

## SECURITY DATA SHEET

Conform Regulation No 1272/2008

Edition date: 19.05.14 Version: 2.5

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## CYANOCOBALAMINE

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

#### 1.1. Product identifier

Trade name: CYANOCOBALAMINE

Synonyms: Vitamin B12, Docemine

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

Active ingredient for medical use.

#### Pharmacological activity:

Substance pharmacologically active. Hematopoietic vitamin.

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

Supplier : ALTAQUIMICA SA

Street address : Casp 86, 08010 BARCELONA

Telephone no. : +34 93 265 60 12

Telefax : +34 93 265 73 52

1.4. Emergency telephone number : + 34 91 5620420

### SECTION 2. Hazards identification

#### 2.1. Classification of the substance or mixture :

CLP/GHS Classification (REGULATION (EC) No 1272/2008)

Not a dangerous substance according to GHS.

Classification according to EU Directives 67/548/EEC or 1999/45/EC (The product is classified and labelled in accordance with EC Directives)

R-phrases) -: -

#### 2.2. Label elements:

CLP/GHS-Labeling (REGULATION (EC) No 1272/2008)

Hazard statements -: -

Precautionary Statement - Prevention P260: Do not breathe vapours.

Precautionary Statement - Response

P262: Do not get in eyes, on skin, or on clothing.

Precautionary Statement - Storage

P314: Get medical advice/ attention if you feel unwell.

Precautionary Statement - Storage

P403 + P233: Store in a well-ventilated place. Keep container tightly closed.

P402: Store in a dry place.

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Precautionary  
Statement - Disposal

P501: Dispose of contents/ container to an approved waste disposal plant.

Labelling in accordance with  
67/548/EEC or 1999/45/EC

: The product is classified and labelled in accordance with EC Directives

R-phrase(s)

-: -

S-phrase(s)

S7/8: Keep container tightly closed and dry.  
S15: Keep away from heat.  
S22: Do not breathe dust.  
S24/25: Avoid contact with skin and eyes.

### 2.3. Other hazards:

Physical-, chemical and  
toxicological hazards

: May be irritating to eyes and skin.  
Risk of dust explosion.

Environmental effects

: Data insufficient for a correct assessment of environmental effects.

### Other hazard bands:

Hygiene

: OEB 2 (approved)

Safety

: SHB 2

Environment

: EHB 2 (preliminary)

Further information see chapter 16.

## SECTION 3. Composition/information on ingredients

Chemical nature/name

: Co-alpha-[alpha-(5,6-dimethylbenzimidazolyl)]-Co-beta-cyanocobamide

### 3.1. Substances:

Empirical formula

: C63 H88 Co N14 O14 P

Molar mass

: 1.355,55 g/mol

CAS number

: 68-19-9

EINECS number

: 200-680-0

## SECTION 4. First aid measures

### 4.1. Description of first aid measures:

General advice

: Take the victim out of the contaminated area. Remove contaminated clothing immediately and dispose of safely.

If inhaled

: Move to fresh air. Make the victim blow his nose. Seek medical advice.

In case of skin contact

: Rinse immediately with plenty of water for at least 15 minutes. If inflammation occurs, alert a physician.

In case of eye contact

: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of irritation consult an oculist.

If swallowed

: Do not induce vomiting. Make the victim rinse his mouth with water. Seek medical advice.

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### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms : Red urine coloration.  
Rash.

### 4.3. Indication of any immediate medical attention and special treatment needed

## SECTION 5. Firefighting measures

### 5.1. Extinguishing media:

Suitable extinguishing media : All means (e.g. water, carbon dioxide, dry chemical extinguisher).

Extinguishing media that must not be used for safety reasons : Strong water jet.

### 5.2. Special hazards arising from the substance or mixture:

In case of fire, the product may emit toxic and/or irritating fumes.

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Phosphorus compounds

Inorganic oxide(s) and carbonate(s)

Possible:

Hydrogen cyanide (HCN)

### 5.3. Advice for firefighters:

Special protective equipment for firefighting : Use self-contained breathing apparatus. Wear full protective suit.

Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Avoid discharging extinguishing water in the environment.

## SECTION 6. Accidental release measures

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

Particle filter half mask, filter P3. Suitable gloves. Safety glasses. Work clothes.

### 6.2. Environmental precautions:

Avoid spreading of product.

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

General advice : Sweep and shovel the solid product into a container specially adapted for its recovery or destroying (avoiding dust formation). Close and label thoroughly.

Cleaning of contaminated zone : After cleaning up the product, rinse the polluted area with water.

Elimination of recovered materials : Deliver to the Environmental service of the factory or to any specialized and approved disposal company.

### 6.4. Reference to other sections:

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### Additional advice:

Intervention of special services recommended.

## SECTION 7. Handling and storage

### 7.1. Precautions for safe handling:

Advice on safe handling (industrial scale) : Local ventilation and emission point dust extraction.  
Take precautionary measures against electrostatic loading. Earth vessels and equipment well.

Advice on safe handling (laboratory scale) : Handling in a hood recommended.

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

Requirements for storage rooms and vessels : Keep in a cool, well-ventilated place.

Advice on common storage : Keep away from chemicals as it is a pharmaceutical substance

Further information on storage conditions : Keep in a well closed container, away from moisture and light. Handle under dehydrated area.

Storage temperature : Keep at ambient temperature.

Advised packaging material : Glass, plastic, stainless steel, aluminium.

Standard packaging : Polyethylene bag in metal drum packaging. Aluminium drum.

### Sensitivity

Light : The product is sensitive to light.  
Humidity : Hygroscopic.

### 7.3. Specific end use(s):

## SECTION 8. Exposure controls/personal protection

### 8.1. Control parameters:

#### Occupational Exposure Limits:

OEL-8h : 300 µg/m<sup>3</sup>

Remarks : (approved)

### 8.2. Exposure controls:

#### Personal protection equipment

(IMPORTANT: to be adapted following the workplace risk assessment.)

#### Workshop

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Respiratory protection : Particle filter (P3) half mask recommended.

Hand protection : Suitable gloves.  
Glove material : Nitrile rubber  
Layer thickness : 0,11 mm  
Break through time: > 480 min

Eye protection : Safety glasses.

Body Protection : Work clothes.

Hygiene measures : Wash hands.

### Laboratory

Respiratory protection : Handling in a hood recommended.

Hand protection : Suitable gloves recommended.

Eye protection : Safety glasses.

Body Protection : Working clothes.

Hygiene measures : Wash hands.

## SECTION 9. Physical and chemical properties

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

State of aggregation : Solid

Form : crystalline, powder

Colour : dark red

Odour : odourless

Molar mass : 1.355,55 g/mol

Melting point : > 300 °C

Flash point : not applicable

Ignition temperature : > 400 °C

Thermal decomposition : 200 °C  
Method: under nitrogen

150 °C  
Method: under oxygen

Minimum ignition energy : 100 < MIE < 300 mJ (moderately sensitive to ignition).

Vapour pressure : No data available.

Density : No data available.

Bulk density : 300 - 500 kg/m<sup>3</sup>

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Solubility in water : 12,5 g/l  
Sparingly soluble in water.

Soluble in other solvents  
(nonaquatic) : Ethanol:  
slightly soluble  
  
Acetone:  
practically insoluble  
  
Chloroform  
insoluble  
  
Diethylether  
insoluble

Octanol/water partition coefficient : log(Pow): -2,6

### 9.2. Other information:

## SECTION 10. Stability and reactivity

Safety remarks : Risk of dust explosion.

10.1. Reactivity : No data available.

10.2. Chemical stability : No data available.

10.3. Possibility of hazardous reactions : With strong oxidizing agents.

10.4. Conditions to avoid : No data available.

10.5. Incompatible materials : No data available.

10.6. Hazardous decomposition products : Supposed thermal decomposition/oxidation:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NOx)  
Phosphorus compounds  
Inorganic oxide(s) and carbonate(s)  
Possible in traces:  
Hydrogen cyanide (HCN)

## SECTION 11. Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

Acute oral toxicity : > 5.000 mg/kg  
(LD50) Species: mouse

Acute intravenous toxicity (IV) : 2.000 mg/kg  
(LD50) Species: mouse

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Irritant effect on skin	:	No experimental data available. No cases reported at workplace. May be irritating to human skin.
Irritant effect on eyes	:	Non-irritant. Species: rabbit May be irritating to human eyes.
Sensitisation	:	Rare cases of hypersensitivity reactions.
Single target organ toxicity - single exposure	:	No data available.
Aspiration hazard	:	Not applicable.

### Chronic/Long-term toxicity

Mutagenicity	:	Ames test negative.
Carcinogenicity evaluation	:	No data available.
Reproductive toxicity	:	No data available.
STOT - repeated exposure	:	No data available.

### Further information:

Pharmacological activity	:	Substance pharmacologically active. Hematopoietic vitamin.
Other toxicity data	:	Red urine coloration.

## SECTION 12. Ecological information

### 12.1. Toxicity:

Toxicity on invertebrates (EC50)	:	> 100 mg/l Species: Daphnia magna Exposure duration: 48 h
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### 12.2. Persistence and degradability:

Biological degradability	:	5 % Slightly biodegradable.
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### 12.3. Bioaccumulative potential:

Bioaccumulation	:	Unlikely to be bioaccumulable in living organisms (Log Pow < 4).
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### 12.4. Mobility in soil:

Behaviour in environmental compartments	:	No data available.
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### 12.5. Results of PBT and vPvB assessment:

Results of PBT and vPvB assessment	:	No data available.
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#### 12.6. Other adverse effects:

Note : Ecological data insufficient for a precise risk assessment.  
Do not release material and cleaning waters into the environment.

#### SECTION 13. Disposal considerations

##### 13.1. Waste treatment methods:

Product : Deliver to the Environmental service of the factory or to any specialized and approved disposal service.

Uncleaned packaging : Deliver to the Environmental service of the factory or to any specialized and approved disposal service.  
Recycling possible after cleaning.

#### SECTION 14. Transport information

##### Land transport

ADR: Not classified as dangerous in the meaning of transport regulations.

##### Sea transport

IMDG: Not classified as dangerous in the meaning of transport regulations.

##### Air transport

IATA: Not classified as dangerous in the meaning of transport regulations.

#### SECTION 15. Regulatory information

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

##### 15.2. Chemical Safety Assessment:

#### SECTION 16. Other information

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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.

Note: major information modified since the last version of the sheet are marked by a vertical line in front of the relevant change.



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### Definition of OEB:

OEB is the occupational exposure band with the following levels (solids - a similar but distinct scale is used for liquids, named OEB V):

Occupational Exposure Band	Occupational Exposure Level
OEB 1	> 1000 µg/m <sup>3</sup>
OEB 2	100 - 1000 µg/m <sup>3</sup>
OEB 3	10 - 100 µg/m <sup>3</sup>
OEB 4	1 - 10 µg/m <sup>3</sup>
OEB 5	< 1 µg/m <sup>3</sup>

Additional notations may be applied as suffixes to the OEL/OEB and are used to communicate additional information that is not directly indicated by the OEL/OEB classifications. This information is necessary to perform an efficient risk assessment and determine the correct exposure controls. The meanings of the suffixes is explained in this way:

Notation/Suffixes	Danger
G1	Reprotoxic Hazard for pregnant women. Exposure below the OEL is acceptable.
G2	Hazard for pregnant women. Exposure even below the OEL is not acceptable.
Sr	Respiratory sensitization hazard with serious potential consequences (anaphylactic reactions).
Sk	Specific dermal hazard (High dermal absorption / Danger of skin sensitization).
Cor	Corrosive compound - Important dermal and ocular hazard If corrosive compounds.

### Définition of SHB and EHB:

Substances are classified on a scale from 1, the less hazardous, to 5, the most hazardous, according to their safety properties, eg explosivity, flammability, etc. (SHB) and ecotoxicological properties, eg persistence, ecotoxicity (EHB)