

1. Identification

Product identifier Monoammonium Phosphate

Other means of identification

Product code KF_NH4H2PO4_CA_EN

Synonyms Monoammonium dihydrogen phosphate, MAP

Recommended use Fertiliser.

Recommended restrictions Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Company name Koch Fertilizer, LLC
4111 E 37th Street North
PO Box 2219
Wichita, KS, 67201-2219
kochmsds@kochind.com
1-316-828-7672

Emergency For Chemical Emergency
Call CHEMTREC Day or Night
1.800.424.9300
Mexico - 1.800.681.9531
Outside USA/Canada
1.703.527.3887
(collect calls accepted)

2. Hazard identification

Physical hazards Not classified.

Health 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.

Supplemental information None.

Other hazards None known.

3. Composition/information on ingredients**Mixtures**

Chemical name	Common name and synonyms	CAS number	%
Monoammonium phosphate		7722-76-1	> 80
Ammonium magnesium orthophosphate		7785-21-9	< 10
Ammonium sulfate		7783-20-2	< 10
Diammonium phosphate		7783-28-0	< 10

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	Move 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	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Dusts may irritate the respiratory tract, skin and eyes. Exposure may cause temporary irritation, redness, or discomfort. Coughing.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
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	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers. Move container from fire area if it can be done without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted. The product is non-combustible.
6. Accidental release measures	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
7. Handling and storage	
Precautions for safe handling	Minimise dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Provide appropriate exhaust ventilation at places where dust is formed. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	This product when stored in a confined, unventilated space/hold can give off ammonia or other odors and lead to the depletion of oxygen within this space and other confined spaces. Store in tightly closed container. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (see section 10 of the SDS).
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).

Exposure guidelines

Canada - Ontario OELs: Skin designation

Lead (CAS 7439-92-1)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection

Risk of contact: Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Risk of contact: Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

Wear respirator with dust filter. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

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.

9. Physical and chemical properties

Physical state

Solid.

Form

Granules.

Colour

Grey. Brown.

Odour

Slight acidic.

Melting point/freezing point

Property has not been measured.

Boiling point or initial boiling point and boiling range

Not applicable, material is a solid.

Flammability

Not flammable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)

Not applicable, material is a solid.

Explosive limit – upper (%)

Not applicable, material is a solid.

Flash point

Not applicable, material is a solid.

Auto-ignition temperature

Not applicable, material is a solid.

Decomposition temperature

Property has not been measured.

pH

5.4 - 10 (5% solution)
4.5 (1% solution)

Kinematic viscosity

Not applicable, material is a solid.

Solubility

Solubility (water)

99.5 - 100 %

Partition coefficient (n-octanol/water) (log value)

Property has not been measured.

Vapour pressure

Property has not been measured.

Density and/or relative density

Relative density

1.8

Vapour density

Property has not been measured.

Particle characteristics

Property has not been measured.

Other information

Bulk density

950 - 1050 kg/m³
64 - 75 lb/ft³

Explosive properties

Not explosive.

Oxidising properties

Not oxidising.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions. Decomposes at high temperatures giving ammonia and polyphosphoric acid.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	High temperatures. Contact with incompatible materials. Avoid dust formation.
Incompatible materials	Strong oxidising agents. Strong acids. Strong bases. Magnesium.
Hazardous decomposition products	Phosphorus oxides. Nitrogen Oxides. Ammonia.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes. Exposure may cause temporary irritation, redness, or discomfort. Coughing.
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Information on toxicological effects

Acute toxicity	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Large quantities: May cause effects on the calcium metabolism, resulting in cardiac disorders and impaired functions. However, ingestion is not likely to be a primary route of occupational exposure.
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Components	Species	Test Results
Monoammonium phosphate (CAS 7722-76-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	> 2000 mg/kg
Skin corrosion/irritation	May cause irritation through mechanical abrasion.	
Serious eye damage/eye irritation	May cause eye irritation.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not classified as a carcinogen.	
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful. 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.
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Components	Species	Test Results
Monoammonium phosphate (CAS 7722-76-1)		
Aquatic		
<i>Acute</i>		
Fish	LC50	Oncorhynchus mykiss
		> 85.9 mg/l, 96 Hours
Persistence and degradability	No data is available on the degradability of this product.	
Bioaccumulative potential	The product is not expected to bioaccumulate.	
Mobility in soil	This product is water soluble and may disperse in soil.	
Other adverse effects	Fertilisers, particularly those containing nitrogen and/or phosphorus, can stimulate weed and algal growth in static surface waters. Nitrogen fertilisers may contain or form nitrate which can contaminate surface and ground-water. High nitrate concentrations may render the water unsuitable for human and livestock consumption.	

13. Disposal considerations

Disposal instructions	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.
Local disposal regulations	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	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

15. Regulatory information

Canadian regulations	This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.
Controlled Drugs and Substances Act	
	Not regulated.
Export Control List (CEPA 1999, Schedule 3)	
	Not listed.
Greenhouse Gases	
	Not listed.
Precursor Control Regulations	
	Not regulated.
International regulations	
Stockholm Convention	
	Not applicable.
Rotterdam Convention	
	Not applicable.
Kyoto Protocol	
	Not applicable.
Montreal Protocol	
	Not applicable.

Basel Convention

Lead (CAS 7439-92-1)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
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	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

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).

16. Other information

Issue date 17-July-2018

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Version No. 02

References IARC Monographs. Overall Evaluation of Carcinogenicity
ECHA: European Chemical Agency.

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