

1 Identification

- **Product identifier**
- **Trade name:** YNB w/ Ammonium Sulfate (Powder)
- **Article number:** 4027512
- **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: 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 ³
7778-77-0	Potassium Phosphate Monobasic Anhydrous	9.6 mg/m ³
7487-88-9	magnesium sulphate	20 mg/m ³
10043-52-4	Calcium Chloride	12 mg/m ³
150-13-0	p-Aminobenzoic Acid	15 mg/m ³
10043-35-3	Boric Acid	6 mg/m ³
7446-20-0	Zinc Sulfate	27 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	9.2 mg/m ³
7705-08-0	iron trichloride	8.7 mg/m ³
7631-95-0	Sodium Molybdate	3.2 mg/m ³
7681-11-0	Potassium Iodide	1.3 mg/m ³
7758-98-7	copper sulphate	7.5 mg/m ³

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· PAC-2:		
7783-20-2	Ammonium Sulfate	140 mg/m ³
7778-77-0	Potassium Phosphate Monobasic Anhydrous	110 mg/m ³
7487-88-9	magnesium sulphate	220 mg/m ³
10043-52-4	Calcium Chloride	130 mg/m ³
150-13-0	p-Aminobenzoic Acid	69 mg/m ³
10043-35-3	Boric Acid	23 mg/m ³
7446-20-0	Zinc Sulfate	170 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	15 mg/m ³
7705-08-0	iron trichloride	30 mg/m ³
7631-95-0	Sodium Molybdate	17 mg/m ³
7681-11-0	Potassium Iodide	15 mg/m ³
7758-98-7	copper sulphate	9.9 mg/m ³

· PAC-3:		
7783-20-2	Ammonium Sulfate	840 mg/m ³
7778-77-0	Potassium Phosphate Monobasic Anhydrous	630 mg/m ³
7487-88-9	magnesium sulphate	1,300 mg/m ³
10043-52-4	Calcium Chloride	790 mg/m ³
150-13-0	p-Aminobenzoic Acid	410 mg/m ³
10043-35-3	Boric Acid	830 mg/m ³
7446-20-0	Zinc Sulfate	1,000 mg/m ³
10034-96-5	Manganese Sulfate Monohydrate	90 mg/m ³
7705-08-0	iron trichloride	180 mg/m ³
7631-95-0	Sodium Molybdate	100 mg/m ³
7681-11-0	Potassium Iodide	87 mg/m ³
7758-98-7	copper sulphate	59 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:**
- **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:**

Form: Powder

Color: Off 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

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· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	Not Determined
· Water:	Easily soluble.
· 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	3,335 mg/kg (rat)
Inhalative	LC50/4 h	26,822 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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| · 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):

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
7778-77-0	Potassium Phosphate Monobasic Anhydrous
7487-88-9	magnesium sulphate
7647-14-5	Sodium Chloride
10043-52-4	Calcium Chloride
87-89-8	D-myo-Inositol, cell culture reagent
150-13-0	p-Aminobenzoic Acid
10043-35-3	Boric Acid
59-67-6	nicotinic acid
137-08-6	D-Pantothenic Acid Calcium Salt
58-56-0	Pyridoxine Hydrochloride
67-03-8	Thiamine Hydrochloride
7705-08-0	iron trichloride
7631-95-0	Sodium Molybdate
83-88-5	riboflavin
7681-11-0	Potassium Iodide
7758-98-7	copper sulphate
59-30-3	Folic Acid
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.

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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** 06/19/2018 / -

· **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