

1 Identification

- **Product identifier**
- **Trade name:** EMM w/o Nitrogen
- **Article number:** 4110712
- **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**
The product is not classified, according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



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



- **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: 7558-79-4 EINECS: 231-448-7 RTECS: WC4500000	Sodium Phosphate Dibasic Anhydrous	≥2.5-<10%
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Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: EMM w/o Nitrogen

(Contd. of page 1)

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **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:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult 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.
- **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.
- **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:**

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

- **PAC-2:**

877-24-7	potassium hydrogen phthalate	110 mg/m ³
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(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: **EMM w/o Nitrogen**

(Contd. of page 2)

7791-18-6	Magnesium Chloride Hexahydrate, cell culture reagent	370 mg/m ³
7757-82-6	sodium sulphate	110 mg/m ³
7446-20-0	Zinc Sulfate (Pentahydrate)	170 mg/m ³
10043-35-3	Boric Acid	23 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m ³
7705-08-0	iron trichloride	30 mg/m ³
7681-11-0	Potassium Iodide	15 mg/m ³
7758-99-8	Cupric Sulfate Pentahydrate	32 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	170 mg/m ³
10102-40-6	Molybdic Acid Disodium Salt Dihydrate	34 mg/m ³

· **PAC-3:**

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

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **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:** This product is hygroscopic.
- **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 product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: EMM w/o Nitrogen

(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
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:** Not required.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Solid material
Color:	According to product specification
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**

Boiling point/Boiling range:	Undetermined.
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- **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.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with** Not Determined
- **Water:** Easily soluble.

(Contd. on page 5)

-US

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: EMM w/o Nitrogen

(Contd. of page 4)

- | | |
|---|--|
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not applicable. |
| Kinematic: | Not applicable. |
| · Solvent content: | |
| VOC content: | 0.00 %
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:** Based on available data, the classification criteria are not met.

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

ATE (Acute Toxicity Estimate)

Oral	LD50	29,091 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritant and potentially harmful
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **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.

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

None of the ingredients is listed.

US

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: EMM w/o Nitrogen

(Contd. of page 5)

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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 of 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 |
| · 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 |

US
(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: EMM w/o Nitrogen

(Contd. of page 6)

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

50-99-7	D-(+)-Dextrose, Anhydrous
877-24-7	potassium hydrogen phthalate
7558-79-4	Sodium Phosphate Dibasic Anhydrous
7447-40-7	Potassium Chloride
7757-82-6	sodium sulphate
87-89-8	D-myo-Inositol, cell culture reagent
59-67-6	nicotinic acid
77-92-9	citric acid
137-08-6	D-Pantothenic Acid Calcium Salt
10043-35-3	Boric Acid
7705-08-0	iron trichloride
7681-11-0	Potassium Iodide
58-85-5	D-Biotin

· **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)
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** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/04/2018

Reviewed on 09/04/2018

Trade name: *EMM w/o Nitrogen*

(Contd. of page 7)

· **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** *09/04/2018 / -*

· **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

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit