Material Safety Data Sheet

Section 1. Product and Company Identification

Product Name  Polyethylene Glycol 4,000
Product Code  9727
Manufacturer  EMD Chemicals Inc.
P.O. Box 70
480 Democrat Road
Gibbstown, NJ 08027
Prior to January 1, 2003 EMD Chemicals Inc. was
EM Industries, Inc. or EM Science, Division of
EM Industries, Inc.

Effective Date  3/3/2003

For More Information Call
856−423−6300 Technical Service
Monday–Friday: 8:00 AM – 5:00 PM

In Case of Emergency Call
800–424–9300 CHEMTREC
(USA)
613–996–6666 CANUTEC
(Canada)
24 Hours/Day: 7 Days/Week

Synonym  CARBOWAX
Material Uses  Analytical reagent.
Chemical Family  Polymer.

Section 2. Composition and Information on Ingredients

Component  CAS #  % by Weight
POLYETHYLENE GLYCOL  25322−68−3  100

Section 3. Hazards Identification

Physical State and Appearance  Solid.
Emergency Overview  CAUTION!
Routes of Entry  Inhalation. Ingestion.
Potential Acute Health Effects

- **Eyes**: May be hazardous in case of eye contact (irritant).
- **Skin**: May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
- **Inhalation**: No known acute effects of this product resulting from inhalation.
- **Ingestion**: No known acute effects of this product resulting from ingestion.

Potential Chronic Health Effects

- **Carcinogenic**: This material is not known to cause cancer in animals or humans.

Effects

Additional information See Toxicological Information (section 11)

Medical Conditions Aggravated by

- **Overexposure**: Repeated or prolonged exposure is not known to aggravate medical condition.

Section 4. First Aid Measures

Eye Contact  Check for and remove any contact lenses. In case of contact, immediately
flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Inhalation**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

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### Section 5. Fire Fighting Measures

**Flammability of the Product**

May be combustible at high temperature.

**Auto-ignition Temperature**

Not available.

**Flash Points**

Closed cup: >175°C (347°F).

**Flammable Limits**

Not available.

**Products of Combustion**

These products are carbon oxides (CO, CO2).

**Fire Hazards in Presence of Various Substances**

Slightly flammable to flammable in presence of open flames, sparks and static discharge, of shocks, of heat.

**Explosion Hazards in Presence of Various Substances**

**Risks of explosion of the product in presence of static discharge:**

Slightly flammable in presence of open flames, sparks and static discharge.

**Risks of explosion of the product in presence of mechanical impact:**

Slightly flammable in presence of shocks.

**Fire Fighting Media and Instructions**

**SMALL FIRE:** Use DRY chemical powder.

**LARGE FIRE:** Use water spray, fog or foam. Do not use water jet.

**Protective Clothing (Fire)**

Be sure to use an approved/certified respirator or equivalent.

**Special Remarks on Fire Hazards**

Not available.

**Special Remarks on Explosion Hazards**

Not available.

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### Section 6. Accidental Release Measures

**Small Spill and Leak**

Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill and Leak**

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

**Spill Kit Information**

No specific spill kit required for this product.

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### Section 7. Handling and Storage
Handling
Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not ingest.

Storage
Keep container tightly closed. Keep container in a cool, well-ventilated area.

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

Eyes
Splash goggles.

Body
Lab coat.

Respiratory
Dust respirator. Be sure to use an approved/certified respirator or equivalent.

Hands
Gloves.

Feet
Not applicable.

Protective Clothing

(Pictograms)

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.

Product Name Exposure Limits
POLYETHYLENE GLYCOL Arbeidsinspectie (Netherlands, 1999).
TGG 8 uur: 1000 mg/m3

Section 9. Physical and Chemical Properties

Odor
Slight.

Color
Not available.

Physical State and Appearance
Solid.

Molecular Weight
Not available.

Molecular Formula
(C2H4O)nH2O

pH
Not available.

Boiling/Condensation Point
Not available.

Melting/Freezing Point
Not available.

Specific Gravity
Not available.

Vapor Pressure
Not available.

Vapor Density
Not available.

Odor Threshold
Not available.

Evaporation Rate
Not available.

LogKow
Not available.

Solubility
Soluble in water.

Section 10. Stability and Reactivity

Stability and Reactivity
The product is stable.
### Conditions of Instability
Not available.

### Incompatibility with Various Substances
Slightly reactive to reactive with oxidizing agents.

### Rem/Incompatibility
Not available.

### Hazardous Decomposition Products
Not available.

### Hazardous Polymerization
Will not occur.

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**Section 11. Toxicological Information**

**RTECS Number:**
- Polyethylene Glycol
  - TQ3520000, TQ5090000, TQ3500000, TQ4950000,
  - TQ4110000, TQ4040000, TQ4025000, TQ4027000,
  - TQ4028000, TQ3850000, TQ3800000, TQ3700000,
  - TQ4030000, TQ4100000, TQ3675000, TQ4026000,
  - TQ3650000, TQ3580000, ZD2465300, TQ4070000,
  - TQ3560000, TQ3600000, TQ3610000, TQ3620000,
  - TQ4050000, TQ4105000, TQ3630000, TQ4041000,
  - TR1579850

**Toxicity**
- LD50: Not available.
- LC50: Not available.

**Chronic Effects on Humans**
Not available.

**Acute Effects on Humans**
May be hazardous in case of eye contact (irritant). May be hazardous in case of skin contact (irritant). Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

**Synergetic Products (Toxicologically)**
Not available.

**Irritancy**
- Draize Test (Rabbit):
  - Eye: 500mg/24h. Reaction: Mild.
  - Skin: 500 mg/24h mild

**Sensitization**
Not available.

**Carcinogenic Effects**
This material is not known to cause cancer in animals or humans.

**Toxicity to Reproductive System**
Not available.

**Teratogenic Effects**
Not available.

**Mutagenic Effects**
Not available.

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**Section 12. Ecological Information**
Polyethylene Glycol 4,000

**Ecotoxicity**
Not available.

**BOD5 and COD**
Not available.

**Toxicity of the Products of Biodegradation**
The product itself and its products of degradation are not toxic.

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**Section 13. Disposal Considerations**

**EPA Waste Number**
Not available.

**Treatment**
Material does not have an EPA Waste Number and is not a listed waste, however consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal (TSD) to assure compliance with all current local, state, and Federal Regulations.

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**Section 14. Transport Information**

**DOT Classification**
Proper Shipping Name: CHEMICALS, N.O.S.

**RQ:** Not applicable.

**TDG Classification**
Not available.

**IMO/IMDG Classification**
Proper Shipping Name: CHEMICALS, N.O.S.

**RQ:** Not applicable.

**ICAO/IATA Classification**
Proper Shipping Name: CHEMICALS, N.O.S.

**RQ:** Not applicable.

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**Section 15. Regulatory Information**

**U.S. Federal Regulations**
TSCA 8(b) inventory: POLYETHYLENE GLYCOL

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution – chemical inventory – hazard identification: No products were found.

SARA 313 toxic chemical notification and release reporting: No products were found.

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: No products were found.

Clean air act (CAA) 112 accidental release prevention: No products were found.

Clean air act (CAA) 112 regulated flammable substances: No products were found.

Clean air act (CAA) 112 regulated toxic substances: No products were found.

**WHMIS (Canada)**
Not controlled under WHMIS (Canada).

CEPA DSL: POLYETHYLENE GLYCOL
This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all required
Polyethylene Glycol 4,000

International Regulations

EINECS Not available.

DSCL (EEC) R11– Highly flammable.
R36/38– Irritating to eyes and skin.

International Lists

Australia (NICNAS): POLYETHYLENE GLYCOL

Japan (MITI): POLYETHYLENE GLYCOL

Korea (TCCL): POLYETHYLENE GLYCOL

Philippines (RA6969): POLYETHYLENE GLYCOL

State Regulations

No products were found.

China: No products were found.

California prop. 65: No products were found.

Section 16. Other Information

<table>
<thead>
<tr>
<th>National Fire Protection Association (U.S.A.)</th>
<th>Fire Hazard</th>
<th>Health Reactivity</th>
<th>Specific Hazard</th>
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<tr>
<td>100</td>
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