

Material Safety Data Sheet Of Vitamin A Palmitate

Section 1: Product And Company Identification

- **Product identifiers**

Product name: Vitamin A Palmitate
Product Number: FPV-2
Brand: Pangoo
CAS-No.: 79-81-2

- **Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Feed for animals

- **Details of the supplier of the safety data sheet**

Company : Pangoo Biotech Hebei Co., Ltd.
Telephone : 0086-317-8585021
Fax : 0086-317-3171801

- **Emergency telephone number**

Emergency Phone : 0086-317-8585021

Section 2: Hazards Identification

Classification of the substance or mixture Classification (REGULATION (EC) No 1272/2008)

Reproductive Toxicity, Category 1B H360D: May damage the unborn child.

Chronic aquatic toxicity, Category 4 H413: May cause long lasting harmful effects to aquatic life.

Classification (67/548/EEC, 1999/45/EC)

Toxic to Reproduction Category 2 R61: May cause harm to the unborn child

Irritant R38: Irritating to skin.

Dangerous for the environment R53: May cause long term adverse effects in the aquatic environment.

Label elements

Labelling (REGULATION (EC) No 1272/2008)



Hazard pictograms:

Signal Word: Danger.

Hazard Statements:

H360D May damage the unborn child.

H413 May cause long lasting harmful effects to aquatic life.

Precautionary Statements:

Prevention:

P201 Obtain special instructions before use

P202 Do not handle until all safety precautions have been read and understood. P273 Avoid release to the environment

P281 Use personal protective equipment as required.

Response: P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Disposal:

Storage: P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label: 79-81-2 Retinyl palmitate (vitamin A palmitate).

Additional Labelling:

EUH208 Contains: dl- α -tocopherol: May produce an allergic reaction.

Restricted to professional users.

Other hazards

In case of extensive air contact (e.g. soaked rags, moistened clothes) an exothermic autooxidation (self-ignition) is possible.

Women of childbearing age must avoid any overexposure.

Section 3 : Composition/Information On Ingredients

Brief description of the product: Mixture (preparation) containing active ingredient and auxiliary substances.

Mixtures Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Retinyl palmitate (vitamin A palmitate)	79-81-2 201-228-5 01-2119480425-37	Repr.Cat.2; R61 Xi; R38 R53	Repr. 1B; H360D Aquatic Chronic 4; H413	>= 50 - < 60
3,4-dihydro- 2,5,7,8-tetramethyl-2-	10191-41-0 233-466-0	R43 R53	Skin Sens. 1B; H317 Aquatic Chronic 4; H413	>= 1 - < 5
(4,8,12-trimethyltridecyl)- 2H-benzopyran-6- ol (dl- α -tocopherol)				

For the full text of the R-phrases mentioned in this Section, see Section 16.

For the full text of the H-Statements mentioned in this Section, see Section 16

Section 4 : First-Aid Measures

Description of first aid measures General Information:

Move out of dangerous area.

Show this safety data sheet to the doctor in attendance.

After any accidental exposure women should seek medical advice from a physician.

If inhaled:

Move to fresh air.

Consult a physician after significant exposure.

In case of skin contact:

Take off contaminated clothing and shoes immediately.

Wash off with soap and plenty of water.

If symptoms persist, call a physician.

In case of eye contact:

Flush eyes with water as a precaution.

Remove contact lenses.

Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed:

Clean mouth with water and drink afterwards plenty of water.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Headache, Irritability, Tiredness, Drowsiness, Nausea, Vomiting, Signs of increased intracranial pressure, generalized desquamation of the skin (after ca. 24 hours).

Indication of any immediate medical attention and special treatment needed Treatment: Treat symptomatically.

Section 5 : Fire-fighting Measures

Extinguishing media Suitable extinguishing media:

Alcohol-resistant foam.

Dry chemical.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: High volume water jet.

Special hazards arising from the substance or mixture Specific hazards during firefighting: None known.

Advice for firefighters

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information:

Collect contaminated fire extinguishing water separately.

This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section 6 : Accidental Release Measures

Measures in case of accidental release

When the spilled material is cleaned up with an absorbant material, attention should be paid to the possibility of exothermic autooxidation (self-ignition) in the presence of air, even at room temperature: store in the absence of air (e.g. in water) and send for incineration (or dispose of in accordance with local regulations).

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas.

Use personal protective equipment.

Ensure adequate ventilation.

Environmental precautions

Do not flush into surface water or sanitary sewer system.

Prevent further leakage or spillage if safe to do so.

If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal.

Reference to other sections

For personal protection see section 8.

For disposal considerations see section 13.

Section 7 : Handling And Storage

Precautions for safe handling Advice on safe handling:

Avoid exposure - obtain special instructions before use.

For personal protection see section 8.

Dispose of rinse water in accordance with local and national regulations.

Handle under inert gas.

Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion:

Take necessary action to avoid static electricity discharge.

Product will burn under fire conditions.

Conditions for safe storage, including any incompatibilities Requirements for storage areas and containers:

Protect against light.

Keep under inert gas.

Keep container tightly closed and dry.

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature: < 15 °C

Specific end use(s) Specific use(s): Not applicable.

Section 8 : Exposure Controls/Personal Protection

Control parameters

Components	CAS-No.	Value (Form of exposure)	Control parameters	Update
retinyl palmitate	79-81-2	TWA	0.37 mg/m ³	
	: Established for men			
		TWA	0.09 mg/m ³	
	: Established for women			

DNEL

Vitamin A palmitate:

Skin contact, Workers: 1.6 mg/kg bw/d

Potential health effects: Systemic effects, long-term.

Inhalation, Workers: 0.55 mg/m³ (8 h).

Potential health effects: Systemic effects, long-term.

PNEC

Vitamin A palmitate:

Fresh water: 0.1 mg/l

Fresh water sediment: The equilibrium partitioning method is not applicable.

Marine water: 0.01 mg/l

Marine sediment: The equilibrium partitioning method is not applicable.

Soil: The equilibrium partitioning method is not applicable.

Sewage treatment plant: 10 mg/l

Exposure controls

Personal protective equipment

Respiratory protection: In the case of vapour formation use a respirator with an approved filter.

Hand protection:

Glove material: for example nitrile rubber.

Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.

Eye protection: Safety glasses with side shields.

Skin and body protection: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures:

When using do not eat or drink.

When using do not smoke.

Avoid contact with skin, eyes and clothing.

Section 9 : Physical and Chemical Properties

Information on basic physical and chemical properties Appearance: Oily liquid / Powder

Colour: Yellow - brownish

Odour: No information available.

Odour threshold: No information available.

pH: No data available.

Melting point/range: Not determined.

Boiling point/boiling range: Not determined.

Flash point: Ca. 195 °C (DIN 51758) Test performed using a similar product.

Evaporation rate: Not determined. **Lower explosion limit:** Not determined. **Upper explosion limit:** Not determined. **Vapour pressure:** Not determined.

Relative vapour density: Not applicable.

Density: Not determined.

Water solubility: Vitamin A Palmitate is a cold water soluble, bioavailable form of the fat soluble.

Partition coefficient: noctanol/water: Not applicable.

Auto-ignition temperature: No data available.

Ignition temperature: Ca. 355 °C (DIN 51794) Test performed using a similar product.

Thermal decomposition: No data available.

Viscosity, dynamic: Not determined. **Explosive properties:** Not explosive. **Oxidizing properties:** No data available.

Other information No data available.

Section 10 : Stability and Reactivity

Reactivity

No hazards to be specially mentioned.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

In case of extensive air contact (e.g. soaked rags, moistened clothes) an exothermic autooxidation (self ignition) is possible.

Conditions to avoid

Heat.

Exposure to air.

Incompatible materials

Strong acids and strong bases.

Strong oxidizing agents.

Hazardous decomposition products

No decomposition if used as directed.

Section 11 : Toxicological Information

Information on toxicological effects

Acute oral toxicity: Acute toxicity estimate: > 5 000 mg/kg (Calculation method).

Skin irritation Retinyl palmitate:

Mild skin irritation (Rabbit, OECD Test Guideline 404).

No phototoxic skin reaction (Guinea pig).

3,4-dihydro-2,5,7,8- tetramethyl-2-(4,8,12- trimethyltridecyl)-2H-benzopyran-6-ol: Mild skin irritation (Rabbit).

Eye irritation

3,4-dihydro-2,5,7,8- tetramethyl-2-(4,8,12- trimethyltridecyl)-2H-benzopyran-6-ol: Slight irritation (Rabbit, Draize Test) temporary redness.

Respiratory or skin sensitisation:

Did not cause sensitisation on laboratory animals. (Guinea pig, Maximisation Test (GPMT), OECD Test Guideline 406). Test substance: Active ingredient.

Did not cause sensitization. (Mouse, Local Lymph Node Assay (LLNA), OECD Test Guideline 429). Tested with a similar product containing 1.5% dl-alpha-tocopherol.

No photoallergenic skin reaction (Guinea pig). Test substance: active ingredient.

Genotoxicity in vivo

Retinyl palmitate: Not genotoxic (In vivo micronucleus test, Mouse).

Carcinogenicity: No indication for carcinogenicity known.

Teratogenicity

Retinyl palmitate: Teratogenic embryotoxic (several species). **STOT - repeated exposure:** This information is not available. **Further information**

Retinyl palmitate: Danger of cumulative effects.

Experience with human exposure Retinyl palmitate:

RDA (Recommended Daily Allowance) 0.8 mg pure vitamin A (retinol) per day established for men.

RDA (Recommended Daily Allowance) ca. 0.7 mg pure vitamin A (retinol) per day established for women.

Experience with human exposure: Ingestion Retinyl palmitate:

Acute overdose produces the following symptoms: Headache, Irritability, Tiredness, Drowsiness, Nausea, Vomiting, Signs of increased intracranial pressure, generalized desquamation of the skin (after ca. 24 hours).

Section 12 : Ecological Information

Toxicity Toxicity to algae:

Desmodesmus subspicatus (green algae).

ErC50 (72 h) 153 mg/l

Test substance: Active ingredient (nominal concentration).

(DIN 38412).

Persistence and degradability Biodegradability

Retinyl palmitate:

Not readily biodegradable.

40 - 50 % (28 d).

(OECD Test Guideline 301F).

3,4-dihydro-2,5,7,8- tetramethyl-2-(4,8,12- trimethyltridecyl)-2Hbenzopyran-6-ol:

Not readily biodegradable.

8 % (28 d).

(OECD Test Guideline 301F).

Photodegradation retinyl palmitate: Decomposes rapidly in contact with light.

No data is available on the product itself.

Bioaccumulative potential Bioaccumulation: No data available.

Partition coefficient: noctanol/water: Not applicable.

Mobility in soil

Distribution among environmental compartments: No data available.

Results of PBT and vPvB assessment Assessment: Not determined.

Other adverse effects

Additional ecological information: May cause long-term adverse effects in the aquatic environment.

Section 13 : Disposal Considerations

Waste treatment methods Product:

Organic materials (e.g. rags, paper, wood) which are soaked with this product can heat up and catch fire in the presence of air, even at room temperature: store in the absence of air (e.g. in water) and send it for incineration (or dispose of in accordance with local regulations).

Discharge into the environment must be avoided.

Do not contaminate ponds, waterways or ditches with chemical or used container.

Do not dispose of waste into sewer.

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging:

Dispose of as unused product.

Do not re-use empty containers.

Section 14 : Transport Information

UN number

ADR Not dangerous goods.

RID Not dangerous goods.

IMDG Not dangerous goods.

IATA Not dangerous goods.

Proper shipping name

ADR Not dangerous goods.

RID Not dangerous goods.

IMDG Not dangerous goods.

IATA Not dangerous goods.

Transport hazard class

ADR Not dangerous goods.

RID Not dangerous goods.

IMDG Not dangerous goods.

IATA Not dangerous goods.

Packing group

ADR Not dangerous goods.

RID Not dangerous goods.

IMDG Not dangerous goods.

IATA Not dangerous goods.

Environmental hazards

ADR Not dangerous goods.

RID Not dangerous goods.

IMDG Not dangerous goods.

IATA Not dangerous goods.

Special precautions for user

Not classified as dangerous in the meaning of transport regulations.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available.

Section 15 : Regulatory Information

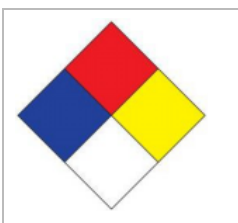
Safety, health and environmental regulations/legislation specific for the substance or mixture

NFPA Classification:

Health hazard: 0

Fire Hazard: 1

Reactivity Hazard: 0



Chemical Safety Assessment

Retinyl palmitate: A Chemical Safety Assessment has been carried out for this substance.

Section 16 : Other Information

- "IMO" : not dangerous for sea transport

Disclaimer

Additional references can be taken from the label or the product description. The information given here is correct to the best of our knowledge at the time of writing this sheet. No responsibility can be taken for improper use or handling of the product.