

Safety Data Sheet

Section 1: Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product identifier

Product Name • Monoammonium Phosphate

Synonyms . Ammonium Phosphate, Monobasic; Ammonium Phosphate, Primary

CAS Number . 7722-76-1

REACH Registration Number . 01-2119488166-29-0067

Molecular Formula . NH4H2PO4
Molecular Weight . 115.03

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified use(s)

Nutrient for yeast in culture media and baked goods; Functional use in foods – buffer, dough conditioner, leavening agent; Agriculture - Ingredient in specialty all-soluble dry fertilizers; Building Materials - Flame-proofing of wood; Ceramics - Vitreous enamel frits and investment precision casting compounds; Pulp and Paper - Flame-proofing of specialty paper and fabrics; preventer of afterflow in matches; Textile - Acidulation agent in dye baths; Flame-proofing of fabrics and cotton battings; Nutrient feed for biological treatment plants; Fire extinguishers

1.3 Details of the supplier of the safety data sheet

Manufacturer . Global Chemical Resources

1925 Nebraska Avenue Toledo, OH 43607

Telephone (Technical) . 419-242-1004

1.4 Emergency telephone number

Manufacturer . 800-424-9300 - Chemtrec - within USA and Canada

Section 2: Hazards Identification

EU/EEC

According to Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006 [amended by 453/2010] According to EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

2.1 Classification of the substance or mixture

CLP . Not classifiedDSD/DPD . Not classified

2.2 Label Elements

CLP

Hazard statements. No label element(s) required

DSD/DPD

Risk phrases . No label element(s) required

2.3 Other Hazards

CLP . According to Regulation (EC) No. 1272/2008 (CLP) this material is not considered

hazardous.

DSD/DPD • This product is not considered dangerous under the European Directive 67/548/EEC

United States (US)

According to OSHA 29 CFR 1910.1200 HCS

2.1 Classification of the substance or mixture

OSHA HCS 2012 . Not classified

2.2 Label elements

OSHA HCS 2012

Hazard statements . No label element(s) required

2.3 Other hazards

OSHA HCS2012 . This product is not considered hazardous under the U.S. OSHA 29 CFR 1910.1200

Hazard Communication Standard.

Canada

According to WHMIS

2.1 Classification of the substance or mixture

WHMIS . Not classified

2.2 Label elements

WHMIS • No label element(s) required.

2.3 Other hazards

WHMIS . In Canada, the product mentioned above is not considered hazardous under the

Workplace Hazardous Materials Information System (WHMIS).

Section 3 - Composition/Information on Ingredients

3.1 Substances

Composition						
Chemical Name	Identifiers	%	LD50/LC50	Classifications According to Regulation/Directive	Comments	
Phosphoric acid, ammonium salt (1:1)	CAS:7722-76-1 EC Number:231-	100%	NDA	EU DSD/DPD: Not classified EU CLP: Not classified OSHA HCS 2012: Not classified	NDA	

3.2 Mixtures

Material does not meet the criteria of a mixture in accordance with Regulation (EC) No 1272/2008.

Section 4 - First Aid Measures

4.1 Description of first aid measures

Inhalation . Move victim

• Move victim to fresh air. Administer oxygen if breathing is difficult. Give artificial respiration if victim is not breathing. If signs/symptoms continue, get medical

attention.

SkinIF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical

advice/attention. Take off contaminated clothing and wash before reuse.

• Flush eyes with water for at least 15 minutes while holding eyelids open. Remove

contact lenses if worn. If eye irritation persists: Get medical advice/attention.

Ingestion

Do NOT induce vomiting. Do not give anything by mouth to an unconscious person.

Rinse mouth. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the

victim is conscious, give water to further dilute the chemical.

4.2 Most important symptoms and effects, both acute and delayed

Refer to Section 11 - Toxicological Information.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to Physician

 All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

4.4 Other information

 Call 911 or emergency medical service. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

Section 5 - Firefighting Measures

5.1 Extinguishing media

Suitable Extinguishing Media . Not combustible. Use extinguishing media suitable for surrounding fire.

Unsuitable Extinguishing Media

None known.

5.2 Special hazards arising from the substance or mixture

Unusual Fire and Explosion Hazards

. Non-combustible.

Hazardous Combustion

Products

Oxides of nitrogen, oxides of phosphorus.

5.3 Advice for firefighters

• Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection. LARGE FIRES: Move containers from fire area if you can do it without risk. LARGE FIRES: Do not scatter spilled material with high pressure water streams. LARGE FIRES: Dike fire-control water for later disposal.

Section 6 - Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

. Do not touch or walk through spilled material.

Emergency Procedures

. Keep unauthorized personnel away.

6.2 Environmental precautions

 Prevent entry into waterways, sewers, basements or confined areas. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

6.3 Methods and material for containment and cleaning up

Containment/Clean-up Measures

. Sweep or vacuum up and place in an appropriate closed container.

Avoid generating dust.

LARGE SPILLS: Cover powder spill with plastic sheet or tarp to minimize spreading. Clean up residual material by washing area with water and detergent. Collect washings for disposal.

6.4 Reference to other sections

 Refer to Section 8 - Exposure Controls/Personal Protection and Section 13 - Disposal Considerations.

Section 7 - Handling and Storage

7.1 Precautions for safe handling

Handling

 Keep containers closed when not in use. Avoid breathing dust. Avoid direct or prolonged contact with skin and eyes. Do not ingest. Do not use in areas without adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Storage

 Store in a cool/low-temperature, well-ventilated, dry place. Store in a tightly closed container.

7.3 Specific end use(s)

Refer to Section 1.2 - Relevant identified uses.

Section 8 - Exposure Controls/Personal Protection

8.1 Control parameters

Exposure Limits/Guidelines								
Result	ACGIH	Argentina	Belgium	China	Indonesia			
STELs	Not established	Not established	Not established	16 mg/m3 STEL (free SiO2 <10%, except asbestos and toxic substances. Use PC-STEL of silica When free SiO2 >10%, total) as Particulates not otherwise classified	Not established			

	Ī		l	Ī	(PNOC)	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)	TWAs	10 mg/m3 TWA (inhalable particles, recommended); 3 mg/m3 TWA (respirable particles, recommended) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA [CMP] (inhalable fraction, particulate matter containing no asbestos and less than 1% crystalline silica); 3 mg/m3 TWA [CMP] (respirable fraction, particulate matter containing no asbestos and less than 1% crystalline silica) as Particulates not otherwise classified (PNOC)	3 mg/m3 TWA (alveolar fraction); 10 mg/m3 TWA (inhalable fraction) as Particulates not otherwise classified (PNOC)	8 mg/m3 TWA (free SiO2 <10%, except asbestos and toxic substances. Use PC-TWA of silica When free SiO2 >10%, total) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA (not containing Asbestos and the crystal content is <1%, inhalable particulate); 3 mg/m3 TWA (not containing Asbestos and the crystal content is <1%, respirable particulate) as Particulates not otherwise classified (PNOC)
			posure Limits/Gu			
	Result	Ireland	Israel	Korea	Malaysia	New Zealand
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)	TWAs	10 mg/m3 TWA (total inhalable); 4 mg/m3 TWA (respirable) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA (recommended, inhalable particles); 3 mg/m3 TWA (recommended, respirable particles) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA (no more than 1% crystalline silica, Serial No. 699) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA (particulate matter containing no Asbestos and <1% crystalline Silica, inhalable fraction); 3 mg/m3 TWA (particulate matter containing no Asbestos and <1% crystalline Silica, respirable fraction) as Particulates not otherwise classified (PNOC)	3 mg/m3 TWA (respirable dust); 10 mg/m3 TWA (inhalable dust) as Particulates not otherwise classified (PNOC)
		Fy	L (posure Limits/Gu	idelines(Con't)		
	Result	Norway	OSHA	Portugal	Singapore	Spain
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)	TWAs		15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction) as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA [VLE-MP] (inhalable fraction, particulate matter containing no Asbestos and < 1% Crystalline silica); 3 mg/m3 TWA [VLE-MP] (respirable fraction, particulate matter containing no Asbestos and < 1% Crystalline silica)	10mg/m3PEL as Particulates not otherwise classified (PNOC)	10 mg/m3 TWA [VLA-ED] (recommended limit, this value is for the particulate matter that is free from Asbestos and contains less than 1% of Crystalline silica; no toxicological data to support TWA. Do not exceed generic limit value provided, inhalable fraction); 3 mg/m3 TWA [VLA-ED] (recommended limit, this value is for the particulate matter that is free from Asbestos and contains less

					as Particulates not otherwise classified (PNOC)	than 1% of Crystalline silica; no toxicological data to support TWA. Do not exceed generic limit value provided, respirable fraction) as Particulates not otherwise classified (PNOC)
	Exposure Limits/Guidelines (Con't.) Result Venezuela					
			Re	suit	Venezuela 10 mg/m3 TWA [C	
Monoammonium Phosphate			TW	VAs	(total inhalable particulate contair no Asbestos and Crystalline silica, inhalable fraction) mg/m3 TWA [CAP inhalable particula containing no Asband <1% Crystalli silica, respirable fraction)	ning <1%); 3 ^o (total ate pestos
					as Particulates no otherwise classifi (PNOC)	

8.2 Exposure controls

Engineering Measures/Controls

Personal Protective Equipment

Respiratory

Eve/Face

Skin/Body

Hands

Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

 For limited exposure use an N95 dust mask. For prolonged exposure use an air-purifying respirator with high efficiency particulate air (HEPA) filters. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.

Wear safety glasses.

Wear appropriate gloves.

Wear appropriate gloves.

General Industrial Hygiene **Considerations**

Environmental Exposure

Do not use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.

Follow best practice for site management and disposal of waste.

Key to abbreviations

Controls

PEL

ACGIH = American Conference of Governmental Industrial Hygiene

Permissible Exposure Level determined by the Occupational Safety and Health Administration (OSHA)

OSHA = Occupational Safety and Health Administration

Short Term Exposure Limits are based on 15-

minute exposures
Time-Weighted Averages are based on 8h/day,

TWA = 40h/week exposures

Section 9 - Physical and Chemical Properties

9.1 Information on Physical and Chemical Properties

Material Description			
Physical Form	Solid	Appearance/Description	White powder with no odor.
Color	White	Odor	Odorless
Odor Threshold	Data lacking		
General Properties		•	•
Boiling Point	Data lacking	Melting Point	Data lacking
Decomposition Temperature	Data lacking	рН	4.4 to 4.9 (@ 1% wt/wt)
Specific Gravity/Relative Density	1.8 Water=1	Density	112.3738 lb(s)/ft ³
Water Solubility	Soluble 29.4 %	Viscosity	Data lacking
Explosive Properties	Data lacking	Oxidizing Properties:	Data lacking
Volatility	•		•
Vapor Pressure	Data lacking	Vapor Density	Data lacking
Evaporation Rate	Data lacking		
Flammability		•	•
Flash Point	Not relevant	UEL	Not relevant
LEL	Not relevant	Autoignition	Data lacking
Flammability (solid, gas)	Data lacking		
Environmental	-		•
Octanol/Water Partition coefficient	Data lacking		

9.2 Other Information

. No additional physical and chemical parameters noted.

Section 10: Stability and Reactivity

10.1 Reactivity

. No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

. Stable under normal temperatures and pressures.

10.3 Possibility of hazardous reactions

. Hazardous polymerization will not occur.

10.4 Conditions to avoid

Dusting conditions, extreme heat, extreme humidity.

10.5 Incompatible materials

. Strong bases, sodium hypochlorite.

10.6 Hazardous decomposition products

. None known.

Section 11 - Toxicological Information

11.1 Information on toxicological effects

Monoammonium Phosphate 7722-76-1								
Test Type	Dosage	Route	Species	Duration	Results	Test Class	Target Organs	Comments
Irritation	= 500 mg	Skin	Rabbit	NDA	NDA	Mild irritation	NDA	NDA
Acute Toxicity	> 1000 mg/kg	Ingestion/Oral	Rat	NDA	LD50	NDA	NDA	NDA

GHS Properties	Classification				
Acute toxicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Aspiration Hazard	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Carcinogenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Germ Cell Mutagenicity	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Skin corrosion/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Skin sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
STOT-RE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
STOT-SE	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Toxicity for Reproduction	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Respiratory sensitization	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				
Serious eye damage/Irritation	EU/CLP • Classification criteria not met OSHA HCS 2012 • Classification criteria not met				

Route(s) of entry/exposure

Medical Conditions
Aggravated by Exposure
Potential Health Effects
Inhalation

. Inhalation, Skin, Eye, Ingestion

. Disorders of the lungs. Skin/Dermal .

Acute (Immediate)

• Exposure to dust may cause irritation. Nuisance dust may affect the lungs but reactions are typically reversible.

Chronic (Delayed)

No data available.

Skin Acute (Immediate)

• May cause mild irritation. Exposure to dust may cause mechanical irritation.

Chronic (Delayed)

. No data available

Eve

Acute (Immediate)

May cause mild irritation. Exposure to dust may cause mechanical irritation.
 Excessive concentrations of nuisance dust in the workplace may reduce visibility and may cause unpleasant deposits in eyes.

Chronic (Delayed)

. No data available.

Ingestion

Acute (Immediate)

Low acute oral toxicity. Ingestion of large quantities may cause abdominal pain,

abdominal cramps, nausea, vomiting, diarrhea.

Chronic (Delayed) Carcinogenic Effects . No data available.

 This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

Key to abbreviations LD = Lethal Dose

Section 12 - Ecological Information

12.1 Toxicity

. No data found for product.

12.2 Persistence and degradability

. No data found for product.

12.3 Bioaccumulative potential

No data found for product.

12.4 Mobility in Soil

. No data found for product.

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment has not been carried out.

12.6 Other adverse effects

Ecological Fate

. No data found for product.

Section 13 - Disposal Considerations

13.1 Waste treatment methods

Product waste

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Packaging waste

 Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14 - Transport Information

	14.1 UN number	14.2 UN proper shipping name	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards
DOT	NDA	Not Regulated	NDA	NDA	NDA
TDG	NDA	Not Regulated	NDA	NDA	NDA
IMO/IMDG	NDA	Not Regulated	NDA	NDA	NDA
IATA/ICAO	NDA	Not Regulated	NDA	NDA	NDA

14.6 Special precautions for . None specified.

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

Data lacking.

Section 15 - Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications . None

Inventory								
Component	CAS	Canada D	SL	Canada NDSL	China	EUEIN	ECS	EU ELNICS
Monoammonium Phosphate	7722-76-1	Yes		No	Yes	Ye	S	No
Inventory (Con't.)								
Component		CAS	Ne	w Zealand	Philippines PIC	PICCS TSCA		SCA
		-: ·•		=			•	

Canada

Labor Canada - WHMIS - Classifications of Substances		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
Canada - WHMIS - Ingredient Disclosure List		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed

Environment Canada - CEPA - Priority Substances List		
Monoammonium Phosphate	7722-76-1	Not Listed
 Monoammonium Phosphate as Particulates not otherwise classified (PNOC) 		Not Listed

Germany

Environment Germany - TA Luft - Types and Classes		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
Germany - Water Classification (VwVwS) - Annex 1		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
Germany - Water Classification (VwVwS) - Annex 2 - Water Hazard Classes		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
Germany - Water Classification (VwVwS) - Annex 3		
Monoammonium Phosphate	7722-76-1	ID Number 2309, hazard class 1 - low hazard to waters
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed

Philippines

Other Philippines - Priority Chemical List		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
ngapore		
Other Singapore - Corrosive and Explosive Substances - Corrosive Substances		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
nited States		
Labor U.S OSHA - Process Safety Management - Highly Hazardous Chemicals		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
())		
U.S OSHA - Specifically Regulated Chemicals		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
Environment		
U.S CAA (Clean Air Act) - 1990 Hazardous Air Pollutants		
Monoammonium Phosphate Monoammonium Phosphate on Particulate and atherwise placetified (PNOC)	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CAA (Clean Air Act) - Class II Ozone Depletors		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Hazardous Substances and their Reportable Quantities		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Radionuclides and Their Reportable Quantities		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances EPCRA RQs		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Section 313 - Emission Reporting		
Monoammonium Phosphate	7722-76-1	Not Listed
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed
U.S CERCLA/SARA - Section 313 - PBT Chemical Listing		
Monoammonium Phosphate	7722-76-1	Not Listed
		Not Listed

United States - California

vironment .S California - Proposition 65 - Carcinogens List			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	
J.S California - Proposition 65 - Developmental Toxicity			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	
J.S California - Proposition 65 - Maximum Allowable Dose Levels (MADL)			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	
J.S California - Proposition 65 - No Significant Risk Levels (NSRL)			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	
J.S California - Proposition 65 - Reproductive Toxicity - Female			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	
J.S California - Proposition 65 - Reproductive Toxicity - Male			
Monoammonium Phosphate	7722-76-1	Not Listed	
Monoammonium Phosphate as Particulates not otherwise classified (PNOC)		Not Listed	

15.2 Chemical Safety Assessment

. No Chemical Safety Assessment has been carried out.

Section 16 - Other Information

Last Revision Date

. 5-1-2015

Preparation Date

. 5-1-2015

Disclaimer/Statement of

The information herein is given in good faith but no warranty, expressed or implied, is made.

Liability

Key to abbreviationsNDA = No Data Available