Dear Customer,

This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI\(^1\) format to the GHS\(^2\) format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

Why It Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.

2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS:"

---

[Label image]

---

CORPORATE OFFICES
14422 South San Pedro Street
Gardena, California 90248
PHONE 310.516.8000
FAX 310.516.9843

AN ISO 9001:2008 REGISTERED COMPANY

www.spectrumchemical.com
Sincerely,

Regulatory Affairs
SAFETY DATA SHEET

Preparation Date: 03/17/2015
Revision Date: 03/17/2015
Revision Number: G1

Product code: P1792
Product Name: POLYETHYLENE GLYCOL 4500, NF

Other means of identification
Synonyms:

1,2-Ethanediol homopolymer
Alcox E 30
Alcox E 100
Alcox E 130
Alcox E 160
Alcox E 240
Alcox E 45
Alcox E 60
Alcox E 75
Alcox R 1000
Alcox R 15
Alcox R 150
Alcox R 400
Alcox SR
Antarox E 4000
Aquacide III
Aquaffin
Atpeg 300
BDH 301
Badimol
Bradsyn PEG
Brex 2000
Brex 20M
Brex 4000
Brex 550
Brex PEG 300
CAFO 154
Carbowax
Carbowax 100
Carbowax 1000
Carbowax 1350
Carbowax 14000
Carbowax 1500
Carbowax 20
Carbowax 200
Carbowax 20000
Carbowax 25000
Carbowax 300
Carbowax 3350
Carbowax 400
Carbowax 4000
Carbowax 4500
Carbowax 4600
Carbowax 600
Carbowax Sentry
DD 3002
Deactivator H
Emkapol 4200
Ethoxylated 1,2-ethanediol
Ethylene glycol homopolymer
Ethylene glycol polymer
Gafanol E 200
Glycols, polyethylene
HM 500
Lutrol
Macrogol
Merpol OJ
Miralax
Modopeg
2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by 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

Product code: P1792

Product name: POLYETHYLENE GLYCOL 4500, NF
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>25322-68-3</td>
<td>100</td>
<td>*</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures

General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126).

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention. If skin irritation persists, call a physician.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. 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: Mild eye irritation. Mild skin irritation. Irritating to respiratory system.

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 (CO2). Dry chemical. Alcohol-resistant foam. Water spray.

Unsuitable Extinguishing Media: Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon monoxide; Carbon dioxide

Specific hazards: May be combustible at high temperatures May be ignited by heat, sparks or flames Most vapors are heavier than air. They will spread along the ground and collect in low or confined areas (sewers, basements, tanks) Fire may produce irritating, corrosive and/or toxic gases
Special Protective Actions for Firefighters

Specific Methods: Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out.

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. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use spark-proof tools and explosion-proof equipment.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment: Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container.

Methods for cleaning up: Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Use only non-sparking tools. 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. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. 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. When using do not smoke. 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. Keep away from heat and sources of ignition. Store in a segregated and approved area. Store away from incompatible materials.


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

Product code: P1792  Product name: POLYETHYLENE GLYCOL 4500, NF
### United States

<table>
<thead>
<tr>
<th>Components</th>
<th>OSHA</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>AIHA WHEEL</th>
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<td>10 mg/m³ TWA</td>
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### Canada

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<th>Alberta</th>
<th>British Columbia</th>
<th>Ontario</th>
<th>Quebec</th>
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<tbody>
<tr>
<td>Polyethylene Glycol 4500 - 25322-68-3</td>
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### Australia and Mexico

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<th>Australia</th>
<th>Mexico</th>
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<tbody>
<tr>
<td>Polyethylene Glycol 4500 - 25322-68-3</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

### 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. Safety glasses with side-shields.

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

**Respiratory protection:** Effective dust mask. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES
9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Solid.

**Odor:** No information available

**Formula:** H(OCH2CH2)nOH

**Flash Point Tested according to:**
- Closed cup

**Autoignition Temperature (°C/°F):** 395°C/ 743°F

**Boiling point/range(°C/°F):** No information available

**Specific gravity:** 1.054

**Evaporation rate:** No information available

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

**Miscibility:** No information available

**Appearance:** No information available

**Taste:** No information available

**Flash point (°C):** 176°C

**Decomposition temperature(°C/°F):** No information available

**Density (g/cm³):** No information available

**Vapor density:** No information available

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

**Solubility:**
- Soluble in cold water
- Soluble in Methanol
- Soluble in diethyl ether

**Molecular/Formula weight:** 4050-4950 g/mol

10. STABILITY AND REACTIVITY

**Reactivity**
- Reactive with oxidizing agents
- Reactive with acids

**Chemical stability**

**Stability:** Stable under recommended storage conditions

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

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials.

**Incompatible Materials:** Oxidizing agents. Acids.

**Hazardous decomposition products:** Carbon monoxide. Carbon dioxide.

**Other Information**

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

11. TOXICOLOGICAL INFORMATION

**Product code:** P1792

**Product name:** POLYETHYLENE GLYCOL 4500, NF

**Autoignition Temperature (°C/°F):** 395°C/ 743°F

**Flashpoint (°C/F):** 176°C/ 348.8°F

**Melting point/range(°C/F):** 63°C/ 145.4°F

**Vapor pressure @ 20°C (kPa):** No information available

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

**Viscosity:** No information available

**Flash Point Tested according to:** Closed cup

**Miscibility:** No information available

**Taste:** No information available

**pH:** 6 [Acidic]

**Decomposition temperature(°C/F):** No information available

**Density (g/cm³):** No information available

**Viscosity:** No information available

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

**Solubility:** Soluble in cold water

**Odor:** No information available

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

**Vapor density:** No information available

**Miscibility:** No information available

**Taste:** No information available

**pH:** 6 [Acidic]
Information on likely routes of exposure

Principal Routes of Exposure:
None.

Acute Toxicity

Component Information

Polyethylene Glycol 4500 - 25322-68-3

LD50/oral/rat = 22 g/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rat = No information available
LD50/dermal/rabbit = >20000 mg/kg
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat = VALUE- Acute Tox Oral = 50000mg/kg

LD50/oral/mouse = Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = 20000mg/kg

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.

Eye Contact: May cause eye irritation.

Inhalation May cause respiratory irritation.

Ingestion Harmful if swallowed.

Aspiration hazard No information available

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

Chronic Toxicity No information available

Product code: P1792  Product name: POLYETHYLENE GLYCOL 4500, NF
Sensitization:  No information available

Mutagenic Effects:  No information available

Carcinogenic effects:  Not considered carcinogenic

<table>
<thead>
<tr>
<th>Components</th>
<th>ACGIH - Carcinogens</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA HCS - Carcinogens</th>
<th>Australia - Prohibited Carcinogenic Substances</th>
<th>Australia - Notifiable Carcinogenic Substances</th>
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</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>
### 14. TRANSPORT INFORMATION

**DOT**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** None
- **ERG No:** No information available
- **Marine Pollutant:** No data available
- **DOT RQ (lbs):** No information available

**TDG (Canada)**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

**ADR**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Packing Group:** No information available
- **Subsidiary Risk:** No information available
- **Classification Code:** No information available
- **Description:** No information available
- **CEFIC Tremcard No:** No information available

**IMO / IMDG**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available
- **IMDG Page:** No information available
- **Marine Pollutant**
- **MFAG:** No information available
- **Maximum Quantity:** No information available

**RID**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Classification Code:** No information available
- **Description:** No information available

**ICAO**
- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available

---

**Product code:** P1792  
**Product name:** POLYETHYLENE GLYCOL 4500, NF
14. TRANSPORT INFORMATION

| Packing Group: | No information available |
| Description:   | No information available |

**IATA**

- **UN-No:** Not Regulated
- **Proper Shipping Name:** No information available
- **Hazard Class:** No information available
- **Subsidiary Risk:** No information available
- **Packing Group:** No information available
- **Description:** No information available

15. REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>Components</th>
<th>U.S. TSCA</th>
<th>KOREA KECL</th>
<th>Philippines (PICCS)</th>
<th>Japan ENCS (8)-429 (7)-129 (2)-441</th>
<th>CHINA</th>
<th>Australia (AICS)</th>
<th>EINECS-No.</th>
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</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>Present XU</td>
<td>Present KE-20228</td>
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<td>Present</td>
<td>Not present</td>
<td></td>
</tr>
</tbody>
</table>

**U.S. Regulations**

**Polyethylene Glycol 4500**

- **Minnesota - Hazardous Substance List:** Present
- **FDA - 21 CFR - Total Food Additives:** 172.210  172.820  173.310  173.340  175.105  175.300  176.180  178.3750  73.1

**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)

<table>
<thead>
<tr>
<th>Components</th>
<th>Carcinogen</th>
<th>Developmental Toxicity</th>
<th>Male Reproductive Toxicity</th>
<th>Female Reproductive Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
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<td>Not Listed</td>
<td>Not Listed</td>
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</tr>
</tbody>
</table>

**CERCLA/SARA**

<table>
<thead>
<tr>
<th>Components</th>
<th>CERCLA - Hazardous Substances and their Reportable Quantities</th>
<th>Section 302 Extremely Hazardous Substances and TPQs</th>
<th>Section 302 Extremely Hazardous Substances and RQs</th>
<th>Section 313 - Chemical Category</th>
<th>Section 313 - Reporting de minimis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
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</tbody>
</table>

**U.S. TSCA**

<table>
<thead>
<tr>
<th>Components</th>
<th>TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)</th>
<th>TSCA 8(d) - Health and Safety Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**Canada**

- **WHMIS hazard class:** Non-controlled

**Product code:** P1792  **Product name:** POLYETHYLENE GLYCOL 4500, NF
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

<table>
<thead>
<tr>
<th>Components</th>
<th>Canada (DSL)</th>
<th>Canada (NDSL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>Present</td>
<td>Not Listed</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>CEPA Schedule I - Toxic Substances</th>
<th>CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting</th>
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<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td>Not listed</td>
<td>Not listed</td>
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EU Classification

R-phrase(s)
not determined (not applicable)

S -phrase(s)
one

<table>
<thead>
<tr>
<th>Components</th>
<th>Classification</th>
<th>Concentration Limits:</th>
<th>Safety Phrases</th>
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<tbody>
<tr>
<td>Polyethylene Glycol 4500</td>
<td></td>
<td>No information</td>
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</tr>
</tbody>
</table>

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

Indication of danger:
None.
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. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet
# Material Safety Data Sheet

## Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>Polyethylene glycol 4500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM CHEMICAL MFG. CORP.</td>
</tr>
<tr>
<td></td>
<td>14422 S. SAN PEDRO STREET</td>
</tr>
<tr>
<td></td>
<td>GARDENA, CA 90248</td>
</tr>
<tr>
<td>Catalog Number(s)</td>
<td>XX963, P1792</td>
</tr>
<tr>
<td>CAS#</td>
<td>25322-68-3</td>
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<tr>
<td>RTECS</td>
<td>TQ4070000</td>
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<td>TSCA</td>
<td>TSCA 8(b) inventory:</td>
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<tr>
<td>Supplier</td>
<td>SPECTRUM CHEMICAL MFG. CORP.</td>
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<tr>
<td></td>
<td>14422 S. SAN PEDRO STREET</td>
</tr>
<tr>
<td></td>
<td>GARDENA, CA 90248</td>
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</table>

## Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
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<td>1) Polyethylene glycol 4500</td>
<td>25322-68-3</td>
<td></td>
<td></td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

### Toxicological Data on Ingredients

Polyethylene glycol 4500:
- **ORAL (LD50):** Acute: 4000 mg/kg [Rat], 20000 mg/kg [Mouse].
- **DERMAL (LD50):** Acute: 20000 mg/kg [Rabbit].

## Section 3. Hazards Identification

### Potential Acute Health Effects
Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion, of inhalation.

### Potential Chronic Health Effects
- **CARCINOGENIC EFFECTS:** Not available.
- **MUTAGENIC EFFECTS:** Not available.
- **TERATOGENIC EFFECTS:** Not available.
- **DEVELOPMENTAL TOXICITY:** Not available.
- Repeated or prolonged exposure is not known to aggravate medical condition.

---

**Continued on Next Page**
### Section 4. First Aid Measures

| Eye Contact | Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. |
| Skin Contact | After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing. |
| Serious Skin Contact | Not available. |
| Inhalation | Allow the victim to rest in a well ventilated area. Seek immediate medical attention. |
| Serious Inhalation | Not available. |
| Ingestion | Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention. |
| Serious Ingestion | Not available. |

### Section 5. Fire and Explosion Data

| Flammability of the Product | May be combustible at high temperature. |
| Auto-Ignition Temperature | 395°C (743°F) |
| Flammable Limits | LOWER: 1.1% |
| Products of Combustion | These products are carbon oxides (CO, CO2). |
| Fire Hazards in Presence of Various Substances | Not available. |
| Fire Fighting Media and Instructions | SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. |
| Special Remarks on Fire Hazards | Not available. |
| Special Remarks on Explosion Hazards | Not available. |

### Section 6. Accidental Release Measures

| Small Spill | Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements. |
| Large Spill | Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. |

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Continued on Next Page
### Section 7. Handling and Storage

**Precautions**
- Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. If ingested, seek medical advice immediately and show the container or the label.

**Storage**
- Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

### Section 8. Exposure Controls/Personal Protection

**Engineering Controls**
- Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection**
- Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill**
- Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits**
- Not available.

### Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical state and appearance</th>
<th>Solid.</th>
<th>Odor</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>4500 g/mole</td>
<td>Taste</td>
<td>Not available.</td>
</tr>
<tr>
<td>pH (1% soln/water)</td>
<td>6 [Acidic.]</td>
<td>Color</td>
<td>Not available.</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point</td>
<td>63°C (145.4°F)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.054 (Water = 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volatility</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water/Oil Dist. Coeff.</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ionicity (in Water)</td>
<td>Not available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dispersion Properties</td>
<td>See solubility in water, methanol, diethyl ether.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility</td>
<td>Easily soluble in cold water. Soluble in hot water, methanol, diethyl ether.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Section 10. Stability and Reactivity Data

| Stability | The product is stable. |
| Instability Temperature | Not available. |
| Conditions of Instability | Not available. |
| Incompatibility with various substances | Not available. |

*Continued on Next Page*
### Polyethylene glycol 4500

<table>
<thead>
<tr>
<th>Corrosivity</th>
<th>Non-corrosive in presence of glass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Remarks on Reactivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Corrosivity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Polymerization</td>
<td>No.</td>
</tr>
</tbody>
</table>

### Section 11. Toxicological Information

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Eye contact. Inhalation. Ingestion.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to Animals</td>
<td>Acute oral toxicity (LD50): 4000 mg/kg [Rat]. Acute dermal toxicity (LD50): 20000 mg/kg [Rabbit].</td>
</tr>
<tr>
<td>Chronic Effects on Humans</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Toxic Effects on Humans</td>
<td>Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.</td>
</tr>
<tr>
<td>Special Remarks on Toxicity to Animals</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Chronic Effects on Humans</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on other Toxic Effects on Humans</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 12. Ecological Information

<table>
<thead>
<tr>
<th>Ecotoxicity</th>
<th>Not available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD5 and COD</td>
<td>Not available.</td>
</tr>
<tr>
<td>Products of Biodegradation</td>
<td>Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.</td>
</tr>
<tr>
<td>Toxicity of the Products of Biodegradation</td>
<td>The products of degradation are more toxic.</td>
</tr>
<tr>
<td>Special Remarks on the Products of Biodegradation</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 13. Disposal Considerations

<table>
<thead>
<tr>
<th>Waste Disposal</th>
</tr>
</thead>
</table>

### Section 14. Transport Information

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>Not a DOT controlled material (United States).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special Provisions for Transport</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Polyethylene glycol 4500
California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Polyethylene glycol 4500
TSCA 8(b) inventory: Polyethylene glycol 4500

DOT (Pictograms)

Other Classifications
WHMIS (Canada) Not controlled under WHMIS (Canada).
DSCL (EEC) R16- Explosive when mixed with oxidizing substances.

HMIS (U.S.A.)
<table>
<thead>
<tr>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
<td>E</td>
</tr>
</tbody>
</table>

National Fire Protection Association (U.S.A.)

Federal and State Regulations
California Proposition 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Polyethylene glycol 4500

Other Regulations
Not available.

Other Classifications
WHMIS (Canada) Not controlled under WHMIS (Canada).
DSCL (EEC) R16- Explosive when mixed with oxidizing substances.

Protective Equipment
Gloves.
Lab coat.

Continued on Next Page
Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Safety glasses.

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### Section 16. Other Information

<table>
<thead>
<tr>
<th>MSDS Code</th>
<th>P4013</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other Special Considerations</td>
<td>Not available.</td>
</tr>
</tbody>
</table>


CALL (310) 516-8000

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**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.