1. Identification

Product Name  Tween® 20

Cat No. : BP337-100; BP337-500; XXBP3374LI; NC1630717

CAS-No  9005-64-5
Synonyms Polyoxyethylene(20)sorbitan monolaurate

Recommended Use  Laboratory chemicals.
Uses advised against  Food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company  Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label Elements

Hazard Statements

Precautionary Statements
Hazards not otherwise classified (HNOC)
None identified

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
</table>

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4. First-aid measures

Eye Contact  
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact  
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.

Inhalation  
Move to fresh air. Get medical attention immediately if symptoms occur. If not breathing, give artificial respiration.

Ingestion  
Do not induce vomiting. Obtain medical attention.

Most important symptoms and effects  
No information available.

Notes to Physician  
Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable Extinguishing Media  
No information available

Flash Point  
> 150 °C / > 302 °F

Method -  
No information available

Autoignition Temperature  
No information available

Explosion Limits  
Upper  
No data available

Lower  
No data available

Sensitivity to Mechanical Impact  
No information available

Sensitivity to Static Discharge  
No information available

Specific Hazards Arising from the Chemical  
Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products  
Carbon monoxide (CO)  Carbon dioxide (CO₂)

Protective Equipment and Precautions 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  
Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions  
Should not be released into the environment. See Section 12 for additional ecological information.

Methods for Containment and Clean Up  
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. Handling and storage
Handling
Wear personal protective equipment. Ensure adequate ventilation. Do not breathe vapors or spray mist. Avoid contact with skin and eyes. Do not ingest.

Storage
Keep containers tightly closed in a dry, cool and well-ventilated place. Store indoors.

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8. Exposure controls / personal protection

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures
None under normal use conditions.

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection
No protective equipment is needed under normal use conditions.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice.

---

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Very viscous Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Amber</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>6 10% aq. solution</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>&gt; 100 °C / 212 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 150 °C / &gt; 302 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.100</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>400 mPa.s at 25 °C</td>
</tr>
</tbody>
</table>

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10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
Stable under normal conditions.

Conditions to Avoid
Incompatible products. Excess heat.

Incompatible Materials
Strong oxidizing agents
Hazardous Decomposition Products Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization Hazardous polymerization does not occur.

Hazardous Reactions None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
</table>
| Polyoxethylene(20) sorbitan monolaurate | LD50 = 37000 mg/kg (Rat)  
LD50 = 36700 µL/kg (Rat) | Not listed | Not listed |

#### Toxicologically Synergistic Products

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

#### Irritation

No information available

#### Sensitization

No information available

#### Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxethylene(20)sorbitan monolaurate</td>
<td>9005-64-5</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

#### Mutagenic Effects

No information available.

#### Reproductive Effects

No information available.

#### Developmental Effects

No information available.

#### Teratogenicity

No information available.

#### STOT - single exposure

None known

#### STOT - repeated exposure

None known

#### Aspiration hazard

No information available

#### Symptoms / effects, both acute and delayed

No information available

#### Endocrine Disruptor Information

No information available

#### Other Adverse Effects

The toxicological properties have not been fully investigated.

### 12. Ecological information

#### Ecotoxicity

Do not empty into drains.

#### Persistence and Degradability

Soluble in water. Persistence is unlikely based on information available.

#### Bioaccumulation/ Accumulation

No information available.

#### Mobility

Will likely be mobile in the environment due to its water solubility.

### 13. Disposal considerations
**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

<table>
<thead>
<tr>
<th>DOT</th>
<th>TDG</th>
<th>IATA</th>
<th>IMDG/IMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
<td>Not regulated</td>
</tr>
</tbody>
</table>

### 15. Regulatory information

#### United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active/Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxyethylene(20)sorbitan monolaurate</td>
<td>9005-64-5</td>
<td>X</td>
<td>ACTIVE</td>
<td>XU</td>
</tr>
</tbody>
</table>

**Legend:**
- **TSCA** - Toxic Substances Control Act, (40 CFR Part 710)
- **X** - Listed
- **‘-’** - Not Listed
- **XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B))

**TSCA 12(b) - Notices of Export**

Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyoxyethylene(20)sorbitan monolaurate</td>
<td>9005-64-5</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-31681</td>
<td></td>
</tr>
</tbody>
</table>

#### U.S. Federal Regulations

- **SARA 313**
  Not applicable
- **SARA 311/312 Hazard Categories**
  See section 2 for more information
- **CWA (Clean Water Act)**
  Not applicable
- **Clean Air Act**
  Not applicable
- **OSHA - Occupational Safety and Health Administration**
  Not applicable
- **CERCLA**
  Not applicable
- **California Proposition 65**
  This product does not contain any Proposition 65 chemicals
- **U.S. State Right-to-Know Regulations**
  Not applicable
- **U.S. Department of Transportation**
  Reportable Quantity (RQ): N
  DOT Marine Pollutant: N
  DOT Severe Marine Pollutant: N
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade
No information available

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date
22-Dec-2010

Revision Date
18-Jan-2018

Print Date
18-Jan-2018

Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS