

Safety Data Sheet acc. to OSHA HCS

Printing date 02/14/2020

Reviewed on 02/14/2020

1 Identification

- **Product identifier**
- **Trade name:** DOB 2% Raffinose (glucose-free) (Powder)
- **Article number:** 4025712
- **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: consisting of the following components.

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· **Dangerous components:** Void

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:**

7783-20-2	Ammonium Sulfate	13 mg/m ³
7758-11-4	Potassium Phosphate Dibasic Anhydrous	13 mg/m ³
7487-88-9	magnesium sulphate	20 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	16 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 heptahydrate	27 mg/m ³
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

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7681-11-0	Potassium Iodide	1.3 mg/m ³
7758-98-7	copper sulphate	7.5 mg/m ³

· **PAC-2:**

7783-20-2	Ammonium Sulfate	140 mg/m ³
7758-11-4	Potassium Phosphate Dibasic Anhydrous	140 mg/m ³
7487-88-9	magnesium sulphate	220 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	170 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 heptahydrate	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:**

7783-20-2	Ammonium Sulfate	840 mg/m ³
7758-11-4	Potassium Phosphate Dibasic Anhydrous	830 mg/m ³
7487-88-9	magnesium sulphate	1,300 mg/m ³
10035-04-8	Calcium Chloride Dihydrate	1,100 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 heptahydrate	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** 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.
- **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:	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 Water:	Not Determined Not determined. Insoluble.
· 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:** Based on available data, the classification criteria are not met.

· LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimate)

Oral	LD50	13,299 mg/kg (rat)
Inhalative	LC50/4 h	109,260 mg/L (rabbit)

- **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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Trade name: **DOB 2% Raffinose (glucose-free) (Powder)**

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- **Carcinogenic categories**

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

150-13-0 | p-Aminobenzoic Acid

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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.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

Not regulated

- **UN proper shipping name**

- **DOT, ADR, IMDG, IATA**

Not regulated

- **Transport hazard class(es)**

- **DOT, ADR, IMDG, IATA**

- **Class**

Not regulated

- **Packing group**

- **DOT, ADR, IMDG, IATA**

Not regulated

- **Environmental hazards:**

Not applicable.

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- | | |
|--|-----------------|
| · 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

ACTIVE

7758-11-4 Potassium Phosphate Dibasic Anhydrous

ACTIVE

7487-88-9 magnesium sulphate

ACTIVE

7647-14-5 Sodium 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

· 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** 02/14/2020 / -