

Printing date 11/09/2018

Reviewed on 11/09/2018

1 Identification

- **Product identifier**
- **Trade name:** YNB w/o Ammonium Sulfate w/o Potassium Phosphate (Powder)
- **Article number:** 4029622
- **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**
Eye Irrit. 2B H320 Causes eye irritation.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**
Causes eye irritation.
- **Precautionary statements**
Wash thoroughly after handling.
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.
- **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

- **Description:**
Mixture of substances listed below with nonhazardous additions.

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Mixture: consisting of the following components.

· Dangerous components:

| | | |
|-------------------|------------------|--------|
| CAS: 7774-34-7 | calcium chloride | 10-50% |
| EINECS: 233-140-8 | | |
| RTECS: EV 9800000 | | |

· Additional information:

| | | |
|---------|------------|-------|
| 58-85-5 | Biotin | <0.1% |
| 59-30-3 | Folic Acid | <0.1% |

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:** 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:

| | | |
|------------|--------------------------------|----------------------|
| 10034-99-8 | Magnesium Sulfate Heptahydrate | 33 mg/m ³ |
| 7774-34-7 | calcium chloride | 24 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 (Pentahydrate) | 27 mg/m ³ |

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| | | |
|------------|-------------------------------|-----------------------|
| 10034-96-5 | Manganese Sulfate Monohydrate | 9.2 mg/m ³ |
| 7631-95-0 | Sodium Molybdate | 3.2 mg/m ³ |
| 7705-08-0 | iron trichloride | 8.7 mg/m ³ |
| 7681-11-0 | Potassium Iodide | 1.3 mg/m ³ |
| 7758-98-7 | copper sulphate | 7.5 mg/m ³ |

· PAC-2:

| | | |
|------------|--------------------------------|-----------------------|
| 10034-99-8 | Magnesium Sulfate Heptahydrate | 370 mg/m ³ |
| 7774-34-7 | calcium chloride | 260 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 (Pentahydrate) | 170 mg/m ³ |
| 10034-96-5 | Manganese Sulfate Monohydrate | 15 mg/m ³ |
| 7631-95-0 | Sodium Molybdate | 17 mg/m ³ |
| 7705-08-0 | iron trichloride | 30 mg/m ³ |
| 7681-11-0 | Potassium Iodide | 15 mg/m ³ |
| 7758-98-7 | copper sulphate | 9.9 mg/m ³ |

· PAC-3:

| | | |
|------------|--------------------------------|-------------------------|
| 10034-99-8 | Magnesium Sulfate Heptahydrate | 2,300 mg/m ³ |
| 7774-34-7 | calcium chloride | 1,600 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 (Pentahydrate) | 1,000 mg/m ³ |
| 10034-96-5 | Manganese Sulfate Monohydrate | 90 mg/m ³ |
| 7631-95-0 | Sodium Molybdate | 100 mg/m ³ |
| 7705-08-0 | iron trichloride | 180 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**
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.

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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:**

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.

- **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:**



Tightly sealed goggles

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.

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| | |
|---|--|
| · 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: | 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:**
- **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:
Irritant

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· **Carcinogenic categories**

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

| | |
|--------------------------------|---|
| 150-13-0 p-Aminobenzoic Acid | 3 |
|--------------------------------|---|

· **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 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

7758-98-7 copper sulphate

· TSCA (Toxic Substances Control Act):

7647-14-5 Sodium Chloride

87-89-8 D-myo-Inositol

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

7631-95-0 Sodium Molybdate

7705-08-0 iron trichloride

83-88-5 riboflavin

7681-11-0 Potassium Iodide

7758-98-7 copper sulphate

58-85-5 D-Biotin

59-30-3 Folic Acid

· TSCA new (21st Century Act) (Substances not listed)

7774-34-7 calcium chloride

· 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.

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· **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 |
|------------|------------|----|

· **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** Void

· **Signal word** Warning

· **Hazard statements**

Causes eye irritation.

· **Precautionary statements**

Wash thoroughly after handling.

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.

· **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** 11/09/2018 / -

· **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)

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

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