

## 1 Identification

- **Product identifier**
- **Trade name:** ZINC DEFICIENT DIET
- **Article number:** 960372
- **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.

### Dangerous components:

CAS: 9005-25-8	Corn Starch	25-50%
EINECS: 232-679-6		
RTECS: GM5090000		

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 1)

CAS: 57-50-1 EINECS: 200-334-9 RTECS: WN6500000	Sucrose	10-<25%
CAS: 9004-34-6 EINECS: 232-674-9 RTECS: FJ5691460	Alphacel	2.5-<10%

## 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:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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.

## 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:** 2-8 °C

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 2)

- **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.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

### 9005-25-8 Corn Starch

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 10 mg/m <sup>3</sup>

### 57-50-1 Sucrose

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 10 mg/m <sup>3</sup>

### 9004-34-6 Alphacel

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	Long-term value: 10 mg/m <sup>3</sup>

- **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.

US

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

Trade name: ZINC DEFICIENT DIET

(Contd. of page 3)

## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
Form:	Pellets
Color:	According to product specification
· <b>Odor:</b> Indeterminate	
· <b>Odor threshold:</b> Not determined.	
· <b>pH-value:</b> Not applicable.	
· <b>Change in condition</b>	
Boiling point/Boiling range:	Undetermined.
· <b>Flash point:</b> Not applicable.	
· <b>Flammability (solid, gaseous):</b> Not determined.	
· <b>Ignition temperature:</b>	
Decomposition temperature:	Not determined.
· <b>Auto igniting:</b> Product is not selfigniting.	
· <b>Danger of explosion:</b> See section 10	
· <b>Explosion limits:</b>	
Lower:	Not Applicable
Upper:	Not Applicable
· <b>Vapor pressure:</b> Not applicable.	
· <b>Density:</b> Not Applicable	
· <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> Insoluble.	
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b>	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· <b>Solvent content:</b>	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
· <b>Solids content:</b> 90.0 %	
· <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.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 4)

- **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:** 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)**

128-37-0	Butylated Hydroxytoluene	3
10102-18-8	Sodium Selenite	3
11032-49-8	Vitamin K2	3

- **NTP (National Toxicology Program)**

10102-18-8	Sodium Selenite	R
------------	-----------------	---

- **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:** Generally not hazardous for water

- **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.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 5)

- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, IMDG, IATA</b>	
· <b>Class</b>	Not regulated
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Not regulated
· <b>Environmental hazards:</b>	Not applicable.
· <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**

· <b>Section 355 (extremely hazardous substances):</b>	
10102-18-8	Sodium Selenite
· <b>Section 313 (Specific toxic chemical listings):</b>	
598-62-9	Manganese Carbonate
12069-69-1	Cupric Carbonate
10102-18-8	Sodium Selenite
· <b>TSCA (Toxic Substances Control Act):</b>	
9005-25-8	Corn Starch
57-50-1	Sucrose
8001-30-7	Corn Oil
9004-34-6	Alphacel
7757-93-9	Calcium Phosphate Dibasic
7647-14-5	Sodium Chloride
87-67-2	Choline Bitartrate
7778-80-5	potassium sulphate
1309-48-4	magnesium oxide
7695-91-2	DL-alpha-Tocopherol Acetate
598-62-9	Manganese Carbonate

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 6)

59-67-6	nicotinic acid
58-85-5	D-Biotin
137-08-6	D-Pantothenic Acid Calcium Salt, USP
79-81-2	retinyl palmitate
12069-69-1	Cupric Carbonate
128-37-0	Butylated Hydroxytoluene
58-56-0	Pyridoxine Hydrochloride
67-03-8	Thiamine Hydrochloride
83-88-5	riboflavin
67-97-0	colecalfiferol
59-30-3	Folic Acid
130-37-0	2-Methyl-1,4-naphthoquinone sodium bisulfite
7758-05-6	potassium iodate
10102-18-8	Sodium Selenite
68-19-9	VITAMIN B12

· **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)**

598-62-9	Manganese Carbonate	D
10102-18-8	Sodium Selenite	D

· **TLV (Threshold Limit Value established by ACGIH)**

9005-25-8	Corn Starch	A4
57-50-1	Sucrose	A4
1309-48-4	magnesium oxide	A4
128-37-0	Butylated Hydroxytoluene	A4

· **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.

US

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/06/2016

Reviewed on 10/06/2016

**Trade name: ZINC DEFICIENT DIET**

(Contd. of page 7)

## 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** 10/06/2016 / -
- **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*

US