SAFETY DATA SHEET

Creation Date 16-May-2014  Revision Date 11-April-2018  Revision Number 4

1. Identification

Product Name Carbowax™ PEG 400 (NF)
Cat No. : P167-1; XXP167PP20LI
Synonyms Polyethylene glycol; Poly(et; Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-
Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Importer/Distributor Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer 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

WHMIS 2015 Classification Not classified under the Hazardous Products Regulations (SOR/2015-17)

Based on available data, the classification criteria are not met

Label Elements
None required

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>25322-68-3</td>
<td>100</td>
</tr>
</tbody>
</table>

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. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

Ingestion  
Do not induce vomiting. Obtain medical attention.

Most important symptoms/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**  
176 °C / 348.8 °F

**Method -**  
No information available

**Autoignition Temperature**  
No information available

**Explosion Limits**  
No data available

**Sensitivity to Mechanical Impact**  
No data available

**Sensitivity to Static Discharge**  
No information available

**Specific Hazards Arising from the Chemical**  
Keep product and empty container away from heat and sources of ignition.

**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.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### 6. Accidental release measures

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

**Environmental Precautions**  
Avoid release to 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. Avoid dust formation. Use spark-proof tools and explosion-proof equipment.

### 7. Handling and storage

**Handling**  
Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

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

### 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
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye 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.

Hand Protection
Wear appropriate protective gloves and clothing to prevent skin exposure.

Environmental exposure controls
No information available.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

| Physical State | Liquid |
| Appearance | Clear |
| Odor | Slight |
| Odor Threshold | No information available |
| pH | 4.5 - 7.5 (5 %) |
| Melting Point/Range | 8 ºC / 46.4 ºF |
| Boiling Point/Range | No information available |
| Flash Point | 176 ºC / 348.8 ºF |
| Evaporation Rate | 0.01 (Butyl Acetate = 1.0) |
| Flammability (solid,gas) | No information available |
| Flammability or explosive limits | |
| Upper | No data available |
| Lower | No data available |
| Vapor Pressure | No information available |
| Vapor Density | No information available |
Carbowax™ PEG 400 (NF)

Specific Gravity 1.128 @ 25°C
Solubility Soluble in water
Partition coefficient; n-octanol/water No data available
Autoignition Temperature No information available
Decomposition Temperature No information available
Viscosity No information available
Molecular Formula C2H4OnH2O
Molecular Weight 380 - 420
VOC Content(%) 100

10. Stability and reactivity

Reactive Hazard None known, based on information available
Stability Stable under normal conditions. Hygroscopic.
Conditions to Avoid Incompatible products. Excess heat. Exposure to moisture.
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
Oral LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Dermal LD50 Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.
Vapor LC50 Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral Oral</th>
<th>LD50 Dermal Dermal</th>
<th>LC50 Inhalation Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>LD50 = 22 g/kg ( Rat )</td>
<td>LD50 = 28 g/kg ( Rat )</td>
<td>LD50 &gt; 20 g/kg ( Rabbit )</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products

No information available

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>Polyethylene glycol</td>
<td>25322-68-3</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.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>Not listed</td>
<td>LC50 = 10 g/L/96h</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

#### Persistence and Degradability
No information available

#### Bioaccumulation / Accumulation
No information available.

#### Mobility
No information available.

### 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

All of the components in the product are on the following Inventory lists: Australia X = listed China Canada Europe TSCA Korea Philippines Japan

#### International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>DSL</th>
<th>NDSL</th>
<th>TSCA</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>500-038-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

#### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

<table>
<thead>
<tr>
<th>Component</th>
<th>Canada - National Pollutant Release Inventory (NPRI)</th>
<th>Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances</th>
<th>Canada’s Chemical Management Plan (CEPA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td>Part 4 Substance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 16. Other information

Prepared By  Regulatory Affairs 
Thermo Fisher Scientific 
Email: EMSDS.RA@thermofisher.com
Revision Summary
This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

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