SAFETY DATA SHEET
Ammonium Polyphosphate Solution, 10-34-00

1. PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: MEARS FERTILIZER, INC.
P.O. Box 1271
629 North Industrial Road
El Dorado, KS 67042
Phone: (316) 321-3674

PRODUCT IDENTITY: APP, Ammonium Polyphosphate Solution, 10-34-00
RECOMMENDED USE: Fertilizer, Animal Feed, Industrial
PRODUCT RESTRICTIONS: None known.

2. HAZARDS IDENTIFICATION

PHYSICAL HAZARDS: Not applicable.
HEALTH HAZARDS: Not applicable.
OSHA DEFINED HAZARDS: Not applicable.

LABEL ELEMENTS
HAZARD SYMBOL: None.
SIGNAL WORD: None.
HAZARD STATEMENT: The mixture does not meet the criteria for classification.

PRECAUTIONARY STATEMENT -
PREVENTION: Observe good industrial hygiene practices.
RESPONSE: Wash hands after handling.
STORAGE: Store away from incompatible materials.
DISPOSAL: Dispose of waste and residues in accordance with local authority requirements.

HAZARD(S) NOT OTHERWISE CLASSIFIED: Not classified.
SUPPLEMENTAL INFORMATION: Not applicable.

3. COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURES
Chemical Name and Synonyms: Ammonium Polyphosphate
CAS No.: 68333-79-9
Weight %: 50 -60
TLV: Not applicable
PLV: Not applicable

Water
CAS No.: 7732-18-5
Weight %: 40 - 50

COMPOSITION COMMENTS: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

IF IN EYES: Flush eyes immediately and thoroughly with running water for 15 minutes, if irritation persists, get medical attention.
IF ON SKIN OR CLOTHING: Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation develops.
IF SWALLOWED: For small amount, rinse mouth. If a large amount is ingested, give 2-3 glasses of water and induce vomiting. Get medical attention. Do not give anything by mouth to an unconscious person.
IF INHALED: Remove to fresh air. Get medical attention if symptoms develop. Not considered an inhalation hazard under normal open air conditions.
NOTES TO PHYSICIAN: Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Patient treatment should be based on sound judgment of the physician and the individual reactions of the patient.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: This product is essentially non-flammable and is used commercially as a fire retardant. Use media suitable to extinguish source of fire.
6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES -

FOR NON-EMERGENCY PERSONNEL: No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

FOR EMERGENCY RESPONDERS: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information "For non-emergency personnel".

ENVIRONMENTAL PRECAUTIONS: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP -

SMALL SPILL: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or wipe up spill with absorbent material. Recover the material and use it for its intended purpose. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

LARGE SPILL: Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas. Dike spilled material, where this is possible with. Absorb in vermiculite, dry sand or earth. Recover the material and use it for its intended purpose. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

REFERENCE TO OTHER SECTIONS: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

CAUTION: Spill area may be quite slippery.

7. HANDLING AND STORAGE

HANDLING: Avoid breathing mist or vapors, if any should be formed. Unless heated to evolve ammonia or misted by heat, agitation or spraying, natural ventilation should be adequate. Wash thoroughly after handling. Do not empty into drains. Use good personal hygiene and housekeeping.

STORAGE: Avoid using containers, pipes and fittings made of zinc-clad, copper-bearing alloys or aluminum. Storage in open containers may result in formation of an ammonium polyphosphate solid on walls. Protect containers from physical damage. Aluminum tanks not recommended because of possible pitting. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS: No exposure limits noted for ingredient(s).

EXPOSURE GUIDELINES: No exposure limits noted for ingredient(s).

ENGINEERING CONTROLS: Provide adequate general and local exhaust ventilation where necessary. Provide eyewash station.

PERSONAL PROTECTION EQUIPMENT -

EYE / FACE PROTECTION: Wear approved safety glasses or goggles when eye contact is possible.

SKIN PROTECTION: Wear suitable gloves when handling this product over long periods. If skin irritation occurs, wear long sleeves.

RESPIRATORY PROTECTION: Wear NIOSH approved respiratory protective equipment when workplace conditions warrant use of a respirator.

GENERAL HYGIENE CONSIDERATIONS: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES
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APPEARANCE -

PHYSICAL STATE: Liquid.
FORM: Liquid.
COLOR: Black, lite to dark green.
ODOR: Slight ammonia odor.
ODOR THRESHOLD: 17 ppm (Ammonia)
pH: 5.70 to 6.50
MELTING POINT/FREEZING POINT: -0.4 °F
INITIAL BOILING POINT/RANGE: Not available.
FLASH POINT: Not flammable. Product does not sustain combustion.
EVAPORATION RATE: Not available.
FLAMMABILITY (SOLID, GAS): Not available.
FLAMMABILITY OR EXPOSURE LIMITS -
FLAMMABILITY LIMIT - LOWER: Not available.
FLAMMABILITY LIMIT - UPPER: Not available.
VAPOR PRESSURE: Not available.
VAPOR DENSITY: Not available.
RELATIVE DENSITY (SPECIFIC GRAVITY): 1.400 to 1.450
SOLUBILITY(IES): Easily soluble in the following materials: cold water and hot water.
AUTO-IGNITION TEMPERATURE: Not available.
DECOMPOSITION TEMPERATURE: Not available.
EXPLOSIVE PROPERTIES: Not available.
OXIDIZING PROPERTIES: Not available.
OTHER INFORMATION -
HEAT OF COMBUSTION: Not applicable.
No additional information.

10. STABILITY AND REACTIVITY

REACTIVITY: The product is stable and non-reactive under normal conditions of use, storage and transportation.
CHEMICAL STABILITY: The product is stable.
POSSIBILITY OF HAZARDOUS REACTIONS: Under normal conditions of storage and use, hazardous reactions will not occur.
CONDITIONS TO AVOID: Excessive heat.
HAZARDOUS DECOMPOSITION PRODUCTS: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

INFORMATION ON LIKELY ROUTES OF EXPOSURE-

INGESTION: May cause discomfort if swallowed.
INHALATION: In high concentrations, vapors may be irritating to the respiratory system.
SKIN CONTACT: Prolonged exposure may cause skin irritation.
EYE CONTACT: May cause eye irritation on direct contact.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS:
Direct contact with eyes may cause temporary irritation.

INFORMATION ON TOXICOLOGICAL EFFECTS -
ACUTE TOXICITY: May cause discomfort if swallowed.

TOXICOLOGICAL DATA

<table>
<thead>
<tr>
<th>Product/Ingredient Name</th>
<th>Results</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Polyphosphate</td>
<td>LD50 Oral</td>
<td>Rat - Male/Female</td>
<td>&gt;2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>LD50 Dermal</td>
<td>Rat - Male/Female</td>
<td>&gt;5000 mg/kg</td>
</tr>
</tbody>
</table>

SKIN CORROSION/IRRITATION: Prolonged exposure may cause skin irritation.
SERIOUS EYE DAMAGE/IRRITATION: May cause eye irritation on direct contact.
RESPIRATORY SENSITIZATION: No data available.

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SKIN SENSITIZATION:  
No data available.

GERM CELL MUTAGENICITY:  
Based on available data, the classification criteria are not met.

CARCINOGENICITY:  
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

REPRODUCTIVE TOXICITY:  
Based on available data, the classification criteria are not met.

SPECIFIC TARGET ORGAN TOXICITY:  
In high concentrations, vapors may be irritating to the respiratory system.

SPECIFIC TARGET ORGAN TOXICITY:  (Single Exposure)  
Based on available data, the classification criteria are not met.

SPECIFIC TARGET ORGAN TOXICITY:  (Repeated Exposure)  
Based on available data, the classification criteria are not met.

ASPIRATION HAZARD:  
Based on available data, the classification criteria are not met.

CHRONIC EFFECTS:  
Prolonged exposure may cause chronic effects.

FURTHER INFORMATION:  
No other specific acute or chronic health impact noted.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:  
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Ammonium Polyphosphate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Water flea (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>627 - 992 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>Chinook salmon (Oncorhynchus tshawytscha)</td>
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<tr>
<td></td>
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<td>106 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

PERSISTENCE AND DEGRADABILITY:  
This substance will promote algae growth which may degrade water quality and taste.

BIOACCUMULATIVE POTENTIAL:  
No data available for this product.

MOBILITY IN SOIL:  
This product is water soluble and may disperse in soil.

OTHER ADVERSE EFFECTS:  
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

WASTE TREATMENT METHODS

PRODUCT

METHODS OF DISPOSAL:  
The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste legislation and any regional local authority requirements.

HAZARDOUS WASTE:  
Within the present knowledge of the supplier, this product is not regarded as hazardous waste.

PACKAGING

METHODS OF DISPOSAL:  
The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should be considered when recycling is not feasible.

SPECIAL PRECAUTIONS:  
This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

14. TRANSPORTATION INFORMATION

SHIPPING NAME:  
Not regulated by D.O.T.

HAZARD CLASS:  
None.

REPORTABLE QUANTITY:  
None.

LABELS REQUIRED:  
None.

PLACARD:  
None.

C.A.S. NUMBER:  
68333-79-9

D.O.T. NUMBER:  
None.

HAZARD WASTE NO:  
None.

EPA REGISTRATION NO:  
None.

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15. REGULATORY INFORMATION

US FEDERAL REGULATIONS: This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA SECTION 12(B) EXPORT NOTIFICATION (40 CFR 707, SUBPT.D): Not Listed.


SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA):

HAZARD CATEGORIES:
- Immediate Hazard: No
- Delayed Hazard: No
- Fire Hazard: No
- Pressure Hazard: No
- Reactivity Hazard: No

SARA 302 EXTREMELY HAZARDOUS SUBSTANCE: No
SARA 311/312 HAZARDOUS CHEMICAL: No
SARA 313 (TRI REPORTING): Not Regulated.

OTHER FEDERAL REGULATIONS -
CLEAN AIR ACT (CAA) SECTION 112 HAZARDOUS AIR POLLUTANTS (HAPs) LIST: Not Regulated.
CLEAN AIR ACT (CAA) SECTION 112 ACCIDENTAL RELEASE PREVENTION (40 CFR 68.130):) LIST: Not Regulated.
SAFE DRINKING WATER ACT (SDWA): Not Regulated.
FOOD AND DRUG ADMINISTRATION (FDA): Not Regulated.

US STATE REGULATIONS -
US CALIFORNIA PROPOSITION 65:
This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Proposition 65, the Safe Drinking Water and Toxic Enforcement Act of 1986, requires notification of potential exposure to substances identified by the State of California as causing cancer, birth defects or other reproductive harm.

16. OTHER INFORMATION

ISSUE DATE: February 18, 2014
REVISION DATE: New
VERSION NO.: 01

NOTICE TO READER

DISCLAIMER AND LIMITATIONS OF LIABILITY:
The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.