SECTION 1. PRODUCT IDENTIFICATION

1.1 TRADE NAME (AS LABELED): POLYPHOSPHORIC ACID 108%-119%
SYNONYMS: Phospholeum; Tetraphosphoric acid
CAS#: 8017-16-1

1.2 PRODUCT USE:
Refer to section 7.3

1.3 MANUFACTURER'S NAME: Innophos.
ADDRESS: 259 Prospect Plains Rd, Building A, Cranbury, NJ 08512
BUSINESS PHONE: 1-800-506-1146
WEB SITE INFORMATION: www.innophos.com

1.4 EMERGENCY PHONE NUMBERS:
800-424-9300 (CHEMTREC U.S. and Canada – 24 Hrs)
+1 703-527-3887 (CHEMTREC outside the USA and Canada – 24 Hrs)
615-386-7816 – Innophos Emergency Communication Team (ECT)

DATE OF CURRENT REVISION: March 21, 2018
DATE OF LAST REVISION: February 2, 2016

SECTION 2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This product is a colorless to yellow to brown liquid with no odor.
Health Hazards: May cause severe skin burns and eye damage. May cause respiratory irritation.
Flammability Hazards: This product is not flammable.
Reactivity Hazards: Corrosive.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

2.1 EU LABELING AND CLASSIFICATION:
EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:
Index Number:
EC# 231-633-2 is listed in Annex VI: Index #015-011-00-6
Substances not listed either individually or in group entries must be self-classified.
Component(s) Contributing to Classification(s)
Phosphoric Acid

2.2 LABEL ELEMENTS
US DOT SYMBOLS

CANADA (WHMIS) SYMBOL(S)

EUROPEAN and (GHS) Hazard Symbol(s)

Complies with WHMIS 2015

Signal Word: Danger!

GHS Hazard Classification(s):
Skin Corrosion Category 1B
Corrosive to Metals Category 1

Hazard Statement(s):
H314 Causes severe burns and eye damage
H290 May be corrosive to metals

Prevention Statement(s):
P234 Keep only in original container.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P280 Wear protective gloves and eye/face protection.
Response Statement(s):
P390 Absorb spillage to prevent material damage.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P321 Specific treatment (see SDS Section 4 First-Aid Measures)
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363 Wash contaminated clothing before reuse.
P310 Immediately call a POISON CENTER/doctor.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage Statement(s):
P406 Store in corrosive resistant container with a resistant inner liner.
P405 Store locked up.

Disposal Statement(s):
P501 Dispose of contents/container in accordance with local/ regional/ national/ international regulations.

2.3 HEALTH HAZARDS OR RISKS FROM EXPOSURE:

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The most significant routes of overexposure for this product are by contact with eyes, and skin and respiratory system. The symptoms of overexposure are described in the following paragraphs.

ACUTE:

INHALATION: May cause upper respiratory tract irritation.

CONTACT WITH SKIN: Corrosive, exposure to skin may cause burns.

EYE CONTACT: Corrosive, will cause serious eye damage.

INGESTION: May cause burns to mouth and esophagus, abdominal pain, nausea, vomiting.

CHRONIC: May cause Bronchial irritation with chronic cough.

TARGET ORGANS: 

Acute: Skin, Eyes, and Respiratory System

Chronic: Respiratory System

SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Ingredients:</th>
<th>WT%</th>
<th>CAS#</th>
<th>EINECS #</th>
<th>Hazard Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyphosphoric Acid</td>
<td>&gt;99%</td>
<td>8017-16-1</td>
<td>232-417-0</td>
<td>Skin Corr.1B, Corr. To Metals 1</td>
</tr>
</tbody>
</table>

Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).

SECTION 4. FIRST-AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES:

EYE CONTACT: If product enters the eyes, open eyes while under gentle running water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention.

SKIN CONTACT: Wash skin thoroughly after handling. Seek medical attention if irritation develops and persists. Remove contaminated clothing. Launder before re-use.

INHALATION: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

INGESTION: If product is swallowed, call physician or poison control center for most current information. If professional advice is not available, do not induce vomiting. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing eye problems may be aggravated by prolonged contact.

4.2 SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

Contact with eyes and skin may cause burns. Inhalation may cause upper respiratory irritation.

4.3 RECOMMENDATIONS TO PHYSICIANS:

Treat symptoms and eliminate overexposure.
SECTION 5. FIRE-FIGHTING MEASURES

5.1 FIRE EXTINGUISHING MATERIALS:

Use fire extinguishing methods below:
- Water Spray: No
- Carbon Dioxide: Yes
- Foam: Yes
- Dry Chemical: Yes
- Halon: Yes
- Other: Any “A” Class

5.2 UNUSUAL FIRE AND EXPLOSION HAZARDS:

None expected
- Explosion Sensitivity to Mechanical Impact: No
- Explosion Sensitivity to Static Discharge: No

5.3 SPECIAL FIRE-FIGHTING PROCEDURES:

Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Isolate materials not yet involved in the fire and protect personnel. Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

Avoid breathing mist / spray. Provide adequate ventilation. Wear suitable protective clothing, gloves and eye/face protection. Evacuate personnel to safe areas.

6.2 ENVIRONMENTAL PRECAUTIONS:

Not applicable.

6.3 SPILL AND LEAK RESPONSE:

Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Prevent entry into sewers, water courses, basement or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

SECTION 7. HANDLING and STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

To prevent skin and eye contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Handle in a well-ventilated work area.

7.2 STORAGE AND HANDLING PRACTICES:

Keep away from incompatible materials. Eliminate all ignition sources. Keep in a dry, well-ventilated area in closed containers. Protect containers from physical damage. Keep container tightly closed and sealed until ready for use. Store in accordance with local regulations.
7.3 SPECIFIC USES:
Intended for use in the production of phosphates, phosphate esters and the polyphosphorylation of polyols. This material acts as a catalyst in organic reactions such as rearrangement, polymerization and dehydration. Also used to strengthen or fortify weak acids.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 EXPOSURE PARAMETERS:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>ACGIH TLV</th>
<th>OSHA TWA</th>
<th>EH40 TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyphosphoric Acid</td>
<td>8017-16-1</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

8.2 EXPOSURE CONTROLS:

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132) or equivalent standard of Canada, or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

RESPIRATORY PROTECTION: Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

EYE PROTECTION: Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

HAND PROTECTION: Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

BODY PROTECTION: Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate Standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee’s feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9. PHYSICAL and CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE (Physical State) and COLOR: This product is a colorless to yellow to brown liquid.

ODOR: Odorless

ODOR THRESHOLD: Not Available

pH: <1

MELTING/FREEZING POINT: Not Available

BOILING POINT: Not Available

FLASH POINT: Not Available

EVAPORATION RATE (n-BuAc=1): Not Applicable

FLAMMABILITY (SOLID, GAS): Not Applicable

UPPER/LOWER FLAMMABILITY OR EXPLOSION LIMITS: Not Available

VAPOR PRESSURE (mm Hg @ 20°C (68°F)): < 1 mmHg @ 20°C(68°F)

VAPOR DENSITY: Not Available

RELATIVE DENSITY: 16.3-17.4 lbs/gal @ 25°C

SPECIFIC GRAVITY: 1.92 to 2.08 @ 25°C

SOLUBILITY IN WATER: Soluble

WEIGHT PER GALLON: Not Available

PARTITION COEFFICIENT (n-octanol/water): Not Available

AUTO-IGNITION TEMPERATURE: Not Available

DECOMPOSITION TEMPERATURE: 282°C(540°F)

VISCOITY: Not Available

9.2 OTHER INFORMATION:

No additional information available at this time.
SAFETY DATA SHEET

POLYPHOSPHORIC ACID 108%-119%

SECTION 10. STABILITY and REACTIVITY

10.1 REACTIVITY:
No dangerous reaction known under conditions of normal use.

10.2 STABILITY:
Stable.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS:
Hazardous reactions will not occur.

10.4 CONDITIONS TO AVOID:
Contact with incompatibles. Moisture. Excessive heat.

10.5 MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:
Water, strong bases, and most metals. This material is corrosive to common metals such as mild steel, copper, brass and bronze and may generate hydrogen gas as a result of reaction. Reacts with water to generate heat and forms phosphoric acid. This reaction is not violent.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS:
Oxides of phosphorus.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

TOXICITY DATA: No data available.
Polyphosphoric Acid CAS# 8017-16-1
Oral LD50 1,530 mg/kg Rat
Inhalation LC50 >850 mg/m³ Rat 1 hr

SUSPECTED CANCER AGENT: Ingredients within this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

IRRITANCY OF PRODUCT: This product may be irritating to the skin, eyes and respiratory system.

SENSITIZATION TO THE PRODUCT: This product is not expected to cause skin sensitization.

REPRODUCTIVE TOXICITY INFORMATION: No specific information is available concerning the effects of this product and its components on the human reproductive system.

SPECIFIC TARGET ORGAN TOXICITY – SINGLE EXPOSURE: Eye and skin burns.
SPECIFIC TARGET ORGAN TOXICITY – REPEATED EXPOSURE: Bronchial irritation with chronic cough.

ASPIRATION HAZARD: None

SECTION 12. ECOLOGICAL INFORMATION

12.1 TOXICITY:
No data available for Polyphosphoric Acid.

12.2 PERSISTENCE AND DEGRADABILITY:
No specific data available on this product.

12.3 BIOACCUMULATIVE POTENTIAL:
No specific data available on this product.

12.4 MOBILITY IN SOIL:
No specific data available on this product.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT:
No specific data available on this product.

12.6 OTHER ADVERSE EFFECTS:
No known significant effects or critical hazards.

12.7 WATER ENDANGERMENT CLASS:
May be water endangering in accordance with EU Guideline 91/155-EWG. Do not allow product to reach ground water, water course or sewage system. At present there are no ecotoxicological assessments for this product.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS:
Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Canada, Australia, EU Member States and Japan.
### SECTION 14. TRANSPORTATION INFORMATION

**US DOT, IATA, IMO, ADR:**

**14.1 U.S. DEPARTMENT OF TRANSPORTATION (DOT) SHIPPING REGULATIONS:** This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

- **UN IDENTIFICATION NUMBER:** UN3264
- **PROPER SHIPPING NAME:** Corrosive Liquid, acidic, inorganic, n.o.s (Polyphosphoric Acid)
- **HAZARD CLASS NUMBER and DESCRIPTION:** Class 8 Corrosive Liquid
- **PACKING GROUP:** III
- **DOT LABEL(S) REQUIRED:** Corrosive Liquid
- **NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER:** 154
- **RQ QUANTITY:** 5000 LB (PHOSPHORIC ACID)
- **MARINE POLLUTANT:** The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

**INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA):** This product is considered as dangerous goods.

**INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO):** This product is considered as dangerous goods.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This product is considered by the United Nations Economic Commission for Europe to be dangerous goods.

### SECTION 15. REGULATORY INFORMATION

**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC FOR THE SUBSTANCE OR MIXTURE:**

**UNITED STATES REGULATIONS:**

- **U.S. SARA REPORTING REQUIREMENTS:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.
- **U.S. SARA 311/312:** Acute Health
- **U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lbs (4,540 kg) therefore applies, per 40 CFR 370.20.
- **U.S. CERCLA REPORTABLE QUANTITY (RQ):** No data available.
- **U.S. TSCA INVENTORY STATUS:** The components of this product are listed on the TSCA Inventory or are exempted from listing.
- **OTHER U.S. FEDERAL REGULATIONS:** None known
- **CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** This product does not contain ingredients on the Proposition 65 Lists.

**15.2 CANADIAN REGULATIONS:**

- **CANADIAN DSL/NDSL INVENTORY STATUS:** Components are DSL Listed, NDSL Listed and/or are exempt from listing
- **OTHER CANADIAN REGULATIONS:** Not applicable.
- **CANADA ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.
- **CANADIAN WHMIS CLASSIFICATION and SYMBOLS:** This product is classified per 2015 WHMIS Controlled Product Regulations.

**15.3 EUROPEAN ECONOMIC COMMUNITY INFORMATION:**

This product does meet the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details

**CHEMICAL SAFETY ASSESSMENT:**

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

**15.4 AUSTRALIAN INFORMATION FOR PRODUCT:** Components of this product are not listed on the International Chemical Inventory list.

**15.5 JAPANESE INFORMATION FOR PRODUCT:**

- **JAPANESE MINISTER OF INTERNATIONAL TRADE AND INDUSTRY (MITI) STATUS:** The components of this product are not listed as Class I Specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.
15.6 INTERNATIONAL CHEMICAL INVENTORIES:
Listing of the components on individual country Chemical Inventories is as follows:
Asia-Pac: Not determined.
Australian Inventory of Chemical Substances (AICS): Not determined.
Korean Existing Chemicals List (ECL): Not determined.
Japanese Existing National Inventory of Chemical Substances (ENCS): Not determined.
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Not determined.
Swiss Giftliste List of Toxic Substances: Not determined.
U.S. TSCA: Not determined.

SECTION 16. OTHER INFORMATION

PREPARED BY: Chris Eigbrett – (MSDS to GHS Compliance)
DATE OF PRINTING: March 21, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. Innophos assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are no adhered to as stipulated in the data sheet. Furthermore, Innophos assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed.

END OF SDS SHEET