

1 Identification

- **Product identifier**
- **Trade name:** EMM
- **Article number:** 4110012
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
MP Biomedicals, LLC
29525 Fountain Parkway
Solon, OH 44139
United States
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazard(s) identification

- **Classification of the substance or mixture**



Acute Tox. 4 H302 Harmful if swallowed.
Eye Irrit. 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



- **Signal word** Warning
- **Hazard-determining components of labeling:**
ammonium chloride
- **Hazard statements**
Harmful if swallowed.
Causes serious eye irritation.
- **Precautionary statements**
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Rinse mouth.
Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 1)

· **Classification system:**· **NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**· **Description:**

Mixture of substances listed below with nonhazardous additions.

Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 12125-02-9

ammonium chloride

10-<25%

EINECS: 235-186-4

RTECS: BP4550000

4 First-aid measures

· **Description of first aid measures**· **After inhalation:** Supply fresh air; consult doctor in case of complaints.· **After skin contact:** Generally the product does not irritate the skin.· **After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

· **Information for doctor:**· **Most important symptoms and effects, both acute and delayed** No further relevant information available.· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**· **Suitable extinguishing agents:**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 2)

- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Pick up mechanically, dispose contaminated material as waste according to Section 13.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

12125-02-9 ammonium chloride

REL	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
TLV	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 3)

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Solid material
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not applicable.

· Change in condition

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not determined.

· Ignition temperature: 400 °C (752 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: See section 10

· Explosion limits:

Lower:	Not Applicable
Upper:	Not Applicable

· Vapor pressure: Not applicable.

· Density: Not Applicable

· Relative density: Not determined.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 4)

· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Not Determined Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
· Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

12125-02-9 ammonium chloride

Oral	LD50	1300 mg/kg (mouse)
		1650 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 5)

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

· Aquatic toxicity:

12125-02-9 ammonium chloride

Oral	LC50 / 96 h	209 mg/L (Cyprinus carpio)
		3.98 mg/L (Oncorhynchus mykiss)

· Persistence and degradability No further relevant information available.

· Behavior in environmental systems:

· Bioaccumulative potential No further relevant information available.

· Mobility in soil No further relevant information available.

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Can not be disposed together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

· Recommendation: Discard must be made according to official regulations.

· Recommended cleansing agent: Water, if necessary with cleaning agents.

14 Transport information

· UN-Number

· DOT, ADR, ADN, IMDG, IATA Not regulated

· UN proper shipping name

· DOT, ADR, ADN, IMDG, IATA Not regulated

· Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA

· Class Not regulated

· Packing group

· DOT, ADR, IMDG, IATA Not regulated

· Environmental hazards:

· Marine pollutant: No

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 6)

· Special precautions for user	Not applicable.
---------------------------------------	-----------------

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
--	-----------------

· UN "Model Regulation":	Not regulated
---------------------------------	---------------

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

10034-96-5	Manganese Sulfate Monohydrate
------------	-------------------------------

· **TSCA (Toxic Substances Control Act):**

50-99-7	D-(+)-Dextrose, Anhydrous
12125-02-9	ammonium chloride
877-24-7	potassium hydrogen phthalate
7558-79-4	Sodium Phosphate Dibasic Anhydrous, ACS
7447-40-7	Potassium Chloride
7757-82-6	sodium sulphate
10043-52-4	Calcium Chloride
87-89-8	D-myo-Inositol, cell culture reagent
59-67-6	nicotinic acid
7758-94-3	iron dichloride
137-08-6	D-Pantothenic Acid Calcium Salt, USP
10043-35-3	Boric Acid
58-85-5	D-Biotin
77-92-9	citric acid
7681-11-0	Potassium Iodide

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

10043-35-3	Boric Acid
------------	------------

	I (oral)
--	----------

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 7)

10034-96-5	Manganese Sulfate Monohydrate	D
· TLV (Threshold Limit Value established by ACGIH)		
10043-35-3	Boric Acid	A4
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
ammonium chloride
- **Hazard statements**
Harmful if swallowed.
Causes serious eye irritation.
- **Precautionary statements**
Wear eye protection / face protection.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
If eye irritation persists: Get medical advice/attention.
Rinse mouth.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Quality Control Dept.
- **Date of preparation / last revision** 05/25/2016 / -
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/25/2016

Reviewed on 05/25/2016

Trade name: EMM

(Contd. of page 8)

*OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Acute Tox. 4: Acute toxicity, Hazard Category 4**Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A*

US