

## SAFETY DATA SHEET

Preparation Date: 2/23/2015

Revision Date: 04/05/2018

Revision Number: G3

### 1. IDENTIFICATION

#### Product identifier

**Product code:** PO132  
**Product Name:** POLYSORBATE 20, NF

#### Other means of identification

**Synonyms:** Polyoxyethylene (20) sorbitan monolaurate; Polyoxyethylene sorbitan monolaurate; Tween 20

**CAS #:** 9005-64-5  
**RTECS #** TR7400000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**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)

Not Applicable

#### Other hazards

Not available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components     | CAS-No.   | Weight % |
|----------------|-----------|----------|
| Polysorbate 20 | 9005-64-5 | 100      |

### 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. Consult a physician if necessary.
- 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** Health injuries are not known or expected under normal use

#### 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 (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:** No information available.

#### Specific hazards arising from the chemical

**Hazardous Combustion Products:** Carbon oxides

**Hazardous Combustion Products:** No information available.

**Specific hazards:** May be combustible at high temperatures. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated.

#### Special Protective Actions for Firefighters

**Specific Methods:** Water mist may be used to cool closed containers.

**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. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid contact with skin, eyes and clothing. Use personal protective equipment. 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). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**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. Remove all sources of ignition. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. 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. Sensitive to light. Store in light-resistant containers. Moisture sensitive.

**Incompatible Materials:**

Oxidizing agents

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**National occupational exposure limits**

**United States**

| Components     | CAS-No.   | OSHA | NIOSH | ACGIH | AIHA WEEL |
|----------------|-----------|------|-------|-------|-----------|
| Polysorbate 20 | 9005-64-5 | None | None  | None  | None      |

## Canada

| Components     | CAS-No.   | Canada - Alberta | Canada - British Columbia | Canada - Ontario | Canada - Quebec |
|----------------|-----------|------------------|---------------------------|------------------|-----------------|
| Polysorbate 20 | 9005-64-5 | None             | None                      | None             | None            |

## Australia and Mexico

| Components     | CAS-No.   | Australia | Mexico |
|----------------|-----------|-----------|--------|
| Polysorbate 20 | 9005-64-5 | None      | None   |

### 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

**Skin and body protection:** Chemical resistant apron  
Long sleeved clothing  
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

**Physical state:**

Liquid

**Appearance:**

No information available.

**Color:**

Yellow.

**Odor:**

No information available.

**Taste**

Bitter.

**Formula:**

C58H114O26

**Molecular/Formula weight:**

1227.72

**Flammability:**

No information available

**Flashpoint (°C/°F):**

>148.89°C/300°F

**Flash Point Tested according to:**

Closed cup

**Autoignition Temperature (°C/°F):**

No information available

**Lower Explosion Limit (%):**

No information available

**Upper Explosion Limit (%):**

No information available

**Melting point/range(°C/°F):**

No information available

**Decomposition temperature(°C/°F):**

No information available

**Boiling point/range(°C/°F):**

>100°C/212°F

**Bulk density:**

No information available

**Density (g/cm3):**

No information available

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**Specific gravity:**  
1.1

**pH:**  
No information available

**Vapor pressure @ 20°C (kPa):**  
<0.1

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Soluble in Water  
Soluble in Isopropanol  
Soluble in Methanol  
Insoluble in mineral oil  
Soluble in dioxane  
Soluble in Alcohol  
Soluble in ethyl acetate  
Dispersible in cottonseed oil, Ethylene glycol, and Propylene glycol

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

**Stability:** Sensitive to light. Exposure to light accelerates decomposition. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Exposure to light. Exposure to moisture.

**Incompatible Materials:** 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:**  
Eyes. Ingestion. Inhalation. Skin.

### Acute Toxicity

### Component Information

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Polysorbate 20

CAS-No. 9005-64-5

**LD50/oral/rat** = 36700 µL/kg Oral LD50 Rat; 37000 mg/kg oral LD50 Rat

**LD50/oral/mouse** = >33 g/kg Oral LD50 Mouse

**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** = 2640 mg/kg Intraperitoneal LD50 Mouse;

3850 mg/kg Intraperitoneal LD50 Rat;

1420 mg/kg Intravenous LD50 Mouse;

770 mg/kg Intravenous LD50 Rat;

18 mL/kg Oral LD50 Hamster

## Product Information

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = 37000 mg/kg

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = >33000 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. It is not likely to be absorbed through the skin.

**Eye Contact:** May cause eye irritation.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** May cause hypermotility, diarrhea. The most notable effect observed at higher doses is diarrhea, an expected, non-specific physiological effect associated with having large quantities of a relatively slowly absorbed material in the gut.

**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. The Registry of Toxic Effects of Chemical Substances noted that according to animal studies, prolonged or repeated ingestion of large amounts may also affect the liver (fatty liver degeneration), urinary system, and blood (pigmented or nucleated red blood cells, changes in red blood cell count).

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**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

| Components     | CAS-No.   | IARC       | ACGIH - Carcinogens | NTP        | OSHA HCS - Carcinogens | Australia - Notifiable Carcinogenic Substances | Australia - Prohibited Carcinogenic Substances |
|----------------|-----------|------------|---------------------|------------|------------------------|--|--|
| Polysorbate 20 | 9005-64-5 | Not listed | Not listed          | Not listed | Not listed             | Not listed                                     | Not listed                                     |

*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

| Components | CAS-No. | RCRA - F Series Wastes | RCRA - K Series Wastes | RCRA - P Series Wastes | RCRA - U Series Wastes |
|------------|---------|------------------------|------------------------|------------------------|------------------------|
|------------|---------|------------------------|------------------------|------------------------|------------------------|

|                |           |      |      |      |      |
|----------------|-----------|------|------|------|------|
| Polysorbate 20 | 9005-64-5 | None | None | None | None |
|----------------|-----------|------|------|------|------|

## 14. TRANSPORT INFORMATION

### DOT

|  |                          |
|--|--------------------------|
| <b>UN-No:</b>                          | Not Regulated            |
| <b>Proper Shipping Name:</b>           | No information available |
| <b>Hazard Class:</b>                   | No information available |
| <b>Subsidiary Class</b>                | No information available |
| <b>Packing group:</b>                  | No information available |
| <b>Emergency Response Guide Number</b> | No information available |
| <b>Marine Pollutant</b>                | No data available        |
| <b>DOT RQ (lbs):</b>                   | No information available |
| <b>Special Provisions</b>              | No Information available |
| <b>Symbol(s):</b>                      | No information available |
| <b>Description:</b>                    | No information available |

### TDG (Canada)

|                              |                          |
|------------------------------|--------------------------|
| <b>UN-No:</b>                | Not Regulated            |
| <b>Proper Shipping Name:</b> | No information available |
| <b>Hazard Class:</b>         | No information available |
| <b>Subsidiary Risk:</b>      | No information available |
| <b>Packing Group:</b>        | No information available |
| <b>Marine Pollutant</b>      | No Information available |
| <b>Description:</b>          | No information available |

### ADR

|                              |                          |
|------------------------------|--------------------------|
| <b>UN-No:</b>                | Not Regulated            |
| <b>Proper Shipping Name:</b> | No information available |
| <b>Hazard Class:</b>         | No information available |
| <b>Packing Group:</b>        | No information available |
| <b>Subsidiary Risk:</b>      | No information available |

### IMO / IMDG

|                              |                          |
|------------------------------|--------------------------|
| <b>UN-No:</b>                | Not Regulated            |
| <b>Proper Shipping Name:</b> | No information available |
| <b>Hazard Class:</b>         | No information available |
| <b>Subsidiary Risk:</b>      | No information available |
| <b>Packing Group:</b>        | No information available |
| <b>Marine Pollutant</b>      | No information available |

### RID

|                              |                          |
|------------------------------|--------------------------|
| <b>UN-No:</b>                | Not Regulated            |
| <b>Proper Shipping Name:</b> | No information available |
| <b>Hazard Class:</b>         | No information available |
| <b>Subsidiary Risk:</b>      | No information available |
| <b>Packing Group:</b>        | No information available |

### ICAO

|                              |                          |
|------------------------------|--------------------------|
| <b>UN-No:</b>                | Not Regulated            |
| <b>Proper Shipping Name:</b> | No information available |
| <b>Hazard Class:</b>         | No information available |
| <b>Subsidiary Risk:</b>      | No information available |
| <b>Packing Group:</b>        | No information available |

### IATA

|               |               |
|---------------|---------------|
| <b>UN-No:</b> | Not Regulated |
|---------------|---------------|

**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

| Components     | CAS-No.   | U.S. TSCA           | KOREA KECL       | Philippines (PICCS) | Japan ENCS     | CHINA   | Australia (AICS) | EINECS-No.  |
|----------------|-----------|---------------------|------------------|---------------------|----------------|---------|------------------|-------------|
| Polysorbate 20 | 9005-64-5 | Present XU (ACTIVE) | Present KE-31681 | Present             | Present (8)-55 | Present | Present          | Not present |

**U.S. Regulations**

*Polysorbate 20*

**FDA - Direct Food Additives** 21 CFR 172.515  
**FDA - 21 CFR - Total Food Additives** 172.515 173.310 175.105 178.3400

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**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 20 | 9005-64-5 | 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 20 | 9005-64-5 | 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 20 | 9005-64-5 | Not Applicable  | Not Applicable                         |

**Canada**

**WHMIS 2015 - GHS Classifications**

WHMIS 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

**WHMIS 1988 Hazard Class**

Non-controlled

**Components**

Polysorbate 20

WHMIS 1988

Uncontrolled product according to WHMIS classification criteria

**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**

| Components     | CAS-No.   | Canada (DSL) | Canada (NDSL) |
|----------------|-----------|--------------|---------------|
| Polysorbate 20 | 9005-64-5 | Present      | Not Listed    |

| Components     | CAS-No.   | CEPA Schedule I - Toxic Substances                          |
|----------------|-----------|---|
| Polysorbate 20 | 9005-64-5 | Not listed  |
| Components     | CAS-No.   | CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting |
| Polysorbate 20 | 9005-64-5 | Not listed  |

**EU Classification**

EU GHS - SV - CLP 1272/2008

| Components     | CAS-No.   | EU GHS - SV - CLP (1272/2008) |
|----------------|-----------|-------------------------------|
| Polysorbate 20 | 9005-64-5 |                               |

EU - CLP (1272/2008)

**R-phrase(s)**

not determined (not applicable)

**S -phrase(s)**

none

| Components     | CAS-No.   | Classification | Concentration Limits: | Safety Phrases |
|----------------|-----------|----------------|-----------------------|----------------|
| Polysorbate 20 | 9005-64-5 |                | No information        |                |

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

None.

**16. OTHER INFORMATION**

Preparation Date: 2/23/2015  
 Revision Date: 04/05/2018  
 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.

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**End of Safety Data Sheet**