1. IDENTIFICATION

Product Name: Polyethylene oxide (PEO) Kit and Standards, WAT011572, WAT011574, WAT011576, WAT011578, WAT011580, WAT011582, WAT011584, WAT011586.

MSDS #: WAT097941

Product Use: For laboratory use only.

2. HAZARDS IDENTIFICATION:

Not classified as hazardous per GHS; not listed in Table 3.1 Annex VI of regulation 1272/2008/EU, as amended. The product is not hazardous in the form in which it is placed on the market and under the normal and recommended conditions of storage and use. The product is not dangerous according to the criteria set by the European Union (EU).

White powder or flake depending on MW. Low hazard in normal laboratory use. The small quantities supplied in our products are unlikely to cause severe or immediate health effects. Use only as directed and in accordance with safe laboratory practices.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>CHEMICAL INGREDIENT NAME</th>
<th>CAS NUMBER</th>
<th>EC NUMBER</th>
<th>% by Weight</th>
<th>OSHA</th>
<th>ACGIH</th>
<th>EU IOELV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene oxide (PEO) (polyethylene glycol or PEG)</td>
<td>25322-68-3</td>
<td>500-038-2</td>
<td>100</td>
<td>5 mg/m3 as PNOR</td>
<td>3 mg/m³ as PNOS (respirable); 10 mg/m³ as PNOS (inhalable)</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes: Polyethylene oxide (high molecular weight PEG) standards in a range of molecular weights (MW). Exposure Limits are 8-Hour TWA (Time Weighted Average) unless designated C (Ceiling) or STEL (Short Term Exposure Limit). PNOR: Particulates Not Otherwise Regulated. PNOS: Particulates Not Otherwise Specified.

4. FIRST AID MEASURES:

Inhalation: Remove to fresh air.

Skin Contact: Flush with water.

Eye Contact: Immediately flush with water for a minimum of 15 minutes.

Ingestion: PEO is essentially inert when taken orally. Get medical attention.

After following first aid measures, seek medical attention.

5. FIRE-FIGHTING MEASURES:

Flammable Properties: Combustible solid.

Extinguishing Media: Dry chemical, carbon dioxide or appropriate foam.

Unique Aspects Contributing To a Fire: None.

Special Fire Fighting Procedures: None.

Note: As in any fire, wear self-contained breathing apparatus, and full protective gear.

6. ACCIDENTAL RELEASE MEASURES: Due to small quantities involved, spills or leaks should not pose a significant problem. Absorb or sweep up material and place in container for waste disposal.

7. HANDLING AND STORAGE: Handle as directed and in accordance with safe laboratory practices.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Handle in accordance with safe laboratory practices.

Respiratory Protection: Not normally needed. If exposure limits are exceeded, use approved particulate respirator.

Eye Protection: Safety glasses with side protection.

Skin Protection: Neoprene or other chemical resistant gloves. Disposable nitrile are acceptable for light intermittent exposure.

Engineering Controls: No special requirements. Handle in an area with sufficient general room ventilation to meet Exposure Limits.
9. PHYSICAL AND CHEMICAL PROPERTIES:
Appearance: White powder or flake
| Physical State: Solid | Flash Point: > 887°F (>475°C) | Vapor Pressure: NA |
| Odor: None | Explosion Limits: NA | Vapor Density (air=1): NA |
| pH: NA | Boiling Point: Decomposes | Solubility in Water: Soluble |
| Specific Gravity: NA | Melting Point: 129-149°F (54 - 65°C) | Other: NA |

10. STABILITY AND REACTIVITY:
- Hazardous Polymerization: ☒ Will Not Occur  ☐ May Occur
- Stability: Stable

  - Hazardous Decomposition/Combustion Products: Carbon monoxide, Carbon dioxide, Acrid, irritating smoke
  - Conditions & Materials to Avoid: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION:
Primary Route(s) of Exposure under Normal Use: Inhalation.

- Target Organ(s): NA
- Acute Effects: Acute toxicity decreases with increases in MW.
  - Selected toxicity data:
    - PEG #4000: Skin-rbt 500 mg open MLD; Ipr-rat LD50 = 11,550 mg/kg; Oral-rbt LD50 = 76g/kg.
    - PEG #6000: Skin-rbt 500 mg open MLD; Ipr-rat LD50 = 6790mg/kg; Oral-rat LDLo = 50 g/kg.
- Chronic Effects: NA
- Other Information: Chemical Ingredient(s) not classified as carcinogen(s) by OSHA, IARC, NTP, ACGIH, or California.

12. ECOLOGICAL INFORMATION:
Not expected to be toxic in the aquatic or terrestrial environment.

13. DISPOSAL CONSIDERATIONS:
Consult state, local or national regulations for proper disposal. The U.S. Environmental Protection Agency (EPA) does not classify unused product as hazardous waste.

14. TRANSPORT INFORMATION:

  | IATA/ICAO | Shipping Name: NA | Hazard Class: NA | UN/NA #: NA | Packing Group #: NA | IMDG: NA | ADR: NA |
  | IATA/ICAO | Shipping Name: NA | Hazard Class: NA | UN/NA #: NA | Packing Group #: NA | IMDG: NA | ADR: NA |

15. REGULATORY INFORMATION:
- U.S. TOSCA: Listed
- Canada: This product has been classified according to the hazard criteria of the Controlled Product Registration (CPR) and this SDS contains all the information required by the CPR.

16. OTHER INFORMATION:

  | U.S. EPA | National Fire Protection Association Rating |
  | SARA 313 Chemicals | CERCLA RQ | 4-Severe Hazard | HEALTH | 0 |
  | None | None | 3=Serious Hazard | FLAMMABILITY | 1 |
  | 2=Moderate Hazard | REACTIVITY | 0 |
  | 1=Slight Hazard | OTHER |
  | 0=Minimal Hazard |

Notes, abbreviations and acronyms:
ACGIH: American Conference of Governmental Industrial Hygienists
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS: Chemical Abstracts Service (division of the American Chemical Society)
EC: European Commission
EU IOELV: European Union Indicative Occupational Exposure Limit Values
OSHA: Occupational Safety and Health Administration

For laboratory use only. Not for drug, household or other uses.

The information contained herein has been compiled from data presented in various technical sources believed to be accurate. Waters makes no warranties and assumes no liability in connection with the use of this information. It is the user's responsibility to determine the suitability of this information and to assure the adoption of necessary precautions.

WAT097941