

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



**Vitamin B12 0.1% WS (spray dried)**

**0429090**

Version 2.2

Revision Date 05.01.2015

Print Date 20.12.2016

## 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name : Vitamin B12 0.1% WS (spray dried)

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : For the fortification of foods, Ingredient for pharmaceutical products

### 1.3 Details of the supplier of the safety data sheet

Company : DSM Nutritional Products (UK) Ltd.  
Heanor Gate  
αGB061EI0017  
Delves Road  
GB-DE75 7SG Heanor

Telephone : +441773536500  
Telefax : +441773536600  
E-mail address : sds.nutritionalproducts@dsm.com  
Responsible/issuing person

### 1.4 Emergency telephone number

+441773536623 / +41628662314

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

#### Classification (67/548/EEC, 1999/45/EC)

Not a hazardous substance or mixture.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

#### Additional Labelling:

EUH210 Safety data sheet available on request.

### 2.3 Other hazards

Risk of dust explosion.

## 3. Composition/information on ingredients

Brief description of the product : Mixture (preparation) containing active ingredient and auxiliary substances

### 3.2 Mixtures

#### Hazardous components

| Chemical Name | CAS-No.<br>EC-No.<br>Registration | Classification<br>(67/548/EEC) | Classification<br>(REGULATION (EC)<br>No 1272/2008) | Concentration [%] |
|---------------|-----------------------------------|--------------------------------|---|-------------------|
|               |                                   |                                |   |                   |

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|             | number               |         |                    |            |
|-------------|----------------------|---------|--------------------|------------|
| citric acid | 77-92-9<br>201-069-1 | Xi; R36 | Eye Irrit. 2; H319 | >= 1 - < 5 |

For the full text of the R-phrases mentioned in this Section, see Section 16.  
For the full text of the H-Statements mentioned in this Section, see Section 16.

**Further ingredients**

| Chemical Name                | CAS-No.<br>EC-No.<br>Registration<br>number | Classification | GHS Classification | Concentration [%] |
|------------------------------|---|----------------|--------------------|-------------------|
| cyanocobalamin (Vitamin B12) | 68-19-9<br>200-680-0                        |                |                    | >= 0,1 - < 1      |

**4. First aid measures****4.1 Description of first aid measures**

- General advice : No hazards which require special first aid measures.
- If inhaled : Move to fresh air.  
If symptoms persist, call a physician.
- In case of skin contact : Take off contaminated clothing and shoes immediately.  
Wash off with soap and plenty of water.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed**

- Symptoms : No specific symptoms known.

**4.3 Indication of any immediate medical attention and special treatment needed**

- Treatment : Treat symptomatically.

**5. Firefighting measures****5.1 Extinguishing media**

- Suitable extinguishing media : Water  
Foam

**5.2 Special hazards arising from the substance or mixture**

- Specific hazards during firefighting : None known.

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### 5.3 Advice for firefighters

- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Further information : Consider dust explosion hazard.

## 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- Use personal protective equipment.  
Avoid dust formation.

### 6.2 Environmental precautions

- Try to prevent the material from entering drains or water courses.

### 6.3 Methods and materials for containment and cleaning up

- Sweep up and shovel.

### 6.4 Reference to other sections

- For personal protection see section 8.  
For disposal considerations see section 13.

## 7. Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : For personal protection see section 8.  
Advice on protection against fire and explosion : Avoid dust formation.  
Provide appropriate exhaust ventilation at places where dust is formed.  
Take precautionary measures against static discharges.

### 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Protect from humidity.  
: Keep container tightly closed and dry.  
Advice on common storage : No special restrictions on storage with other products.  
Storage temperature : < 25 °C

### 7.3 Specific end use(s)

- Specific use(s) : Not applicable

## 8. Exposure controls/personal protection

### 8.1 Control parameters

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Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.  
In case of high dust concentration use a dust mask applicable to local conditions.
- Hand protection : Glove material: for example nitrile rubber
- Eye protection : Safety glasses
- Skin and body protection : Lightweight protective clothing
- Hygiene measures : General industrial hygiene practice.

### 9. Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

- Appearance : powder
- Colour : pink
- Odour : No information available.
- Odour Threshold : No information available.
- Melting point/range : not determined
- Boiling point/boiling range : not determined
- Flash point : Not applicable
- Flammability (solid, gas) : May form combustible dust concentrations in air
- Vapour pressure : Not applicable
- Relative vapour density : Not applicable
- Density : not determined
- Water solubility : completely soluble
- Partition coefficient: n-octanol/water : Not applicable
- Auto-ignition temperature : No data available
- Thermal decomposition : Decomposes on heating.  
Potential for exothermic hazard
- Explosive properties : No data available
- Oxidizing properties : No data available

#### 9.2 Other information

- Combustibility index for deposited dust : 3 ( 22 °C)
- : 3 ( 100 °C)
- Dust explosion properties : KSt value: 103 bar·m/s (Product sample, Median value of the

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|  |  |
|--|--|
|  | tested sample 0,056 mm; ISO 6184)  |
| Dust explosion class                           | : St1 (Product sample, Median value of the tested sample 0,056 mm; ISO 6184)   |
| Maximum explosion overpressure                 | : 7,2 bar (Product sample, Median value of the tested sample 0,056 mm; ISO 6184)   |
| Minimum ignition energy                        | : 30 - 100 mJ (Milled sample, Median value of the tested sample 0,043 mm, Loss on drying 4,1 %, EN 13821)<br>The Minimum ignition energy (MIE) of a dust/air mix depends on the particle size the water content and the temperature of the dust. The finer and the dryer the dust the lower the MIE. |
|  | : General remark: The indicated dust explosion characteristics are only valid for this product and are sensitive to the sample's parameters.   |
| Powder volume resistivity                      | : ca. 4E+11 Ohmm (Product sample, Median value of the tested sample 0,074 mm, Loss on drying 4,2 %)<br>The material can accumulate static charge and can therefore cause electrical ignition.  |
| Minimum ignition temperature of a dust/air mix | : ca. 390 °C (Median value of the tested sample 0,055 mm) determined in the BAM oven   |

**10. Stability and reactivity****10.1 Reactivity**

No hazards to be specially mentioned.

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Dust may form explosive mixture in air.

**10.4 Conditions to avoid**

Heat.

**10.5 Incompatible materials**Strong acids and strong bases  
Strong oxidizing agents**10.6 Hazardous decomposition products**

No decomposition if used as directed.

**11. Toxicological information****11.1 Information on toxicological effects**Acute oral toxicity : LD50 (Rat): > 5 000 mg/kg  
(calculated from LD50 of components)

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|                                      |   |
|--------------------------------------|---|
| Skin irritation<br>citric acid       | : Mild skin irritation (Rabbit, OECD Test Guideline 404, 72 h)  |
| Serious eye damage/eye<br>irritation | : Dust contact with the eyes can lead to mechanical irritation. |
| Respiratory or skin<br>sensitisation | : This information is not available.                            |
| Genotoxicity in vitro                | : No indication for mutagenicity known.                         |
| Carcinogenicity                      | : No indication for carcinogenicity known.                      |
| Teratogenicity                       | : No indication for teratogenicity known.                       |
| STOT - repeated exposure             | : This information is not available.                            |
| Further information                  | : Dust contact with the eyes can lead to mechanical irritation. |

## 12. Ecological information

### 12.1 Toxicity

No data is available on the product itself.

### 12.2 Persistence and degradability

No data is available on the product itself.

### 12.3 Bioaccumulative potential

Bioaccumulation : No data available  
Partition coefficient: n-  
octanol/water : Not applicable

### 12.4 Mobility in soil

Distribution among  
environmental compartments : No data available

### 12.5 Results of PBT and vPvB assessment

Assessment : not determined

### 12.6 Other adverse effects

Additional ecological  
information : There is no data available for this product.

## 13. Disposal considerations

### 13.1 Waste treatment methods

Product : Offer surplus and non-recyclable solutions to a licensed  
disposal company.

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Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### 14.1 UN number

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

### 14.2 Proper shipping name

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

### 14.3 Transport hazard class

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

### 14.4 Packing group

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

### 14.5 Environmental hazards

**ADR**

Not dangerous goods

**RID**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

### 14.6 Special precautions for user

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Not classified as dangerous in the meaning of transport regulations.

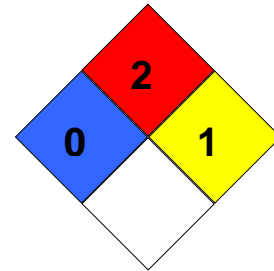
## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

## 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**NFPA Classification** : Health hazard: 0  
Fire Hazard: 2  
Reactivity Hazard: 1



### 15.2 Chemical Safety Assessment

Not applicable

## 16. Other information

### Full text of R-phrases referred to under sections 2 and 3

R36 Irritating to eyes.

### Full text of H-Statements referred to under sections 2 and 3.

H319 Causes serious eye irritation.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**Abbreviations:** 67/548/EEC= Dangerous Substances Directive. 1999/45/EC= Dangerous Preparations Directive. Regulation (EC) No. 1272/2008= Regulation on classification, labelling and packaging of substances and mixtures. DNEL= Derived No-Effect Level. PNEC= Predicted No-Effect Concentration. NFPA= National Fire Protection Association (USA). IATA= International Air Transport Association. IMDG= International Maritime Dangerous Goods. RID= International Rule for Transport of Dangerous Substances by Railway; ADR= European Agreement concerning the International Carriage of Dangerous Goods by Road. TWA= Time Weighted Average. STEL= Short term exposure limit. WEL = Workplace Exposure Limit.