Material Safety Data Sheet / Safety Data Sheet

Monoammonium Phosphate

Section 1. Chemical Product and Company Identification

: Monoammonium Phosphate **Product name**

: Monoammonium Phosphate; Multi-MAP; Trade name

Hi-MAP.

: Ammonium phosphate, monoammonium **Synonym**

phosphate, ammonium phosphate

monobasic, MAP.

Fertilizer formula : 12-61-0 Chemical formula : NH₄.H₂PO₄

Material uses : Agriculture - fertilizer, component of mixed

fertilizers, nutrient supplement.

Food processing - buffer, dough

conditioner, leavener, nutrient.

Industries - ceramics, textile, pulp and

Flame-proofing and fire extinguisher

agent.

: 972-4-8469603/4 **Emergency telephone number**

Section 2. Hazards identification

Physical state : Solid. (Crystals.)

: Warning! **Emergency overview**

CAUSES EYE AND SKIN IRRITATION.

Avoid contact with skin and clothing. Wash thoroughly after handling.

: Dermal contact. Eye contact. Inhalation. Ingestion. **Routes of entry**

Potential acute health effects

Eyes : Irritating to eyes.

Skin : Practically non-toxic in contact with skin. Irritating to skin.

: No known significant effects or critical hazards. Inhalation

Ingestion : Practically non-toxic if swallowed.

Potential chronic health

effects

: Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not applicable. Teratogenic Effects: Not applicable.

Medical conditions

aggravated by over-

exposure

: Repeated skin exposure can produce local skin destruction or dermatitis. Repeated

exposure of the eyes to a low level of dust can produce eye irritation.

: Ingestion may cause gastrointestinal irritation, vomiting and diarrhea. **Over-exposure**

signs/symptoms

See toxicological information (section 11)

Monoammonium Phosphate

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Section 3. Composition, Information on Ingredients

CAS number

United States

Monoammonium Phosphate 7722-76-1

This material is classified as hazardous under OSHA regulations. See Chapters 8, 11 and 14 for details.

Section 4. First aid measures

: Check for and remove any contact lenses. In case of contact with eyes, rinse **Eye contact**

immediately with plenty of water. Get medical attention if symptoms occur.

Skin contact : Wash with soap and water. Get medical attention if symptoms occur.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical

attention if symptoms appear.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Get

medical attention if symptoms appear.

Notes to physician No specific antidote. Medical staff must contact Poison Control Center.

Section 5. Fire fighting measures

Flammability of the product: Not combustible.

Products of combustion

Not combustible. Thermal decomposition products are dependent on temperature conditions. These products are water, ammonia and oxides of phosphorous.

Fire-fighting media and instructions

: Use an extinguishing agent suitable for the surrounding fire.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing

Special remarks on fire

apparatus (SCBA) with a full face-piece operated in positive pressure mode.

hazards

: Non-combustible.

Special remarks on

: Non-explosive under normal conditions.

explosion hazards

Section 6. Accidental release measures

Personal precautions

: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up

If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

Section 7. Handling and storage

Handling

: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Storage

: Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure controls, personal protection

Engineering controls

: Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal protection

Eyes

: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to

liquid splashes, mists or dusts. Recommended: Safety glasses.

Respiratory

: Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.

Recommended: Disposable particulate mask

Hands

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.: Disposable vinyl gloves.



Skin/Body : Not applicable.

Personal protection in case :

of a large spill

Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear MSHA/NIOSH-approved self-contained breathing apparatus or equivalent and full

protective gear.

Product name

United States

Monoammonium Phosphate

ACGIH TLV (United States).

Exposure limits

TWA: 5 mg/m³ 8 hour/hours. Form: Dust

Consult local authorities for acceptable exposure limits.

Section 9. Physical and chemical properties

Physical state : Solid. (Crystals.)

Color : White.

Odor : Odorless. (Slight.)

Molecular weight : 115.03 g/mole

Molecular formula : NH₄.H₂PO₄

pH : 4 to 5 (Conc. (% w/w): 1) [Acidic.]

Melting/freezing point : 190°C (374°F)

Bulk density : 0.9 to 1.1 g/cm³

Vapor pressure : <0.1 kPa (<1 mm Hg) (at 20°C)

Vapor density : Non-volatile.
Volatility : Non-volatile.
Odor threshold : Odorless.
Evaporation rate : Non-volatile.

VOC : Not an organic solvent.Viscosity : Non-viscous substance.

LogK_{ow}: The product is more soluble in water; log(octanol/water) <1.

Ionicity (in water) : Amphoteric.

Solubility : Partially soluble in cold water, hot water, 18% at 0°C (32°F); 27% at 20°C (68°F); 36%

at 40°C (104°F).

Section 10. Stability and reactivity

Stability and reactivity

: The product is stable.

Conditions of instability

: Contact with alkaline compounds, temperature >170°C (338°F).

Incompatibility with various: Reactive with alkalis.

substances

Hazardous decomposition

products

: Ammonia generation under alkaline conditions; water, ammonia, oxides of phosphorous

under high temperature.

Hazardous polymerization : Will not occur.

Section 11. Toxicological information

Toxicity data

Route Ingredient name Test Result **Species** >2000 mg/kg LD50 Monoammonium Phosphate Oral Rat LD50 >5000 mg/kg Rabbit Dermal

Acute Effects

: Irritating to eyes. **Eyes**

Skin : Practically non-toxic in contact with skin. Irritating to skin.

: No known significant effects or critical hazards. Inhalation

Practically non-toxic if swallowed. Ingestion

Potential chronic health

effects

Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Mutagenic effects: Not applicable. Teratogenic Effects: Not applicable.

effects on humans

Special remarks on chronic: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 12. Ecological information

Biodegradable/OECD Not applicable, since inorganic substance. Substances, which have an unfavorable

influence on the oxygen balance and can be measured using parameters such as BOD,

COD, etc.

Soluble in water. **Mobility**

Persistence/degradability Not applicable, since inorganic substance.

Other adverse effects Substances, which contribute to eutrophication: Phosphates.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid

dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation

and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Classification

DOT/ IMDG/ IATA: Not regulated.

Label

Additional information

Section 15. Regulatory information

United States

HCS Classification : Irritating material

U.S. Federal regulations

: TSCA 8(b) inventory: Monoammonium Phosphate

SARA 302/304/311/312 extremely hazardous substances: No products were found. SARA 302/304 emergency planning and notification: No products were found. SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No

products were found.

Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

SARA 313

Product name CAS number Concentration

Form R - Reporting requirements
Supplier notification

Monoammonium Phosphate 7722-76-1 70 - 100

: Monoammonium Phosphate 7722-76-1 70 - 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached

to copies of the MSDS subsequently redistributed.

State regulations

: No products were found.

International regulations International lists

: All components listed are listed on major international inventories or exempted from being listed in Australia (AICS), Europe (EINECS/ELINCS), Korea (TCCL), Japan (METI/MOL), Philippines (RA6969).

Section 16. Other information

Label requirements

: CAUSES EYE AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.)

Health 1
Fire hazard 0
Reactivity 0
Personal protection C

National Fire Protection Association (U.S.A.)

Health 1 0 Instability
Special

References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. -

29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous

Materials, UN#, Proper Shipping Names, PG.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.