1. IDENTIFICATION
Product: Polyvinylpyrrolidone  P/N:   820343.901.  
Product Use: For laboratory use only.  
MSDS #:  901176.001
Date: Rev B, March 26, 2013

2. HAZARDS IDENTIFICATION:
Not classified as hazardous per GHS.  Not dangerous according to the criteria set by the European Union (EU); 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 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>Polyvinylpyrrolidone</td>
<td>9003-39-8</td>
<td>618-363-4</td>
<td>100</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Notes: Polyvinylpyrrolidone powder provided in an 8cm³ vial, used for performance verification for sorption analyzers.

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: Get medical attention.

After following first aid measures, seek medical attention.

5. FIRE-FIGHTING MEASURES:
Flammable Properties: Not flammable.
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. Sweep up and place wastes into closed containers for proper disposal.

7. HANDLING AND STORAGE: Hygroscopic. Store tightly closed in a dry, well ventilated area. 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 protection from nuisance levels of dusts are desired, use approved dust masks.
Eye Protection: Safety glasses with side protection.
Skin Protection: No special requirements. Disposable nitrile are acceptable for light intermittent exposure.
Engineering Controls: No special requirements.
9. PHYSICAL AND CHEMICAL PROPERTIES:
Appearance: Beige powder
Physical State: Solid
Flash Point: NA
Vapor Pressure: NA
Odor: None
Explosion Limits: NA
Vapor Density (air=1): NA
pH: NA
Boiling Point: NA
Solubility in Water: Soluble
Specific Gravity: 1.23-1.29
Melting Point: NA
Other: Hygroscopic

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

<table>
<thead>
<tr>
<th>Hazardous Decomposition/Combustion Products:</th>
<th>Conditions &amp; Materials to Avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxides of carbon and nitrogen.</td>
<td>Strong oxidizing agents.</td>
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</table>

11. TOXICOLOGICAL INFORMATION:
Primary Route(s) of Exposure under Normal Use: Inhalation.
Target Organ(s): NA
Acute Effects: Low toxicity. Oral Rat, LD50: 100 gm/kg; intraperitoneal, mouse, LD50: 12 gm/kg.
Chronic Effects: NA
Other Information: Chemical Ingredient(s) not classified as carcinogen(s) by OSHA, IARC, NTP, ACGIH, or California.

12. ECOLOGICAL INFORMATION: NA

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.

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:

<table>
<thead>
<tr>
<th>U.S. EPA</th>
<th>National Fire Protection Association Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA 313 Chemicals</td>
<td>CERCLA RQ</td>
</tr>
<tr>
<td>None</td>
<td>None</td>
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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
GHS: Globally Harmonized System of Classification and Labeling of Chemicals
IMDG: International Maritime Code for Dangerous Goods
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.

901176.001