

Safety Data Sheet acc. to OSHA HCS

Printing date 04/30/2020

Reviewed on 04/30/2020

1 Identification

- **Product identifier**
- **Trade name:** EMM Broth (Powder)
- **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**



GHS07

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**



GHS07

- **Signal word** Warning
- **Hazard-determining components of labeling:**
Ammonium Chloride
- **Hazard statements**
Harmful if swallowed.
Causes serious eye irritation.
- **Precautionary statements**
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye protection / face protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
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.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	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 EINECS: 235-186-4 RTECS: BP4550000	Ammonium Chloride	10-50%
CAS: 7558-79-4 EINECS: 231-448-7 RTECS: WC4500000	Sodium Phosphate Dibasic Anhydrous	≥2.5-<10%

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:** Use fire fighting measures that suit the environment.

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- **Special hazards arising from the substance or mixture** No further relevant information available.
- **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.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

12125-02-9	Ammonium Chloride	20 mg/m ³
877-24-7	potassium hydrogen phthalate	9.6 mg/m ³
7791-18-6	Magnesium Chloride Hexahydrate	34 mg/m ³
7757-82-6	sodium sulphate	9.8 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	16 mg/m ³
7705-08-0	iron trichloride	8.7 mg/m ³
7446-20-0	Zinc Sulfate heptahydrate	27 mg/m ³
10043-35-3	Boric Acid	6 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	9.2 mg/m ³
7681-11-0	Potassium Iodide	1.3 mg/m ³
7758-99-8	Cupric Sulfate Pentahydrate	12 mg/m ³
10102-40-6	Molybdic Acid Disodium Salt Dihydrate	3.8 mg/m ³

- **PAC-2:**

12125-02-9	Ammonium Chloride	54 mg/m ³
877-24-7	potassium hydrogen phthalate	110 mg/m ³
7791-18-6	Magnesium Chloride Hexahydrate	370 mg/m ³
7757-82-6	sodium sulphate	110 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	170 mg/m ³
7705-08-0	iron trichloride	30 mg/m ³
7446-20-0	Zinc Sulfate heptahydrate	170 mg/m ³
10043-35-3	Boric Acid	23 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m ³
7681-11-0	Potassium Iodide	15 mg/m ³
7758-99-8	Cupric Sulfate Pentahydrate	32 mg/m ³
10102-40-6	Molybdic Acid Disodium Salt Dihydrate	34 mg/m ³

- **PAC-3:**

12125-02-9	Ammonium Chloride	330 mg/m ³
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877-24-7	potassium hydrogen phthalate	630 mg/m ³
7791-18-6	Magnesium Chloride Hexahydrate	1,600 mg/m ³
7757-82-6	sodium sulphate	650 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	1,100 mg/m ³
7705-08-0	iron trichloride	180 mg/m ³
7446-20-0	Zinc Sulfate heptahydrate	1,000 mg/m ³
10043-35-3	Boric Acid	830 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	90 mg/m ³
7681-11-0	Potassium Iodide	87 mg/m ³
7758-99-8	Cupric Sulfate Pentahydrate	190 mg/m ³
10102-40-6	Molybdic Acid Disodium Salt Dihydrate	210 mg/m ³

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:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

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.

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· **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: Powder

Color: White

· **Odor:** Indeterminate

· **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.

· **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.

· **Vapor density** Not applicable.

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· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	Not Determined
· Water:	Soluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
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.
Avoid contact with acids. Contact liberates a toxic gas.
- **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	1,300 mg/kg (mouse)
		1,650 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.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**· **Aquatic toxicity:****ATE (Acute Toxicity Estimate)**

Oral LC50 / 96 h 27.4 mg/L

12125-02-9 Ammonium ChlorideOral 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

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- | | |
|--|-----------------|
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · 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	ACTIVE
12125-02-9	Ammonium Chloride	ACTIVE
877-24-7	potassium hydrogen phthalate	ACTIVE
7558-79-4	Sodium Phosphate Dibasic Anhydrous	ACTIVE
7447-40-7	Potassium Chloride	ACTIVE
7757-82-6	sodium sulphate	ACTIVE
59-67-6	nicotinic acid	ACTIVE
87-89-8	D-myo-Inositol	ACTIVE
7705-08-0	iron trichloride	ACTIVE
137-08-6	D-Pantothenic Acid Calcium Salt	ACTIVE
10043-35-3	Boric Acid	ACTIVE
58-85-5	D-Biotin	ACTIVE
77-92-9	citric acid	ACTIVE
7681-11-0	Potassium Iodide	ACTIVE

· Hazardous Air Pollutants

10034-96-5 Manganese Sulfate Monohydrate

· 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.

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- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

10043-35-3	Boric Acid	I (oral)
10034-96-5	Manganese Sulfate Monohydrate	D

- **TLV (Threshold Limit Value established by ACGIH)**

10043-35-3	Boric Acid	A4
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- **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**

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wear eye protection / face protection.

If swallowed: Call a poison center/doctor if you feel unwell.

Rinse mouth.

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.

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** 04/30/2020 / -

- **Abbreviations and acronyms:**

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A