

Safety Data Sheet

Vitamin A-Palmitate 1.0 Mio IU/G stabilized with BHT

Revision date : 2025/08/08

Version: 5.0

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(30041040/SDS_GEN_CA/EN)

1. Identification

Product identifier used on the label

Vitamin A-Palmitate 1.0 Mio IU/G stabilized with BHT

Recommended use of the chemical and restriction on use

Recommended use*: feed additive(s), food additive(s), cosmetic ingredient

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF Canada Inc.

5025 Creekbank Road

Building A, Floor 2

Mississauga, ON, L4W 0B6, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Synonyms:

Preparation based on: Retinyl palmitate dissolved in: Sunflower oil
stabilized with: 2,6-di-tert-Butyl-p-cresol

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Classification of the product

| | | |
|-----------------|-------------------|--|
| Repr. | 1B (unborn child) | Reproductive toxicity |
| Aquatic Acute | 3 | Hazardous to the aquatic environment - acute |
| Aquatic Chronic | 3 | Hazardous to the aquatic environment - chronic |

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Label elements

Pictogram:



Signal Word:

Danger

Hazard Statement:

H360

May damage the unborn child.

H402

Harmful to aquatic life.

H412

Harmful to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280

Wear protective gloves, protective clothing and eye protection or face protection.

P273

Avoid release to the environment.

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P313

IF exposed or concerned: Get medical attention.

Precautionary Statements (Storage):

P405

Store locked up.

Precautionary Statements (Disposal):

P501

Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

When finely distributed on porous material, self-ignition is possible. High risk of slipping due to leakage/spillage of product.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2022-272)

Vitamin A palmitate

CAS Number: 79-81-2

Content (W/W): 45.0 - 70.0%

Synonym: No data available.

Sunflower oil

CAS Number: 8001-21-6

Content (W/W): 30.0 - 60.0%

Synonym: No data available.

Isomers of Retinyl palmitate

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Content (W/W): 1.0 - 7.0%

Synonym: No data available.

BHT

CAS Number: 128-37-0

Content (W/W): 0.1 - 1.5%

Synonym: 2,6-Bis(1,1-dimethylethyl)-4-methylphenol; BHT, Butylated hydroxytoluene, 2,6-Di-tert-butyl-p-cresol

The actual concentration is withheld as a trade secret.

4. First-Aid Measures

Description of first aid measures

General advice:

First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Immediately wash thoroughly with soap and water, seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Information on: Vitamin A palmitate

Symptoms: Overexposure may cause:, Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, foam, dry powder, carbon dioxide

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Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon oxides, harmful vapours

The substances/groups of substances mentioned can be released in case of fire. Generation of fumes/fog.

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

In case of combustion evolution of toxic gases/vapours possible. Cool endangered containers with water-spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Do not spray water directly on fire, product will float and could be reignited on surface of water.

6. Accidental release measures

Further accidental release measures:

High risk of slipping due to leakage/spillage of product. Soiled textiles/cleaning rags made of natural fibres (e.g. of pure wool or of pure cotton) are capable of ignition and should not be used and/or must be disposed of in a safe manner.

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8. Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

Environmental precautions

Do not discharge into drains/surface waters/groundwater. Inform authorities in the event of product spillage to water courses or sewage systems.

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material. Do not use saw-dust or other combustible substances as an absorbant during cleanup.

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Mop up spills with non-flammable adsorbents (e.g. vermiculite, spill mats). Soiled textiles / cleaning rags / adsorbents and Silica are capable of self ignition and should be wetted with water and must be disposed of in a safe manner.

7. Handling and Storage

Precautions for safe handling

Avoid aerosol formation. Ensure that there is no crystallized product in the container before use. Processing machines must be fitted with local exhaust ventilation. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. Keep container tightly sealed.

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Protection against fire and explosion:

Risk of self-ignition when a large surface area is produced due to fine dispersion. Soiled textiles / cleaning rags / adsorbents and Silica are capable of self ignition and should be wetted with water and must be disposed of in a safe manner. Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

Conditions for safe storage, including any incompatibilities

Segregate from oxidants.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air. Protect from the effects of light. Keep under nitrogen.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

| | | |
|---------------|------------|--|
| BHT | ACGIH, US: | TWA value 2 mg/m3 Inhalable fraction and vapor ; |
| Sunflower oil | OSHA Z3: | TWA value 5 mg/m3 Respirable fraction ; |
| | OSHA Z3: | TWA value 15 mg/m3 Total dust ; |
| | OSHA Z3: | TWA value 15 millions of particles per cubic foot of air Respirable fraction ; |
| | OSHA Z3: | TWA value 50 millions of particles per cubic foot of air Total dust ; |
| | ACGIH, US: | TWA value 10 mg/m3 Inhalable particles ; |
| | ACGIH, US: | TWA value 3 mg/m3 Respirable particles ; |
| | OSHA Z1: | PEL 15 mg/m3 Total dust ; |
| | OSHA Z1: | PEL 5 mg/m3 Respirable fraction ; |

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection:

Wear chemical resistant protective gloves.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Females in early pregnancy must never be exposed to the substance. Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with skin. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

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9. Physical and Chemical Properties

| | | |
|---|---|--|
| Physical state: | liquid | |
| Form: | liquid, partially crystallized | |
| Odour: | not applicable | |
| Odour threshold: | Not determined due to potential health hazard by inhalation. | |
| Colour: | light yellow | |
| pH value: | (20 °C) substance/mixture is non-soluble (in water) | |
| Melting point: | approx. 26 °C | |
| Freezing point: | No data available. | |
| Boiling point: | The substance / product decomposes therefore not determined. | |
| Flash point: | > 100 °C | |
| Flammability: | hardly combustible | (derived from flash - and boiling point) |
| Lower explosion limit: | For liquids not relevant for classification and labelling. | |
| Upper explosion limit: | For liquids not relevant for classification and labelling. | |
| Autoignition: | approx. 270 °C | (DIN 51794) |
| Vapour pressure: | (20 °C) negligible | |
| Density: | 0.88 g/cm ³ (20 °C, 1,013 hPa) | |
| Relative vapour density: | > 1 (20 °C) Heavier than air. | (estimated) |
| Partitioning coefficient n-octanol/water (log Pow): | not applicable for mixtures | |
| Thermal decomposition: | No data available. | |
| Viscosity, dynamic: | 27 mPa.s (60 °C) | |
| Viscosity, kinematic: | No data available. | |
| Solubility in water: | sparingly soluble | |
| Solubility (qualitative): | soluble solvent(s): organic solvents, | |
| Molecular weight: | No data available. | |
| Evaporation rate: | negligible | |
| Other Information: | If necessary, information on other physical and chemical parameters is indicated in this section. | |

Particle characteristics

No applicable information available.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

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Corrosive effects to metal are not anticipated.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

Self-ignition is possible when finely distributed on flammable surfaces in the presence of air.

Conditions to avoid

Temperature: > 60 degrees Celsius

Disregard of the conditions mentioned may result in undesirable decomposition reactions. Avoid light. See SDS section 7 - Handling and storage.

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static discharge.

Incompatible materials

oxidizing agents

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No data available.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single ingestion.

Oral

Type of value: ATE

Value: > 5,000 mg/kg

Information on: Vitamin A palmitate

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (BASF-Test)

No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Inhalation

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No data available.

Dermal

No data available.

Assessment other acute effects

Assessment of STOT single:

Based on available data, the classification criteria are not met.

Irritation / corrosion

Assessment of irritating effects: Not irritating to the eyes. May cause slight irritation to the skin.

Skin

Information on: Vitamin A palmitate

Species: rabbit

Result: Irritant.

Method: BASF-Test

Species: rabbit

Result: Slightly irritating.

Method: OECD Guideline 404

Eye

Information on: Vitamin A palmitate

Species: rabbit

Result: non-irritant

Method: OECD Guideline 405

Sensitization

Assessment of sensitization: Based on the ingredients, there is no suspicion of a skin-sensitizing potential.

Information on: Vitamin A palmitate

Guinea pig maximization test

Species: guinea pig

Result: Non-sensitizing.

Method: OECD Guideline 406

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Based on available data, the classification criteria are not met.

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Genetic toxicity

Assessment of mutagenicity: Based on available data, the classification criteria are not met.

Information on: Vitamin A palmitate

Assessment of mutagenicity: In the majority of tests performed (bacteria/microorganisms/cell cultures) a mutagenic effect was not found. A mutagenic effect was also not observed in in-vivo assays. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: Based on available data, the classification criteria are not met.

Information on: Vitamin A palmitate

Assessment of carcinogenicity: Results from a number of long-term carcinogenity studies and short-term tests are available. Taking into account all of the information, there is no indication that the substance itself is carcinogenic. Literature data.

Reproductive toxicity

Assessment of reproduction toxicity: Based on available data, the classification criteria are not met.

Information on: Vitamin A palmitate

Assessment of reproduction toxicity: No reliable data are available concerning reproduction toxicity.

Teratogenicity

Assessment of teratogenicity: The substance caused malformations/developmental toxicity in laboratory animals. Literature data.

Information on: Vitamin A palmitate

Assessment of teratogenicity: May cause harm to the unborn child.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to fish

Information on: BHT

*LC0 (96 h) >= 0.57 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EWG, C.1, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. Limit concentration test only (LIMIT test).*

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Information on: Vitamin A palmitate

LC50 (96 h) > 10,000 mg/l, Leuciscus idus (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates

Information on: BHT

EC0 (48 h) 0.48 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

Information on: Vitamin A palmitate

EC50 (48 h) > 100 mg/l, Daphnia magna (Screening test, static)

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants

Information on: BHT

EC50 (72 h) > 0.40 mg/l (growth rate), Scenedesmus subspicatus (Guideline 92/69/EEC, C.3, static)

The statement of the toxic effect relates to the analytically determined concentration.

Information on: Vitamin A palmitate

EC50 (72 h) 152.94 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)

The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Chronic toxicity to aquatic invertebrates

Information on: BHT

No observed effect concentration (21 d) 0.316 mg/l, Daphnia magna (OECD Guideline 202, part 2, semistatic)

The details of the toxic effect relate to the nominal concentration.

Information on: Vitamin A palmitate

Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on: BHT

DIN EN ISO 8192-OECD 209-88/302/EEC, P. C aerobic activated sludge/EC0 (3 h): 1,000 mg/l

Information on: Vitamin A palmitate

DIN EN ISO 8192-OECD 209-88/302/EEC, P. C aerobic activated sludge, domestic/EC20 (30 min): > 1,000 mg/l

Persistence and degradability

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Assessment biodegradation and elimination (H₂O)

The product contains (a) poorly biodegradable component(s).

Elimination information

Information on: BHT

4.5 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EWG, C.4-F) (aerobic, activated sludge)

Information on: Vitamin A palmitate

40 - 50 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic)

Bioaccumulative potential

Assessment bioaccumulation potential

The product contains components with potential for bioaccumulation

Assessment bioaccumulation potential

Information on: BHT

May be accumulated in organisms.

Bioaccumulation potential

Information on: BHT

Bioconcentration factor: 330 - 1,800 (28 d), *Cyprinus carpio* (OECD Guideline 305 C)

Bioconcentration factor: 230 - 2,500 (56 d), *Cyprinus carpio* (OECD Guideline 305 C)

Information on: Vitamin A palmitate

No significant accumulation in organisms is expected as a result of the distribution coefficient of *n*-octanol/water (log *P*_{ow}).

Mobility in soil

Assessment transport between environmental compartments

No data available.

Information on: BHT

The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

Information on: Vitamin A palmitate

The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

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Additional information

Other ecotoxicological advice:

The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:

Observe national and local legal requirements.

Container disposal:

Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport

TDG

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Food DSL, CA released / listed

Chemical DSL, CA released / listed

Chemical DSL, CA

DSL listed and/or otherwise compliant.

NFPA Hazard codes:

Health: 1 Fire: 1 Reactivity: 0 Special:

Assessment of the hazard classes according to UN GHS criteria (most recent version):

| | | |
|-------------------|-------------------|--|
| Skin Corr./Irrit. | 3 | Skin corrosion/irritation |
| Repr. | 1B (unborn child) | Reproductive toxicity |
| Aquatic Acute | 3 | Hazardous to the aquatic environment - acute |
| Aquatic Chronic | 3 | Hazardous to the aquatic environment - chronic |

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16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2025/08/08

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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Previous version: 4.0

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