



Material Safety Data Sheet

Product Name: Vitamin K1 (5%)

Material Safety Data Sheet Supplier Details

Company Name: Shandong Lanmo Biotech Co., Ltd

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1. IDENTIFICATION

1.1 Product Identifier

Product Name: Vitamin K1 (5%)

CAS No: 84-80-0

1.2 Other Means of Identification

No data available

1.3 Recommended Use and Restrictions on Use

For use only as an API, food supplement additive, or other uses. Not for use as a medication, household remedy, etc.

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

According to the Globally Harmonized System of Classification and Labeling of Chemicals (GHS), this substance is not classified as hazardous.

2.3 Other Hazards

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance 1: Vitamin K1, Content: 5%

Synonyms: Phylloquinone; 3-Phytylmenadione; 2-Methyl-3-phytyl-1,4-naphthoquinone; Vitamin K1(20)

Molecular Formula: $C_{31}H_{46}O_2$

Molecular Weight: 450.70 g/mol



3.2 Substance 2: Maltodextrin, Content: 95%

Synonyms: Water-soluble dextrin; Maltodextrin; Enzyme-modified dextrin

Molecular Formula: $(C_6H_{10}O_5)_n$

4. FIRST AID MEASURES

4.1 Description of Necessary First Aid Measures

Inhalation:

If inhaled, move the person to fresh air. If breathing has stopped, give artificial respiration.

Skin Contact:

Wash off with soap and plenty of water.

Eye Contact:

Rinse eyes with water as a precaution.

Ingestion:

Never give anything by mouth to an unconscious person. Rinse mouth with water.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

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

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical powder, or carbon dioxide.

5.2 Special Hazards Arising from the Substance or Mixture

Carbon oxides, Nitrogen oxides

5.3 Advice for Firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further Information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid inhalation of vapors, mists, or gas.



6.2 Environmental Precautions

Do not let the product enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Collect and place into suitable closed containers for disposal.

6.4 Reference to Other Sections

Refer to other sections for disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Use general industrial hygiene practices.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Carefully reseal opened containers and store upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

Sensitive to moisture and light. Store under inert gas.

7.3 Specific End Uses

No data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Occupational Exposure Limits: No known national exposure limits established.

8.2 Exposure Controls

Appropriate Engineering Controls:

Apply general industrial hygiene practices.

Individual Protection Measures:

Eye/Face Protection: Use equipment approved by standards such as NIOSH (USA) or EN 166 (EU).

Skin Protection:

Wear gloves. Inspect gloves before use.

Use appropriate method to remove gloves (avoid touching outer surface).

Avoid skin contact with the product.

Dispose of contaminated gloves according to relevant laws and good laboratory practices. Wash and dry hands.

The chosen protective gloves must comply with EU Directive 89/686/EEC and derived standard EN 376.

Body Protection: Impervious clothing. The type of protective equipment must be selected based on the concentration and amount of hazardous substances at the specific workplace.



Respiratory Protection: Respiratory protection is not normally required. For small amounts of volatiles, use respirator filters of type OV/AG (USA standard) or ABEK (EU EN 14387 standard). Use respirators and components tested and approved by government standards like NIOSH (USA) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

- a) Appearance: Form: Powder; Color: Light yellow
- b) Odor: N/A
- c) Odor Threshold: N/A
- d) pH: N/A
- e) Melting Point/Freezing Point: 140-150 °C
- f) Initial Boiling Point and Boiling Range: N/A
- g) Flash Point: N/A
- h) Evaporation Rate: N/A
- i) Flammability (Solid, Gas): N/A
- j) Upper/Lower Flammability or Explosive Limits: N/A
- k) Vapor Pressure: N/A
- l) Vapor Density: N/A
- m) Relative Density: 1.18 g/mL at 25 °C
- n) Water Solubility: N/A
- o) Partition Coefficient: n-Octanol/Water: N/A
- p) Auto-ignition Temperature: N/A
- q) Decomposition Temperature: N/A
- r) Viscosity: N/A

10. STABILITY AND REACTIVITY

10.1 Reactivity

N/A

10.2 Chemical Stability

N/A

10.3 Possibility of Hazardous Reactions

N/A

10.4 Conditions to Avoid

Light and heat.

10.5 Incompatible Materials

Strong oxidizing agents, Strong bases

10.6 Hazardous Decomposition Products

Other decomposition products - N/A



11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute Toxicity:

Oral LD50 (Rat): > 33,487 mg/kg

Intravenous LD50 (Mouse): > 6,570 mg/kg

Skin Corrosion/Irritation: No data available

Serious Eye Damage/Irritation: No data available

Respiratory or Skin Sensitization: No data available

Germ Cell Mutagenicity: No data available

Carcinogenicity: This product is not, and does not contain, any component classified as carcinogenic by IARC, ACGIH, EPA, or NTP.

IARC: 3 - Not classifiable as to its carcinogenicity to humans (Phytomenadione)

Reproductive Toxicity: N/A

STOT - Single Exposure: N/A

STOT - Repeated Exposure: N/A

Aspiration Hazard: N/A

Potential Health Effects:

Inhalation: May be harmful if inhaled. May cause respiratory irritation.

Ingestion: Harmful if swallowed.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

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

Additional Information: RTECS: QJ5800000

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

N/A

12.2 Persistence and Degradability

N/A

12.3 Bioaccumulative Potential

N/A

12.4 Mobility in Soil

N/A

12.5 Results of PBT and vPvB Assessment

N/A

12.6 Other Adverse Effects

N/A

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Product: Dispose of surplus and non-recyclable material with a licensed waste



Shandong Lanmo Biotech Co.,Ltd

山东蓝墨生物科技有限公司

disposal company.

Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN Number

ADR/RID: - | IMDG: - | IATA: -

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport Hazard Class(es)

ADR/RID: - | IMDG: - | IATA: -

14.4 Packing Group

ADR/RID: - | IMDG: - | IATA: -

14.5 Environmental Hazards

ADR/RID: No | IMDG Marine Pollutant: No | IATA: No

14.6 Special Precautions for User

N/A

The information provided above is considered correct but does not purport to be all-inclusive and should be used only as a guide. This document contains information based on our current knowledge relating to appropriate safety precautions for this product. It does not represent a guarantee of the properties of this product.