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

- **Informations to product No. 2724**
- **Product name:**

### **Cyanocobalamin** Cyanocobalaminum, Vitamin B12-Cyanokomplex

- **Supplier of the Product / responsible Company:**

Caesar & Loretz GmbH  
Herderstr. 31  
40721 Hilden  
Tel.: 02103/4994-0  
Fax: 02103/32360  
e-mail: info@caelo.de

- **Emergency telephone:**

Giftinformationszentrum Mainz  
Langenbeckstr. 1, 55131 Mainz  
Tel.: 06131/19240

- **Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

- **Application of the substance / mixture:**

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

## 2 Hazards identification

- **Hazards identification:** The substance is not classified as dangerous according to European Union legislation.

## 3 Composition / information on ingredients

### **CAS-No. Substance name**

68-19-9 Vitamin B12 Cyanokomplex


- **EINECS-No.:** 200-680-0

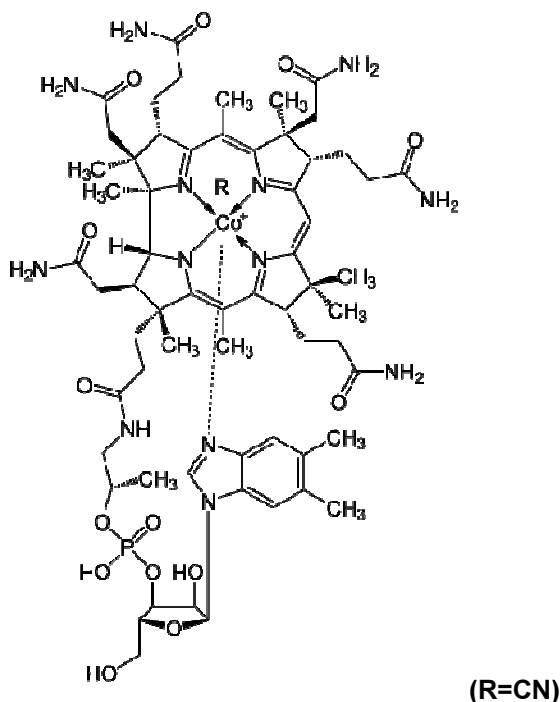
- **REACH Reg. No.:** 01-2120088037-53-0000

- **INCI-Name:** Cyanocobalamin

- **General information** Vitamine in the group of cobalt containing corrinoides.

- **Chemical characterization:**

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#### 4 First aid measures


- **after inhalation:** fresh air. Seek medical advice.
- **after skin contact:** Remove contaminated clothing. Wash away with water and soap.
- **after eye contact:** Rinse out with plenty of water with the eyelid wide open.
- **after swallowing:** Drink water. Induce vomiting. Seek medical advice.

#### 5 Fire-fighting measures

- **Suitable extinguishing media:** All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.
- **Specific hazards during fire fighting:** Combustible, but not flammable. In case of fire dangerous vapours/gases can be generated: Smoke gases.
- **Additional information:** Prevent fire extinguishing water from contaminating surface water, the ground water system or soil. Residues must be deposited according to local regulations.

#### 6 Accidental release measures

- **Personal protective measures:** Avoid dust formation and contact with substance.
- **Environmental protective measures:** Prevent from entering into drains.
- **Methods for cleaning:** Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.

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## 7 Handling and storage

- **Handling:** work in closed systems, if possible under protection gas (nitrogen).
- **Advice on safe handling:** Exhaustion of working place.
- **Informations to fire or explosion protection:** Avoid generating dusts and electrostatic charging.
- **Storage:**
- **Requirements for storage areas and containers:** Tightly closed. Store at a dry place. At room temperature ( +15°C to +25°C ). Protect from light.

## 8 Exposure controls / personal protective equipment

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

**Zusätzliche Expositionsgrenzwerte bei möglichen Verarbeitungsgefahren:**

IOEL: 0,6 mg/cbm (International Occupational Exposure Limit, defined as 8-hours average).

- **Personal protective equipment:**
- **General protective and hygiene measures:** The usual precaution measures during handling of chemicals are to observe.
- **Respiratory protection:** Dust protection mask.
- **Hand protection:** Protection gloves of rubber or latex
- **Eye protection:** Safety glasses.

## 9 Physical and chemical properties


- **Form:** Crystalline powder
- **Colour:** violet - dark red
- **Odour:** odourless
- **Melting point / melting range:** not determined
- **Boiling point / boiling range:** not determined
- **Flash point:** not determined
- **Explosion hazard:** High dust explosion hazard.
- **Density:** not determined
- **Solubility in / Miscibility with**
- **Water:** (25 °C) 12 g/l
- **pH-range:** (20 g/l, 20 °C) 4,75

## 10 Stability and reactivity

- **Thermal decomposition / conditions to avoid:** Avoid strong heating.
- **Hazardous reactions:** No hazardous reactions known.
- **Hazardous decomposition products:** None.
- **Additional information:** Light sensitive and strongly hygroscopic. Forms by water addition the more stable heptahydrate.

## 11 Toxicological information

- **Acute toxicity:**  
LD50(oral,div.) > 5000 mg/kg  
LD50(i.v.,Mouse): > 600 mg/kg

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NOAEL(oral,Man): 100 mg

• **Sensitization:** Can be sensitizing, few cases observed.

• **Other information (experimental toxicology):**

Reproductive toxicity: Not teratogene.

Therapeutical dosage: 1 mg/Week i.m.

Serum half life period: 6 days

Normal Plasma concentration: 150-750 pg/ml

Elimination renal and fecal, with high resorption in ileum,

Overall elimination: 2-5µg/d

After extremely high dosage only few cases of diarrhea, periphere blood vessel tromboses, itches and eczema observed.

RDA (recommended dietary allowance): 2µg

GRAS (generally recognized as safe for human consumption)

• **Sub-acute / chronic toxicity:** NOAEL 1 mg per week (oral, man, 5 years), low toxicity.

## 12 Ecological information

• **Information about elimination (persistence and degradability):** Not readily biodegradable (< 5%).

• **Mobility and bioaccumulation potential:** No bioaccumulation.

• **Aquatic toxicity:** EC50(Daphnia magna, 48h) > 100 mg/l

• **Water hazard class:** 1 (self classification): slightly hazardous for water.

## 13 Disposal considerations

• **Product:**

• **Recommendation:** Disposal according to local regulations as pharmaceutical waste.

• **Empty contaminated packaging:**

• **Recommendation:** Disposal according to the local regulations.

## 14 Transport informations

• **Land transport according to ADR:**

Not classified as dangerous in the meaning of transport regulations.

## 15 Regulatory information

• **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**

The product does not need to be labelled according to GHS-regulations.


• **National regulations (Germany):**

• **Water hazard class:** see chapter 12

• **Storage class TRGS 510:** 11

## 16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

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· **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.