We create chemistry

Safety data sheet

1. Substance/preparation and manufacturer/supplier identification

Product name:
Vitamin A-Palmitate 1.7 Mio IU/G stabilized with BHT

Use: feed additive(s), food additive(s), cosmetic ingredient

Manufacturer/supplier:
BASF (Thai) Limited
23rd Floor, Emporium Tower, 622, Sukhumvit 24 Rd.,
Klongton, Klongtoey, Bangkok 10110, THAILAND
Telephone: +66 2624-1999
Telefax number: +66 2664-9254
E-mail address: Thailand-SDS-info@basf.com

Emergency information:
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification according to UN GHS 2009

Classification of the substance and mixture:
Reproductive toxicity: Cat.1B (unborn child)
Skin corrosion/irritation: Cat.3
Hazardous to the aquatic environment - acute: Cat.3
Hazardous to the aquatic environment - chronic: Cat.3

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

H316	Causes mild skin irritation.
H360	May damage the unborn child.
H412	Harmful to aquatic life with long lasting effects.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P202	Do not handle until all safety precautions have been read and understood.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or physician.
P332 + P313	If skin irritation occurs: Get medical attention.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
When finely distributed on porose material, self-ignition is possible. High risk of slipping due to leakage/spillage of product.

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

retinyl palmitate

stabilized with:
2,6-di-tert-butyl-p-cresol

Hazardous ingredients

retinyl palmitate

Content (W/W): >= 75 % - <= 100 %	Skin Corr./Irrit.: Cat. 3
CAS Number: 79-81-2	Repr.: Cat. 1B (unborn child)
	Aquatic Chronic: Cat. 4

2,6-di-tert-butyl-p-cresol

Content (W/W): >= 1 % - < 2.5 %	Aquatic Acute: Cat. 1
CAS Number: 128-37-0	Aquatic Chronic: Cat. 1
	M-factor chronic: 1

4. 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.

On skin contact:
Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

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

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far
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

Unsuitable extinguishing media for safety reasons:
water jet

Specific hazards:
carbon oxides, harmful vapours
The substances/groups of substances mentioned can be released in case of fire. Evolution of fumes/fog.

Special protective equipment:
Wear self-contained breathing apparatus and chemical-protective clothing.

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

Personal precautions:
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 for cleaning up or taking 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.

Additional information: 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 desposed of in a safe manner.

7. Handling and Storage

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.

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.

Storage

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 and personal protection

Components with occupational exposure limits

2,6-di-tert-butyl-p-cresol, 128-37-0;
TWA value 2 mg/m3 (ACGIHTLV), Inhalable fraction and vapor

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

Hand protection:
Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc.
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

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.

9. Physical and Chemical Properties

Form:	oil, partially crystallized
Colour:	yellowish
Odour:	not applicable
Odour threshold:	Not determined due to potential health hazard by inhalation.
pH value:	
	substance/mixture is non-soluble (in water)
Melting point:	approx. 26 °C
Boiling point:	
	The substance / product decomposes therefore not determined.

Flash point:	194 °C	(ISO 2719, closed cup)
Evaporation rate:	negligible	
Flammability (solid/gas):	hardly combustible	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling., The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	261 °C	(DIN EN 14522)
Thermal decomposition:	>= 170 °C self-accelerating reaction	(DSC (DIN 51007))
Self heating ability:	not applicable, the product is a liquid	
SADT:	Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	(20 °C) negligible	
Density:	921.1 kg/m3 (20 °C)	(pyknometer)
Relative density:	0.9211 (20 °C)	(pyknometer)
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(estimated)
Solubility in water:	insoluble	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
Surface tension:	Study technically not feasible.	
Viscosity, dynamic:	44 mPa.s (60 °C)	
Viscosity, kinematic:	No data available.	

10. Stability and Reactivity

Conditions to avoid:
Temperature: > 60 °C
Disregard of the conditions mentioned may result in undesirable decomposition reactions. Avoid light. See SDS section 7 - Handling and storage.

Thermal decomposition:	>= 170 °C (DSC (DIN 51007)) self-accelerating reaction

Substances to avoid:
oxidizing agents

Corrosion to metals: No corrosive effect on metal.

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

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

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

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

11. Toxicological Information

Routes of exposure

Assessment of acute toxicity

Virtually nontoxic after a single ingestion.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
(Further) symptoms and / or effects are not known so far

Irritation

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

Information on: retinyl palmitate
Experimental/calculated data:
Skin corrosion/irritation rabbit: Irritant. (BASF-Test)

Skin corrosion/irritation rabbit: Slightly irritating. (OECD Guideline 404)

Information on: retinyl palmitate
Experimental/calculated data:
Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:
Skin sensitizing effects were not observed in animal studies.

Information on: retinyl palmitate
Experimental/calculated data:
Guinea pig maximization test guinea pig: Non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity

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

Information on: retinyl 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: retinyl 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: retinyl palmitate
Assessment of reproduction toxicity:
No reliable data are available concerning reproduction toxicity.

Developmental toxicity

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

Experimental/calculated data:

Information on: retinyl palmitate
Assessment of teratogenicity:
May cause harm to the unborn child.

Specific target organ toxicity (single exposure)

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

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

No data available.

Other relevant toxicity information

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

12. Ecological Information

Ecotoxicity

Assessment of aquatic toxicity:
Harmful to aquatic life with long lasting effects.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information on: 2,6-di-tert-butyl-p-cresol
Toxicity to fish:
LC0 (96 h) >= 0.57 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1, semistatic)
The statement of the toxic effect relates to the analytically determined concentration. Limit concentration test only (LIMIT test).

Information on: retinyl palmitate
Toxicity to fish:
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.

Information on: 2,6-di-tert-butyl-p-cresol
Aquatic invertebrates:
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: retinyl palmitate
Aquatic invertebrates:
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.

Information on: 2,6-di-tert-butyl-p-cresol
Aquatic plants:
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: retinyl palmitate
Aquatic plants:
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.

Information on: 2,6-di-tert-butyl-p-cresol
Microorganisms/Effect on activated sludge:
EC0 (3 h) 1,000 mg/l, activated sludge (DIN EN ISO 8192-OECD 209-88/302/EEC,P. C, aerobic)

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

Information on: 2,6-di-tert-butyl-p-cresol
Chronic toxicity to aquatic invertebrates:
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: retinyl palmitate
Chronic toxicity to aquatic invertebrates:
Study scientifically not justified.

Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

Information on: 2,6-di-tert-butyl-p-cresol
Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

Information on: retinyl palmitate
Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Not readily biodegradable (by OECD criteria).

Information on: 2,6-di-tert-butyl-p-cresol
Elimination information:
4.5 % BOD of the ThOD (28 d) (OECD 301C; ISO 9408; 92/69/EEC, C.4-F) (aerobic, activated sludge)

Information on: retinyl palmitate
Elimination information:
40 - 50 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (aerobic, activated sludge, domestic)

Bioaccumulation potential

Assessment bioaccumulation potential:
The product contains components with potential for bioaccumulation

Information on: 2,6-di-tert-butyl-p-cresol
Bioaccumulation potential:
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: retinyl palmitate
Bioaccumulation potential:
No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Additional information

Other ecotoxicological advice:
The product has not been tested. The statement has been derived from the properties of the individual components.

13. Disposal Considerations

Observe national and local legal requirements.

14. Transport Information

Domestic transport:

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Sea transport
IMDG

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport
IATA/ICAO

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
Proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

15. Regulatory Information

Other regulations

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Any other intended applications should be discussed with the manufacturer.Corresponding occupational protection measurements must be followed.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.