

## Safety Data Sheet acc. to OSHA HCS

Printing date 07/02/2020

Reviewed on 07/02/2020

### 1 Identification

- **Product identifier**
- **Trade name:** YNB with Ammonium Sulfate, without Phosphates, without Sodium Chloride (Powder)
- **Article number:** 4027812
- **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.

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**· Dangerous components:**

CAS: 10043-52-4 EINECS: 233-140-8 RTECS: EV 9800000	Calcium Chloride	1-2.5%
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## 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**  
No dangerous substances are released.  
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:**

7783-20-2	Ammonium Sulfate	13 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	20 mg/m <sup>3</sup>
10043-52-4	Calcium Chloride	12 mg/m <sup>3</sup>
150-13-0	p-Aminobenzoic Acid	15 mg/m <sup>3</sup>
10043-35-3	Boric Acid	6 mg/m <sup>3</sup>
7446-20-0	Zinc Sulfate heptahydrate	27 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	9.2 mg/m <sup>3</sup>

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7631-95-0	Sodium Molybdate	3.2 mg/m <sup>3</sup>
7705-08-0	iron trichloride	8.7 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	1.3 mg/m <sup>3</sup>
7758-98-7	copper sulphate	7.5 mg/m <sup>3</sup>

**· PAC-2:**

7783-20-2	Ammonium Sulfate	140 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	220 mg/m <sup>3</sup>
10043-52-4	Calcium Chloride	130 mg/m <sup>3</sup>
150-13-0	p-Aminobenzoic Acid	69 mg/m <sup>3</sup>
10043-35-3	Boric Acid	23 mg/m <sup>3</sup>
7446-20-0	Zinc Sulfate heptahydrate	170 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m <sup>3</sup>
7631-95-0	Sodium Molybdate	17 mg/m <sup>3</sup>
7705-08-0	iron trichloride	30 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	15 mg/m <sup>3</sup>
7758-98-7	copper sulphate	9.9 mg/m <sup>3</sup>

**· PAC-3:**

7783-20-2	Ammonium Sulfate	840 mg/m <sup>3</sup>
7487-88-9	magnesium sulphate	1,300 mg/m <sup>3</sup>
10043-52-4	Calcium Chloride	790 mg/m <sup>3</sup>
150-13-0	p-Aminobenzoic Acid	410 mg/m <sup>3</sup>
10043-35-3	Boric Acid	830 mg/m <sup>3</sup>
7446-20-0	Zinc Sulfate heptahydrate	1,000 mg/m <sup>3</sup>
10034-96-5	Manganese Sulfate Monohydrate	90 mg/m <sup>3</sup>
7631-95-0	Sodium Molybdate	100 mg/m <sup>3</sup>
7705-08-0	iron trichloride	180 mg/m <sup>3</sup>
7681-11-0	Potassium Iodide	87 mg/m <sup>3</sup>
7758-98-7	copper sulphate	59 mg/m <sup>3</sup>

## 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.

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- **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.
- **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:**

<b>Form:</b>	Powder
<b>Color:</b>	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:**

<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable
- **Vapor pressure:** Not applicable.
- **Density:** Not Applicable

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· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	Not Determined
· <b>Water:</b>	Easily soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>VOC content:</b>	0.00 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	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:** Based on available data, the classification criteria are not met.

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

#### ATE (Acute Toxicity Estimate)

Oral	LD50	2,788 mg/kg (rat)
Inhalative	LC50/4 h	22,423 mg/L (rabbit)

#### 7783-20-2 Ammonium Sulfate

Oral	LD50	2,840 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.

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· **Carcinogenic categories**

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

150-13-0   p-Aminobenzoic Acid	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

## 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

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- |  |                 |
|--|-----------------|
| <b>· Environmental hazards:</b>  |                 |
| <b>· Marine pollutant:</b>   | No              |
| <b>· Special precautions for user</b>  | Not applicable. |
| <b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| <b>· UN "Model Regulation":</b>  | 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):**

7783-20-2	Ammonium Sulfate
10034-96-5	Manganese Sulfate Monohydrate
7758-98-7	copper sulphate

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

7783-20-2	Ammonium Sulfate	ACTIVE
7487-88-9	magnesium sulphate	ACTIVE
10043-52-4	Calcium Chloride	ACTIVE
87-89-8	D-myo-Inositol	ACTIVE
150-13-0	p-Aminobenzoic Acid	ACTIVE
10043-35-3	Boric Acid	ACTIVE
58-56-0	Pyridoxine Hydrochloride	ACTIVE
59-67-6	nicotinic acid	ACTIVE
67-03-8	Thiamine Hydrochloride	ACTIVE
137-08-6	D-Pantothenic Acid Calcium Salt	ACTIVE
7631-95-0	Sodium Molybdate	ACTIVE
7705-08-0	iron trichloride	ACTIVE
7681-11-0	Potassium Iodide	ACTIVE
83-88-5	riboflavin	ACTIVE
7758-98-7	copper sulphate	ACTIVE
58-85-5	D-Biotin	ACTIVE
59-30-3	Folic Acid	ACTIVE

**· Hazardous Air Pollutants**

10034-96-5	Manganese Sulfate Monohydrate
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**· 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.

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· **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

· **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** 07/02/2020 / -