I. PRODUCT IDENTIFICATION

PRODUCT NAME: Liquid Ammonium Polyphosphate
TRADE NAME: Liquid Ammonium Polyphosphate 10-34-00
COMMON NAME: Liquid Polyphosphate 10-34-00
CHEMICAL FAMILY: Inorganic Salt

II. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAME AND SYNONYMS</th>
<th>C.A.S. NUMBER</th>
<th>CHEMICAL FORMULA</th>
<th>WT%</th>
<th>TLV</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Polyphosphate</td>
<td>68333-79-9</td>
<td>(NH₄)₃PO₄</td>
<td>56</td>
<td>Not Applicable</td>
<td>Not Available</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>H₂O</td>
<td>44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

None Listed
Non-hazardous

III. HEALTH HAZARD INFORMATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Ingestion
POTENTIAL HEALTH EFFECTS: No chronic effects known.
EYE CONTACT: Low eye aggravation potential.
SKIN ABSORPTION: Dermal exposure is non-lethal.
SKIN CONTACT: Low skin abrasion potential.
INGESTION: Not generally considered as hazardous as all constituents are used as food additives.
EFFECTS OF OVERDOSE: Direct contact with the liquid on open cuts in the skin or contact with the eyes will result in local discomfort.
POTENTIAL CARCINOGEN STATUS (Source of Information - Registry of Toxic Effects): None listed.

IV. FIRST AID AND EMERGENCY PROCEDURES

Call a physician immediately in all cases of suspected poisoning.
EYES: Flush eyes with running water for at least 15 minutes until irritation subsides. Get medical attention if irritation persists.
SKIN: Remove contaminated clothing and wash skin with water and mild detergent and copious amounts of running water. Get medical attention if irritation persists.
INHALATION: Not considered an inhalation hazard under normal open air conditions.
INGESTION: If a large amount is ingested, give 2-3 glasses of water and induce vomiting. Call a physician.

V. FIRE FIGHTING MEASURES

FLASH POINT (Method Used): Not Applicable
AUTO IGNITION TEMPERATURE: Not Applicable
LOWER EXPLOSION LIMITS: Not Applicable
UPPER EXPLOSION LIMITS: Not Applicable
EXPLOSION HAZARDS: Not an explosion hazard.

NFPA HAZARD Rating
0 Least 1 Slight 1 Health
1 Slight 2 Moderate 0 Flammability
2 Moderate 3 High 0 Reactivity
3 High 4 Severe

FIRE EXTINGUISHING MEDIA: This product is essentially non-flammable and is used commercially as a fire retardant. Use media suitable to extinguish source of fire.
SPECIAL FIRE FIGHTING PROCEDURES: Use fire fighting procedures according to type of fire.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

VI. ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Since this product is a fertilizer, it may promote algae growth in waterways. Use and disposal, employing proper environmental control practices, should not cause significant environmental impact.
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spills and maximize recovery.
Small spills can be absorbed in sand, kitty litter or other absorbent. For large spills, dike area and reclaim liquid. Absorb unreclaimed liquid and wash area with water. Keep out of sewers, drinking water and all waterways. Use as fertilizer.

**VII. MATERIAL HANDLING AND STORAGE**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Avoid using containers, pipes and fittings made of zinc-clad or copper bearing alloys. Storage in open containers may result in formation of an ammonium polyphosphate solid on walls. Avoid contact with skin and eyes.

**VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**VENTILATION PROTECTION:** Good ventilation practice should be exercised.

**PERSONAL PROTECTION EQUIPMENT:**

**EYES AND FACE:** Safety glasses or chemical splash-proof goggles.

**RESPIRATORY:** None required under normal conditions.

**GLOVES:** Rubber coated gloves.

**PROTECTIVE CLOTHING:** Clean work clothing. Minimize skin exposure.

**WORK HYGIENIC PRACTICES:** Wash thoroughly after handling. Remove contaminated clothing and wash. Keep out of open cuts and wounds.

**COMMENTS:** Eyewash station and emergency shower availability recommended when applied in confined areas.

**IX. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOILING POINT</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>pH</td>
<td>5.8 - 6.2</td>
</tr>
<tr>
<td>FLASH POINT</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY</td>
<td>1.40 @ 60°F</td>
</tr>
<tr>
<td>% VOLATILES (BY VOLUME)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>APPEARANCE</td>
<td>Dark or Light Green</td>
</tr>
<tr>
<td>VAPOR PRESSURE, mm Hg</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>EXTINGUISHING MEDIA</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>SOLUBILITY IN WATER</td>
<td>Complete</td>
</tr>
</tbody>
</table>

**X. STABILITY AND REACTIVITY INFORMATION**

**CONDITIONS TO AVOID:** None known.

**STABILITY:** Stable

**INCOMPATIBLE MATERIALS:** Zinc-clad and copper bearing alloys.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Ammonia, POx and NOx.

**HAZARDOUS POLYMERIZATION:** Will not occur

**XI. TOXICOLOGICAL INFORMATION**

**ACUTE ORAL TOXICITY:** LD50 (rat) is greater than 2,000 mg/kg (ppm); not acutely toxic by oral exposure. (TFI Product Testing Results, OECD Guideline 425)

**ACUTE DERMAL TOXICITY:** LD50 (rat) is greater than 5,000 mg/kg (ppm); not acutely toxic by dermal exposure. (TFI Product Testing Results, OECD Guideline 402)

**ACUTE AQUATIC TOXICITY:** Fish 96-hour (rainbow trout) LC50 (rat) is greater than 101 mg/L. Non-toxic to aquatic organisms. (TFI Product Testing Results)

**XII. ECOLOGICAL INFORMATION**

None Listed.

**XIII. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHODS:** Contain spills and maximize recovery. Disposal of spilled material should be in accordance with applicable federal, state and local environmental regulatory requirements. Use as a fertilizer by applying to soil using good agricultural and soil management.

**XIV. TRANSPORTATION INFORMATION**

**DOT TRANSPORTATION:** Not Regulated

**PLACARD:** None

**SHIPPING NAME:** Not Regulated by D.O.T.

**C.A.S. NUMBER:** See "Ingredients"
HAZARD CLASS: None
D.O.T. NUMBER: None
REPORTABLE QUANTITY (RQ): None
HAZ WASTE NO: None
LABELS REQUIRED: None
EPA REGIST NO: None

XV. REGULATORY INFORMATION - UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

<table>
<thead>
<tr>
<th>Category</th>
<th>SEC</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate (Acute Health)</td>
<td>302</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Delayed (Chronic Health)</td>
<td>304</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Fire</td>
<td>313</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Sudden Release of Pressure</td>
<td></td>
<td>CERCLA RQ: Not Applicable</td>
</tr>
<tr>
<td>Reactivity</td>
<td></td>
<td>CAA RQ: Not Applicable</td>
</tr>
</tbody>
</table>

EPA REGISTRATION NO: Not Applicable

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