SAFETY DATA SHEET



1. Identification

Product identifier Ammonium Polyphosphate Solution (10-34-0)

Other means of identification

SDS Number KFI_NH4PO3Sol_US_EN

Synonyms APP, 10-34-0 Ammonium Polyphosphate solution

Recommended use Fertilizer.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Koch Fertilizer International Limited

Address 4th Floor

20 Gresham Street

London, United Kingdom EC2V 7JE

Telephone 1.316.828.7672

E-mail kochmsds@kochind.com

Emergency phone number USA/Canada - 1.800.424.9300 Outside USA/Canada - 1.703.527.3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

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 (HNOC)

None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

| Chemical name | CAS number | % |
|------------------------|------------|---------|
| Ammonium polyphosphate | 68333-79-9 | 50 - 60 |
| Water | 7732-18-5 | 40 - 50 |

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in

percent by volume.

This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from

supplier.

4. First-aid measures

Inhalation If inhaled, remove to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Get medical attention if irritation develops and persists. Rinse mouth. Get medical attention if symptoms occur. Ingestion Most important

symptoms/effects, acute and

Direct contact with eyes may cause temporary irritation.

delaved

Indication of immediate medical attention and special Treat symptomatically.

treatment needed

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to

protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder.

Unsuitable extinguishing

media

Carbon dioxide (CO2).

Specific hazards arising from the chemical

During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting

equipment/instructions

In the event of fire, cool tanks with water spray.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapors/dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.

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

Never return spills to original containers for re-use.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.

7. Handling and storage

Precautions for safe handling

Avoid inhalation of vapors/spray and contact with skin and eyes. Use only with adequate

ventilation. Observe good industrial hygiene practices.

Conditions for safe storage. including any incompatibilities Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits No exposure limits noted for ingredient(s).

Biological limit values No biological exposure limits noted for the ingredient(s). Provide adequate general and local exhaust ventilation. Appropriate engineering

controls

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Individual protection measures, such as personal protective equipment

Eye/face protection Wear approved safety glasses or goggles.

Skin protection

Version #: 01

Hand protection Chemical resistant gloves are recommended. Be aware that the liquid may penetrate the gloves.

Frequent change is advisable.

Wear appropriate clothing to prevent repeated or prolonged skin contact. Other

If engineering controls do not maintain airborne concentrations below recommended exposure Respiratory protection

limits (where applicable) or to an acceptable level (in countries where exposure limits have not

been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

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Ammonium Polyphosphate Solution (10-34-0) Revision date: -

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 practice.

9. Physical and chemical properties

Appearance Clear to hazy liquid.

Physical stateLiquid.FormLiquid.ColorGreen.

Odor Slight ammonia odor.
Odor threshold 17 ppm (Ammonia)

pH 7

Melting point/freezing point $-0.4 \, ^{\circ}\text{F} \, (-18 \, ^{\circ}\text{C})$ Initial boiling point and boiling $212 \, ^{\circ}\text{F} \, (100 \, ^{\circ}\text{C})$

range

Flash point Not flammable.

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower

(%)

Not available.

Flammability limit - upper

(%)

Not available.

Vapor pressureNot available.Vapor densityNot available.Relative densityNot available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

Other information

Explosive properties Not explosive. **Oxidizing properties** Not oxidizing.

10. Stability and reactivity

ReactivityThe product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable under normal temperature conditions.

Possibility of hazardous Hazardous polymerization does not occur.

reactions

Conditions to avoid Excessive heat.

Incompatible materials Strong oxidizing agents. Bases. Reactive metals. May attack copper, zinc and their alloys.

Hazardous decomposition

products

Nitrogen oxides (NOx). Oxides of phosphorous. Ammonia.

11. Toxicological information

Information on likely routes of exposure

Inhalation In high concentrations, vapors may be irritating to the respiratory system.

Skin contactProlonged exposure may cause skin irritation.Eye contactMay cause eye irritation on direct contact.

Ingestion May cause discomfort if swallowed.

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Symptoms related to the physical, chemical and toxicological characteristics Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

May cause discomfort if swallowed. **Acute toxicity**

Components **Species Test Results**

Ammonium polyphosphate (CAS 68333-79-9)

Acute

Dermal

LD50 Rat > 5000 mg/kg

Inhalation

LC50 Rat > 5.09 mg/l, 4 Hours

Oral

LD50 Rat > 2000 mg/kg

Skin corrosion/irritation Serious eye damage/eye

irritation

May cause eye irritation on direct contact.

Prolonged exposure may cause skin irritation.

Respiratory or skin sensitization

Respiratory sensitization No data available. Skin sensitization No data available.

Based on available data, the classification criteria are not met. Germ cell mutagenicity

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

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Reproductive toxicity Based on available data, the classification criteria are not met.

Specific target organ toxicity -

single exposure

In high concentrations, vapors may be irritating to the respiratory system.

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.

Test Results Components **Species**

Ammonium polyphosphate (CAS 68333-79-9)

Aquatic

Acute

Fish LC50 Oncorhynchus mykiss > 101 mg/l, 96 hours

Persistence and degradability Bioaccumulative potential No data available for this product.

Mobility in soil This product is water soluble and may disperse in soil.

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation Other adverse effects

potential, endocrine disruption, global warming potential) are expected from this component.

This substance will promote algae growth which may degrade water quality and taste.

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13. Disposal considerations

Disposal instructionsDo not allow this material to drain into sewers/water supplies. Dispose in accordance with all

applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste

disposal company.

Waste from residues / unused

products

Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is

emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

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 regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

No

Hazard categories Immediate Hazard - No

Delayed Hazard - No Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

chemical

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(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

US state regulationsThis product does not contain a chemical known to the State of California to cause cancer, birth

defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

Not Listed.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | No |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |
| | | |

^{*}A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 28-October-2016

Revision date - Version # 01

HMIS® ratings Health: 1

Flammability: 0 Physical hazard: 0

NFPA ratings



Disclaimer

NOTICE: 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.

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).