SECTION 1: IDENTIFICATION

Product Name: PEG 200

CAS Number: 25322-68-3

Chemical Name: Polyethylene Glycol

Synonyms: PEG 200

Uses: Laboratory chemicals. Manufacture of substances.

Company
Silver Fern Chemical, Inc.
2226 Queen Anne Avenue North
Suite #C
Seattle WA 98109, USA

24 Hour Emergency Contact
Infotrac 800-535-5053
Outside USA & Canada 352-323-3500

SECTION 2: HAZARD IDENTIFICATION

No Signal Word

Hazard classification
This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards
No data available

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Content (W/W)</th>
<th>Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>25322-68-3</td>
<td>&gt; 96.0%</td>
<td>Polyethylene Glycol</td>
</tr>
<tr>
<td>111-46-6</td>
<td>&lt; 4.0%</td>
<td>Diethylene Glycol</td>
</tr>
<tr>
<td>107-21-1</td>
<td>&lt;= 1.0 %</td>
<td>Ethylene Glycol</td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

If inhaled:
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

In case of skin contact:
Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

In case of eye contact:
Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

If swallowed:
Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point:
149°C (>300.2°F)

Lower/Upper explosion limit:
Lower: 1%
Upper: 7%

Suitable extinguishing media:
Use an extinguishing agent suitable for the surrounding fire.

Special hazards arising from the substance or mixture:
In a fire or if heated, a pressure increase will occur and the container may burst.

Advice for firefighters:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Containment and clean-up procedures:
Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

Evacuation Procedures:
Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.

Special Instructions:
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. Inform the relevant authorities if the product has caused environmental pollution.
SECTION 7: HANDLING AND STORAGE

Handling:
Put on appropriate personal protective equipment

Storage:
Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal Protective Equipment (PPE)

Respiratory protection:
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Ensure adequate ventilation.

Hand protection:
Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection:
Safety goggles complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gasses or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Body protection:
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

General safety and hygiene measures:
Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Form: Liquid
Color: Colorless
Odor: Mild
Odor threshold: Not available
pH: 4.5 to 7
Melting point/Freezing point: -65°C (-85°F)
Boiling/condensation point: >200°C (>392°F)
Flash point: Closed cup: >149°C (>300.2°F)

Effective Date: 04/01/2015
Evaporation rate: <0.01 (butyl acetate = 1)
Flammability (solid, gas): Not available
Lower and Upper explosive (flammable) limits:
  Lower: 1%
  Upper: 7%
Vapor pressure: <0.001 kPa (<0.0075 mm Hg) [room temperature]
Vapor density: >1 [Air = 1]
Relative density: 1.124
Solubility in water: Not available
Water Solubility Result: 100%
Partition coefficient: n-octanol/water: Not available
Auto-ignition temperature: 350°C (662°F)
Decomposition temperature: >250°C (>482°F)
Evaporation rate: <0.01 (butyl acetate =1)
Viscosity: Kinematic (room temperature): 0.24 cm²/s (24 cSt)

SECTION 10: STABILITY AND REACTIVITY

Conditions to avoid:
Exposure to elevated temperatures can cause product to decompose.
Generation of gas during decomposition can cause pressure in closed systems

Substances to avoid:
No data available

Hazardous reactions:
Under normal conditions of storage and use, hazardous reactions will not occur

Decomposition products:
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Not available
Irritation/corrosion: Not available
Sensitization: Not available
Mutagenicity: Not available
Carcinogenicity: Not available
Reproductive toxicity: Not available
Teratogenicity: Not available
Specific target organ toxicity (single exposure): Not available
Specific target organ toxicity (repeated exposure): Not available
Aspiration hazard: Not available
Information on the likely routes of exposure: Not available
Potential acute health effects:
Eye contact: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Skin contact: No known significant effects or critical hazards.
Ingestion: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics:
Eye contact: No specific data.
Inhalation: No specific data.
Skin contact: No specific data.
Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure:
Short term exposure:
Potential immediate effects: Not available
Potential delayed effects: Not available
Long term exposure:
Potential immediate effects: Not available
Potential delayed effects: Not available

Potential chronic health effects:
General: No known significant effects or critical hazards.
Carcinogenicity: No known significant effects or critical hazards.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards.
Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity:
Acute toxicity estimates: Not available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity
Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Pimephales promelas (fathead minnow), static test, 96 Hour, > 10,000 mg/l, OECD Test Guideline 203 or Equivalent
Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

Persistence and degradability
Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 85 %
Exposure time: 28 d
Method: OECD Test Guideline 301F or Equivalent
Theoretical Oxygen Demand: 1.67 mg/mg

Bioaccumulative potential
Bioaccumulation: No bioconcentration is expected because of the relatively high water solubility.

Mobility in soil
No relevant data found.
SECTION 13: DISPOSAL CONSIDERATIONS

Waste disposal of substance:
The generation of waste should be avoided or minimized whenever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Container disposal:
Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

Proper shipping name: Polyethylene Glycol
DOT: Not regulated
TDG: Not regulated
IMDG: Not regulated
IATA: Not regulated

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is not a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components Ethylene glycol CASRN 107-21-1

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:
Components Diethylene glycol CASRN 111-46-6

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Effective Date: 04/01/2015
PEG 200
SECTION 16: OTHER INFORMATION

Hazardous Material Information System (U.S.A.):

Health: 0
Flammability: 1
Physical Hazards: 0

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

Revision Date: April 1, 2015

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