Safety data sheet

1. Identification

Product identifier

Vitamin A-Acetate

Chemical name: retinyl acetate
CAS Number: 127-47-9

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

Relevant identified uses: feed additive(s), food additive(s)

Details of the supplier of the safety data sheet

Company: RAWPHARMA BIZ PVT LTD
1101-CITY CENTRE-2
SCIENCE CITY ROAD, SOLA
AHMEDABAD, 380060
GUJARAT, INDIA.

Telephone: 8320310672

E-mail address: info@rawpharmabiz.com

Website: www.rawpharmabiz.com

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2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 5 (oral)
Skin Corr./Irrit. 3
Repr. 1B (unborn child)
Aquatic Chronic 4

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H316	Causes mild skin irritation.
H303	May be harmful if swallowed.
H360	May damage the unborn child.
H413	May cause long lasting harmful effects 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 doctor/physician. P332 + P313 If skin irritation occurs: Get medical advice/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

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification, but which may contribute to the overall hazards of the substance or mixture. When finely distributed, self-ignition is possible. The product does not contain a substance fulfilling the PBT (persistent/bio accumulative/toxic) criteria or the vPvB (very persistent/very bio accumulative) criteria.

3. Composition/Information on Ingredients

Substances

Chemical nature

liposoluble vitamin
Retinyl acetate
CAS Number: 127-47-9
EC-Number: 204-844-2

For the classifications not written out in full in this section the full text can be found in section 16.

Mixtures

Not applicable

4. First-Aid Measures

Description of first aid measures

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.

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

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

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: water spray, dry powder, alcohol-resistant foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

harmful vapors, carbon oxides
Burning produces harmful and toxic fumes.

Advice for fire-fighters

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

Further information:
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. Cool endangered containers with water-spray. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems.

6. Accidental Release Measures

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 vapor/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. After taking up material in containers, cover immediately with water layer.
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).

7. Handling and Storage

Precautions for safe handling

Avoid aerosol formation. Processing machines must be fitted with local exhaust ventilation. Ensure that there is no crystallized product in the container before use. 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.

Conditions for safe storage, including any incompatibilities

Segregate from oxidants.

Suitable materials for containers: Stove-lacquer R 78433, High density polyethylene (HDPE) 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.

Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

127-47-9: Retinyl acetate

Exposure controls

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapor/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 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): 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
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. Females in early pregnancy must never be exposed to the substance. 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

Information on basic physical and chemical properties

Form:	solid (tends to form supercooled liquid)
Color:	yellow
Odor:	mild
Odor threshold:	
	not determined

pH value: not applicable
turbidity/clear point: approx. 60 °C
Boiling point:
(1.013 hPa)
Study scientifically not justified. The substance / product decomposes therefore not determined.

Flash point:	approx. 150 °C	(DIN EN 22719; ISO 2719)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability:	not highly flammable	(Directive 92/69/EEC, A.12)
Lower explosion limit:	For liquids not relevant for classification and labelling.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	approx. 290 °C	(DIN 51794)
Vapor pressure:	0,002 hPa (100 °C)	
Density:	> 0,94 g/cm3 (60 °C)	

Solubility in water: (OECD Guideline 105)
< 10 µg/l
(20 °C)
Solubility (qualitative) solvent(s): hydrocarbons, oils, fats, ether soluble
Thermal decomposition: >= 170 °C (DSC (OECD 113))
Viscosity, dynamic: 40,00 mPa.s
(60 °C)
Explosion hazard: Based on the chemical structure there is no indicating of explosive properties.
Fire promoting properties: Based on its structural properties the product is not classified as oxidizing.

Other information

Self-heating ability: Not tested on account of the low melting-point.
pKA:

The substance does not dissociate.
Adsorption/water - soil: (calculated)
Molar mass: 328,49 g/mol

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:	Corrosive effects to metal are not anticipated.	
Formation of flammable gases:	Method:	Flammability (contact with water)
	Information on hazardous decomposition products:	Forms no flammable gases in the presence of water.

Chemical stability

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

Possibility of hazardous reactions

When finely distributed, self-ignition is possible.

Conditions to avoid

See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
oxidizing agents

Hazardous decomposition products

Possible thermal decomposition products: Acetic acid

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of low toxicity after single ingestion.

Experimental/calculated data:
LD50 rat (oral): > 2.000 mg/kg
No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Irritation

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

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

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.

Experimental/calculated data:
Guinea pig maximization test guinea pig: non-sensitizing. (OECD Guideline 406)

Germ cell mutagenicity
Assessment of mutagenicity:
Most of the results from the available studies show no evidence of a mutagenic effect. Literature data.

Carcinogenicity

Assessment of carcinogenicity:
No reliable data was available concerning carcinogenic activity.

Reproductive toxicity

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

Developmental toxicity

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

Specific target organ toxicity (single exposure)

Assessment of STOT single:
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:
Repeated exposure to large quantities may affect certain organs.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

The product has not been tested.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. No toxic effects occur within the range of solubility. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Toxicity to fish:
LC50 (96 h) 1,37 mg/l, Oncorhynchus mykiss (OECD Guideline 203)
The statement of the toxic effect relates to the analytically determined concentration. The LC50 is higher than the solubility limit. Tested above maximum solubility. No toxic effects occur within the range of solubility.

Aquatic invertebrates:
EC50 (48 h) 46 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
No toxic effects occur within the range of solubility. Tested above maximum solubility. The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:
EC50 (72 h) 0,103 mg/l (biomass), Scenedesmus subspicatus (OECD Guideline 201, static) The details of the toxic effect relate to the nominal concentration. No toxic effects occur within the range of solubility. Tested above maximum solubility.

Microorganisms/Effect on activated sludge:
EC20 (180 min) > 1.000 mg/l, activated sludge, domestic (OECD Guideline 209, aquatic)
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.

Chronic toxicity to aquatic invertebrates:
Study scientifically not justified.

Persistence and degradability

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

Elimination information:
42,2 % CO2 formation relative to the theoretical value (28 d) (OECD 301B; ISO 9439; 92/69/EEC, C.4-C) (aerobic, activated sludge, domestic)

Assessment of stability in water:
In contact with water the substance will hydrolyze slowly.

Bio accumulative potential

Assessment bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

Bioaccumulation potential:
Significant accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments: Adsorption in soil: Adsorption to solid soil phase is expected.

Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT
(Persistent/bio accumulative/toxic) and vPvB (very persistent/very bio accumulative). Self-classification

Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

13. Disposal Considerations

Waste treatment methods

Observe national and local legal requirements.

14. Transport Information

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN 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

RID

Not classified as a dangerous good under transport regulations

UN 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

Inland waterway transport ADN

Not classified as a dangerous good under transport regulations

UN 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

Transport in inland waterway vessel
Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN 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:	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	None known user

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

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

15. Regulatory Information

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

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.

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Repr.	Reproductive toxicity
Aquatic Chronic	Hazardous to the aquatic environment - chronic

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only regarding 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.