

MATERIAL SAFETY DATA SHEET

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Version 1.0

Section 1 - Product and Company Information

Product Name VITAMIN B12 PLANT CELL CULTURE
TESTED
Product Number V2006
Brand SIGMA

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS MO 63103 US
Technical Phone: 314 771 5765
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Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
CYANOCOBALAMIN, MEETS USP TEST SPECS.	68-19-9	No

Formula C63H88CoN14O14P
Synonyms Anacobin * Berubigen * Betalin-12 * Betalin 12
crystalline * Betaline-12 * B-Twelve * B-Twelve
ora * Byladoce * Cabadon M * CN-B12 * Cobadoce
forte * Cobalin * Cobamin * Cobione * Cotel *
Covit * Crystamin * Crystwel * Cyano-B12 *
Cyanocobalamin * Cyanocobalamine * Cycolamin *
Cykobeminet * Cyredin * Cytaccon * Cytamen *
Cytobion * Depinar *
Dimethylbenzimidazolylcobamide *
5,6-Dimethylbenzimidazolylcobamide cyanide *
Distivit (B12 peptide) * Dobetin * Docemine *
Docibin * Docigram * Dodecabee * Dodecavite *
Dodex * Ducobee * Duodecibin * Embiol *
Emociclina * Eritrone * Erycytol * Erythrotin *
Euhaemon * Extrinsic factor * Factor II (vitamin)
* Fresmin * Hemo-B-doze * Hemomin * Hepagon *
Hepavis * Hepcovite * Lactobacillus lactis dorer
factor * LLD factor * Macrabin * Megalovel *
Milbedoce * Nagravon * Normocytin * Pernaemon *
Pernaevit * Pernipuron * Plecyamin * Poyamin *
Rebramin * Redamina * Redisol * Rhodacryst *
Rubesol * Rubramin * Rubramin PC * Rubripca *
Rubrocitol * Sytobex * Vibalt * Vibisone *
Virubra * Vitamin B12 * Vitamin B12 complex *

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution: Avoid contact and inhalation. Possible sensitizer.

HMIS RATING

HEALTH: 0

FLAMMABILITY: 0
REACTIVITY: 0

NFPA RATING

HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

FLASH POINT

N/A

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: May decompose on exposure to light.

Materials to Avoid: Strong mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Phosphorous oxides, Nitrogen oxides Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

SENSITIZATION

Sensitization: Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Intravenous

Mouse

2 GM/KG

LD50

CHRONIC EXPOSURE - TERATOGEN

Species: Mouse Mouse

Dose: 168 MG/KG 168 MG/KG

Route of Application: Intramuscular Intramuscular

Exposure Time: (10D PREG) (10D PREG)

Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Urogenital system.

Specific Developmental Abnormalities: Musculoskeletal system.

Specific Developmental Abnormalities: Urogenital system.

Species: Mouse Mouse

Dose: 84 MG/KG 84 MG/KG

Route of Application: Intramuscular Intramuscular

Exposure Time: (11D PREG) (11D PREG)

Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat Rat
Dose: 115 MG/KG 115 MG/KG
Route of Application: Oral Oral
Exposure Time: (1-22D PREG) (1-22D PREG)
Result: Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Growth statistics (e.g., reduced weight gain).
Effects on Newborn: Biochemical and metabolic. Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: None
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

S: 22-24/25

Safety Statements: Do not breathe dust. Avoid contact with skin and eyes.

US CLASSIFICATION AND LABEL TEXT

US Statements: Caution: Avoid contact and inhalation. Possible sensitizer.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

NOTES: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements - cyanide compounds.

TSCA INVENTORY ITEM: Yes Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D or manufacturing use. Not for prescription compound or

other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.