT INFORMATION

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| Product code: | PO138 | Product name: | POLYSORBATE 80, NF |
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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<td>Polysorbate 80</td>
<td>9005-65-6</td>
<td>Present ACTIVE</td>
<td>Present KE-25511</td>
<td>Present (8)-55</td>
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U.S. Regulations

Polysorbate 80

FDA - Direct Food Additives

FDA - 21 CFR - Total Food Additives


Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components | CAS-No. | Carcinogen | Developmental Toxicity | Male Reproductive Toxicity | Female Reproductive Toxicity |
---|---|---|---|---|---|
Polysorbate 80 | 9005-65-6 | Not Listed | Not Listed | Not Listed | Not Listed |

CERCLA/SARA

Components | CAS-No. | CERCLA - Hazardous Substances and their Reportable Quantities | Section 302 Extremely Hazardous Substances and TPQs | Section 302 Extremely Hazardous Substances and RQs | Section 313 - Chemical Category | Section 313 - Reporting de minimis |
---|---|---|---|---|---|---|
Polysorbate 80 | 9005-65-6 | None | None | None | None | None |

U.S. TSCA

Components | CAS-No. | TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS) | TSCA 8(d) - Health and Safety Reporting |
---|---|---|---|
Polysorbate 80 | 9005-65-6 | Not Applicable | Not Applicable |

Canada

WHIMIS 2015 - GHS Classifications

WHIMIS 2015 Hazard Classification Information: Not a dangerous product according to HPR classification criteria.

Canada Hazardous Products Regulation
This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHIMIS 1988 Hazard Class
Non-controlled

Product code: PO138 Product name: POLYSORBATE 80, NF
Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

<table>
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<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
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<th>Components</th>
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<th>CEPA Schedule I - Toxic Substances</th>
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EU Classification

EU GHS - SV - CLP 1272/2008

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EU - CLP (1272/2008)

R-phrase(s)
not determined (not applicable)

S-phrase(s)
none

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<th>Components</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Not dangerous

16. OTHER INFORMATION

Preparation Date: 2/27/2014
Revision Date: 4/5/2018
Prepared by: Sonia Owen

Disclaimer:
All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be
the user’s responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet