



Material Safety Data Sheet

Cyanocobalamin

MSDS# 84042

Section 1 - Chemical Product and Company Identification

MSDS Name: Cyanocobalamin

Catalog Numbers: AC405920000, AC405920010, AC405920050, AC405920250, AC405925000, BP862-1

Synonyms: Anacobin; Vitamin B12; 1H-Benzimidazole, 5,6-dimethyl-1-(3-O-phosphono-alpha-d-ribofuranosyl)-, monoester with cobinamide cyanide hydroxide, inner salt; Cyanocobalamin.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 68-19-9
Chemical Name: Cyanocobalamin
%: >96
EINECS#: 200-680-0

Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! Hygroscopic (absorbs moisture from the air). Light sensitive. This is expected to be a low hazard for usual industrial handling. May cause eye, skin, and respiratory tract irritation. Target Organs: None.

Potential Health Effects

Eye: Contact may cause transient eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. Ingestion of large amounts may cause convulsions, tremors, muscular contractions or spasticity, diarrhea, or fever.

Inhalation: May cause respiratory tract irritation.

Chronic:

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH

General Information: (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 1; flammability: 1; instability: 0;

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage: Store protected from moisture. Store protected from light. Refrigeration has been recommended.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cyanocobalamin	none listed	none listed	none listed

OSHA Vacated PELs: Cyanocobalamin: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Color: dark red

Odor: odorless

pH: aq solns are neutral

Vapor Pressure: Negligible.

Vapor Density: Not available

Evaporation Rate: Negligible.

Viscosity: Not available

Boiling Point: > 300 deg C (> 572.00°F)

Freezing/Melting Point: > 300 deg C (> 572.00°F)

Decomposition Temperature: Not available

Solubility in water: Moderately soluble in water.

Specific Gravity/Density: Not available.

Molecular Formula: C63H88CoN14O14P

Molecular Weight: 1355.38

Section 10 - Stability and Reactivity

Chemical Stability:	Stable under normal temperatures and pressures. May decompose when exposed to light. Darkens at 210 - 220°C.
Conditions to Avoid:	Light, dust generation, excess heat.
Incompatibilities with Other Materials	Not available
Hazardous Decomposition Products	Carbon monoxide, oxides of nitrogen, oxides of phosphorus, carbon dioxide, oxides of cobalt.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

RTECS#:	CAS# 68-19-9: GG3750000
LD50/LC50:	RTECS: Not available.
Carcinogenicity:	Cyanocobalamin - IARC: Group 2B carcinogen (Cobalt compounds).
Other:	See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not available

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 68-19-9: Not available

Canada

CAS# 68-19-9 is listed on Canada's DSL List

Canadian WHMIS Classifications: Not available

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

and the MSDS contains all of the information required by those regulations.
CAS# 68-19-9 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 68-19-9 is listed on the TSCA
Inventory.

Section 16 - Other Information

MSDS Creation Date: 7/14/1999

Revision #7 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
