
1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Vitamin K Hemin (Solids)
Catalog Number: VV35
Product Use: For laboratory use only

Manufacturer's Name: Dalynn Biologicals Inc.
Supplier's Name: Dalynn Biologicals Inc.
Address: 3253 – 34 Avenue NE
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T1Y 6X2

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Chemical Emergency: 1-613-996-6666
Phone Number Only

2. HAZARD IDENTIFICATION**Emergency Overview****GHS Classification**

Eye irritation (Category 2A)

GHS Label Elements, Including Precautionary Statements

Pictogram



Signal word Warning

Hazard statement(s)

H303 May be harmful if swallowed.
H319 Causes serious eye irritation.

Precautionary statement(s)

P233 Keep container tightly closed
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves & clothing/ eye protection/ face protection.
P310 Immediately call a poison center or doctor.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

3. COMPOSITION & INFORMATION ON INGREDIENTS

INGREDIENT	%	CAS-No.	EC-No.	Index-No.
Ethanol	17	64-17-5	200-578-6	603-002-00-5
Vitamin K	2	84-80-0	201-564-2	-
Sodium hydroxide	1	1310-73-2	215-185-5	011-002-00-6
Water	80	7732-18-5	231-791-2	-

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move affected individual out of affected area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing. Wash affected area with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with plenty of water for at least 15 minutes. Consult a physician.

If swallowed

Do not induce vomiting. Rinse mouth with water if patient is conscious. Take patient to hospital and consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Low flammability as the main ingredient is water.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions: carbon oxides (ie. carbon dioxides, carbon monoxide), sodium oxides

Explosion data – sensitivity to mechanical impact

No data available.

Explosion data – sensitivity to static discharge

No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to explosive concentrations.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Wearing appropriate safety gear including chemical resistant gloves and dust mask or respirator. Soak up with paper or cloth towels and place in a sealed container and hold for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use in area with adequate ventilation.

Conditions for safe storage

Keep container tightly closed under refrigerated conditions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Sodium hydroxide	1310-73-2	(c)	2 mg/m3	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
		C	2 mg/m3	Canada. British Columbia OEL
		C	2 mg/m3	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
		C	2 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
Ethanol	64-17-5	TWA	1,000 ppm 1,880 mg/m3	Canada. Alberta. Occupational Health and Safety Code (table 2:OEL)
		TWA	1,000 ppm	Canada. British Columbia OEL
		STEL	1,000 ppm	Canada. British Columbia OEL
		TWAEV	1,000 ppm 1,900 mg/m3	Canada. Ontario OELs
		TWAEV	1,000 ppm 1,880 mg/m3	Canada. Quebec. Regulation respecting occupational health and safety, schedule 1, Part 1
		TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)

Personal protective equipment

Respiratory protection

Use in area with adequate ventilation. Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal

technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands after use.

Eye protection

Face shield and/or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU).

Skin and body protection

Wear appropriate clothing such as a lab coat that covers as much of the body as possible. Complete suit can also be worn if desired.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Liquid
Color	Brown, murky

Safety data

pH	~9 to 10
Melting point/ freezing point	No data available
Boiling point	No data available
Flash point	No data available
Ignition temperature	No data available
Auto ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Density	No data available
Water solubility	soluble
Partition coefficient/ n-octanol/water	No data available
Relative vapor density	No data available
Odour	No data available
Odour threshold	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Vapors may form explosive mixture with air.

Materials to avoid

Oxidizing agents, strong bases, strong acids

Hazardous decomposition products

Other decomposition products – No data available

Hazardous decomposition products formed under fire conditions – Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral – Rat – 10,470 mg/kg (ethanol)

LD50 Oral – Rat – >33,487 mg/kg (vitamin K)

Inhalation LC50

LD50 Inhalation – Rat – 4h - 30,000 mg/l (ethanol)

Dermal LD50

LD50 Dermal – Rabbit – 15,800 mg/kg (ethanol)

Other information on acute toxicity

No data available

Skin corrosion/irritation

Skin – Rabbit – No skin irritation – 24h – OECD Test Guidelines 404 (ethanol)

Skin – Rabbit – Severe skin irritation – 24h RTECS (sodium hydroxide)

Serious eye damage/eye irritation

Eye – Rabbit – Moderate eye irritation – OECD Test Guidelines 405 (ethanol)

Eye – Rabbit – Causes serious eye irritation – OECD Test Guidelines 405 (sodium hydroxide)

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

This table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Vitamin K	84-80-0	Not listed	Not listed	Not listed	Not listed	Not listed
Sodium hydroxide	1310-73-2	Not listed	Not listed	Not listed	Not listed	Not listed
Ethanol	64-17-5	Group 1	Known	A3	X	Not listed

Reproductive toxicity

Reproductive toxicity – Human – Female (Oral) (ethanol)
Effects on newborn – Apgar score, drug dependence (ethanol)

Teratogenicity

No data available

Specific target organ toxicity – single exposure (GHS)

No data available

Specific target organ toxicity – repeated exposure (GHS)

No data available

Aspiration hazard

No data available

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract inflammation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes Causes eye irritation on contact.
Ingestion May be harmful if swallowed. No serious side effects expected unless swallowed in large quantities. Alcohol swallowed in sufficient quantity can cause blindness and death.

Signs and Symptoms of Exposure

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

Synergistic effects

No data available

Additional information

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethanol	EC50 (72h) = 275 mg/L (Chorella vulgaris)	Fathead minnow (Pimpehales promelas) LC50 = 14,200 mg/L/96h	Photobacterium phosphoreum: EC50 = 34,634 mg/L/30 min Photobacterium phosphoreum: EC50 = 35,470 mg/L/5 min	EC50 = 9,268 mg/L/48h EC50 = 10,800 mg/L/24h

Persistence and degradability

Persistence is unlikely based on information available.

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Product

May be disposed of with regular waste. If desired, product may be washed down the sink diluted with running water.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not Dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

16. OTHER INFORMATION

Further information

Copyright 2019 Dalynn Biologicals Inc. The above information is believed to be correct but does not purport to be all inclusive and shall be only used 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. Dalynn Biologicals Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.