

Section 1. Product and Company Identification

Product Name Polysorbate 80
CAS Number 9005-65-6

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Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture

Classification

Skin corrosion/irritation, Category 3
Serious eye damage/eye irritation, Category 2B
Specific target organ toxicity- single exposure, Category 3 (respiratory system)

GHS Label Elements

Pictograms:



Signal word: WARNING

Hazard and precautionary statements

Hazard Statements

H316 Causes mild skin irritation.
H320 Causes eye irritation.
H335 May cause respiratory irritation.

Precautionary Statements

P261 Avoid breathing gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention.
P305+P351 +P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



P337+P313 If eye irritation persists: Get medical advice/attention.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents I container in accordance with current legislation.

Section 3. Composition / Information on Ingredients

Common Name	Polysorbate 80
Synonym(s)	Ethoxylated sorbitan monooleate
CAS Number	9005-65-6

Section 4. First Aid Measures

Ingestion: Seek prompt medical attention. Do not induce vomiting. Vomiting should only be induced by medical personnel. If vomiting occurs, keep the head lower than chest to avoid aspiration into the lungs. Never give anything by mouth to an unconscious or convulsing person.

Inhalation: Seek prompt medical attention. Remove victim to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Skin Contact: Remove contaminated clothing and shoes. Wash affected areas with plenty of running water, preferably under a shower. Seek prompt medical attention.

Eye Contact: Immediately flush with plenty of running water for at least 15 minutes, keeping eyelids open. Remove contact lenses if easy to do. Seek prompt medical attention.

Most Important Symptoms/Effects, Acute and Delayed

Ingestion: Toxic effects are not expected due to significant acute toxic ingestion of small amounts of this product. In large amounts may cause: Intestinal obstruction.

Inhalation: May cause irritation of the nose, throat, and respiratory tract.

Skin-Causes: Slight irritation.

Eyes-Causes: Irritation.

Information for Doctor: There is not known any specific antidote. Direct the treatment in accordance with the symptoms and clinical conditions of the patient.

Section 5. Firefighting Measures

Extinguishing Media

In case of fire, use: Alcohol resistant foam. Water spray. Carbon dioxide (CO₂). Dry chemical powder.

Specific Hazards: Slight fire hazard. In case of combustion it may generate carbon monoxide, besides CO₂.



Protective Measures for Firefighters: Water jets should not be used directly on igniting products because it may disperse the material and intensify the fire. Self-contained breathing apparatus and protective clothing are required. Cool the intact fire-exposed containers with water spray and remove them.

NFPA Rating

Health: 0

Flammability: 1

Instability: 0

Special: -

Section 6. Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Isolate and signalize area. Keep heat and/or ignition sources away. Use personal protection equipment as indicated in Section 8, in order to avoid contact with spilled product.

Environmental Precautions: Prevent product from entering into soil and waterways. Notify the competent authorities if the product has run into drainage systems or watercourse or has contaminated the ground or vegetation.

Methods and Materials for Containment and Cleaning up: Stop if possible. Contain and dike spilled product with earth or sand. Eliminate ignition or heat sources. Transfer to proper container. Collect remnants with an appropriate absorbent material. Wash the contaminated surface with water, which should be collected for disposal.

Section 7. Handling and Storage

Precautions for Safe Handling: Use in a well-ventilated area. Avoid inhalation and contact with eyes, skin or clothing through proper protection. If occurs accidental contact, 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.

Conditions for Safe Storage: 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.

Incompatibilities: Avoid contact with: Strong oxidizing agents. Compounds with high affinity for hydroxyl groups

Packaging Material: Recommended: Stainless steel. Carbon steel.

Section 8. Exposure Controls / Personal Protection

Control Parameters

TLV-TWA (ACGIH): Not established

PEL-TWA (OSHA): Not established

TLV-STEL (ACGIH): Not established

LT (NR15): Not established

Odor Threshold: Not available

IDLH: Not available

Biological Exposure Indices (ACGIH): Not available

Engineering Control Measures: In closed environments, this product should be handled keeping proper exhaust (general diluter or local exhauster).

Individual Protection Measures

Eye Protection: Side shields or wide vision safety goggles.

Skin Protection: PVC apron. It is recommended to adopt safety boots/shoes.

Hand Protection: Gloves made of: Rubber. PVC (Polyvinyl chloride).

Breathing Equipment: In case of emergency or contact with high concentrations of the product, wear an air supplied mask or self-contained breathing apparatus. It is recommended to wear face mask with organic vapors cartridge in case of exposure to vapors/aerosols.

Section 9. Physical and Chemical Properties

Appearance: Liquid. Viscous. Yellowish.

Odor and Odor Threshold: Not available.

pH: 6.0 - 7.0 (sol. 5%/ 25°C).

Melting Point/Freezing Point: > 20°C.

Initial Boiling Point and Boiling Range: > 100°C.

Flash Point (Open Cup): > 150°C

Evaporation Rate: Not available.

Flammability (Solid, Gas): Not available.

Upper/Lower Flammability or Explosive Limits: Not available.

Vapor Pressure: 0,001 kPa (25°C).

Vapor Density (Air= 1): 45.

Relative Density (Water=1): 1,080 kg/m³ (25°C).

Apparent Density: Not available.

Solubility

Soluble in water (20°C for 1 hour/concentration of 0.5%).

Soluble in ethanol (25°C).

Partition Coefficient (n-Octanol/Water): Not available.

Auto-Ignition Temperature: Not available.

Decomposition Temperature: Not available.

Viscosity (25°C): 425 mPa*s

Section 10. Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.

Reactivity: No hazardous reactivity is expected.

Possibility of Hazardous Reactions: Not polymerize.

Conditions to Avoid: High temperatures, ignition sources and prolonged exposure to the air.

Incompatible Materials: Avoid contact with: Strong oxidizing agents. Compounds with high affinity for hydroxyl groups.

Hazardous Decomposition Products: In case of combustion it may generate carbon monoxide, besides CO₂.

Considerations on the use of the Product: Not available.

Section 11. Toxicological Information

Acute Toxicity

Oral: LD50, rat: 34,500 µL/kg; LD50, mouse: 25,000 mg/kg.

Inhalation: Not available

Dermal: Not available

Skin Corrosion/Irritation: Not available

Serious Eye Damage/Eye Irritation: Slightly irritant (150 mg, rats)

Respiratory or Skin Sensitization: Not available

Germ cell Mutagenicity: Not available

Carcinogenicity: There are no known serious chronic effects of the product. Tests with pregnant rats that received the product orally, in doses of 500 mg/kg/day, showed that the product does not affect the development or alter the mortality of the fetuses. There are no references on the mutagenic or carcinogenic activity of the product.

Reproductive Toxicity: Not available

Specific Target Organ Toxicity - Single Exposure: Not available

Specific Target Organ Toxicity - Repeated Exposure: Not available

Aspiration Hazard: Not available

Section 12. Ecological Information

Ecotoxicity: It has low toxicity to aquatic life

Persistence and Degradability: Completely biodegradable.

Bioaccumulative Potential: It is not expected to bioaccumulate in the environment.

Mobility in Soil: The product is slightly volatile and water soluble. It is expected to have high mobility in soil.

Other Adverse Effects: Not available



Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

Land Transport ANTT: Product not classified as hazardous in accordance with Resolution 420/2004 -Transport Ministry.

Maritime Transport IMDG: Product not classified as hazardous in accordance with IMDG Code-2010 Edition -IMO (International Maritime Organization).

Air Transport ICAO-TI and IATA-DGR: Product not classified as hazardous in accordance with Dangerous Goods Regulations - 52nd Edition - IATA (International Air Transport Association).

Land Transportation ADRIRID (Cross border): Product not classified as hazardous in accordance with Dangerous Goods by Road -Applicable from 1st January 2011 - Unece (United Nations Economic Commission for Europe).

Section 15. Regulatory Information

Applicable Standards: Resolution 420/2004 - Transport Ministry.

IMDG Code - 2010 Edition - IMO (International Maritime Organization).

Dangerous Goods Regulations - 52nd Edition - IATA (International Air Transport Association).

Dangerous Goods by Road (ADR) - Available from January 1st, 2011 - Unece (United Nations Economic Commission for Europe).

Brazilian Technical Standards Association (ABNT) - NBR 14725 - Part 1 to 4.

Section 16. Other Information

Disclaimer: 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.

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