MAP

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.
Issue date: 3/29/2023 Revision date: 3/29/2023 Version: 1.0

SECTION 1: Identification

1.1. Identification

Product type	:	Dry fertilizer blend
Product name	:	MAP
Product code	:	11-52-0
Chemical name	:	Monoammonium Phosphate
CAS-No.	:	7722-76-1
Formula	:	NH4H2PO4
Synonyms	:	MAP, Phosphoric acid ammonium salt

1.2. Recommended use and restrictions on use

Use of the substance/mixture	:	Agricultural application

1.3. Supplier

Manufacturer
MacroSource, LLC
7632 County Rd 101
Shakopee, MN 55379
T 651-726-1150
www.Macrosource.com

1.4. Emergency telephone number

Emergency number	:	CHEMTREC 1 (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling

No labeling applicable

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Name	:	11-52-0 (MAP)
CAS-No.	:	7722-76-1

Name	Product identifier	%
Monoammonium phosphate	CAS-No.: 7722-76-1	>98
Water	CAS-No.: 7732-18-5	<2

Comments : 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 the supplier. All concentrations are in percent weight.

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : If skin irritation occurs: Wash skin with plenty of water. Obtain medical attention if irritation persists.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause irritation to the respiratory tract.

Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Water fog.

Unsuitable extinguishing media : Do not use water jet.

5.2. Specific hazards arising from the chemical

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Ammonia. Nitrogen oxides. Oxides of phosphorus.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Prevent runoff from entering water courses, sewers and basements.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain spill, then place in a suitable container. Minimize dust generation. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke..Minimize generation of dust. Good housekeeping is important to prevent accumulation of dust. The use of compressed air for cleaning clothing, equipment, etc, is not recommended.

Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep out of the reach of children. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep dry.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

11-52-0 (MAP) (7722-76-1)
No additional information available

Particulates not otherwise regulated (PNOR) and Particulates not otherwise classified (PNOC)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 mg/m³ (inhalable particles)
ACGIH OEL TWA	3 mg/m³ (respirable particles)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL TWA	15 mg/m³ (total dust)

Particulates not otherwise regulated (PNOR) and Particulates not otherwise classified (PNOC)	
OSHA PEL TWA	5 mg/m³ (respirable fraction)

Monoammonium phosphate (7722-76-1)

No additional information available

Water (7732-18-5)

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Wear suitable gloves. Consult glove manufacturer's product information on material suitability and material thickness.

Eye protection:

Safety glasses or goggles are recommended when using product.

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Granules.
Color	: Light tan to Gray
Odor	: Slightly acidic
Odor threshold	: No data available
pH	: 5
pH solution concentration	: 10 %
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Appreciable.

Partition coefficient n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

9.2. Other information

Bulk density	:	52 – 60 lbs/ft3
Formula Weight	:	132.14

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Heat. Fire. Incompatible materials.

10.5. Incompatible materials

Strong acids. Alkalis. Sodium hypochlorite. Copper and its alloys

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. Ammonia. Nitrogen oxides. Oxides of phosphorus.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Monoammonium phosphate (7722-76-1)	
LD50 oral rat	5750 mg/kg
LD50 dermal rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 7940 mg/kg
LC50 inhalation rat	> 5 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity), Guideline: other:Japanese Ministry of Agriculture, Forestry and Fisheries (JMAFF), 12 Nousan, Notification No 8147, November 2000, including the most recent partial revisions.
ATE US (oral)	5750 mg/kg body weight

Water (7732-18-5)	
LD50 oral rat	> 90 ml/kg

Skin corrosion/irritation : Not classified
pH: >

Monoammonium phosphate (7722-76-1)	
pH	4.5 (conc: 1 % at 20 °C (solution)

Serious eye damage/irritation : Not classified
pH: >

Monoammonium phosphate (7722-76-1)	
pH	4.5 (conc: 1 % at 20 °C (solution)

Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after inhalation : May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.
Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Monoammonium phosphate (7722-76-1)	
LC50 - Fish [1]	> 85.9 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 72h - Algae [1]	> 97.1 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

11-52-0 (MAP) (7722-76-1)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

11-52-0 (MAP) (7722-76-1)	
Bioaccumulative potential	Not established.

Monoammonium phosphate (7722-76-1)	
BCF - Fish [1]	(no bioaccumulation expected)

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : No other effects known.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not applicable

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

DOT
No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Monoammonium phosphate	7722-76-1	Present	Active	
Water	7732-18-5	Present	Active	

15.2. International regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

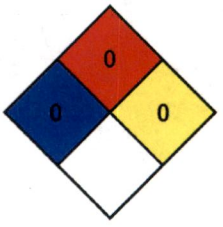
SECTION 16: Other information

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date	:	03/29/2023
Revision date	:	03/29/2023
Other information	:	None.
Prepared by	:	Nexreg Compliance Inc. www.Nexreg.com

NEXREG

NFPA health hazard	:	0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	:	0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating		
Health	:	0 Minimal Hazard - No significant risk to health
Flammability	:	0 Minimal Hazard - Materials that will not burn
Physical	:	0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Safety Data Sheet (SDS), USA

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