

Safety data sheet

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BASF Safety data sheet
Date / Revised: 27.01.2025
Product: **Lutavit® A 500 Plus**

Version: 8.0

(30040362/SDS_GEN_SG/EN)

Date of print: 15.10.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:
Lutavit® A 500 Plus

Use: feed additive(s)

Manufacturer/supplier:
BASF South East Asia Pte Ltd.
128 Beach Road #18-01
Guoco Midtown, 189773, Singapore
Telephone: +65 8322 4420
Telefax number: +65 6 334-0330
E-mail address: benny.zou@basf.com

Emergency information:
Singapore Emergency Toll-Free Number:
Telephone: 1800-723-1361
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

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

Label elements and precautionary statement:

Pictogram:

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Signal Word:
 Danger

Hazard Statement:

H316	Causes mild skin irritation.
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.
P332 + P313	If skin irritation occurs: Get medical attention.

Precautionary Statements (Storage):

P405	Store locked up.
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Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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Other hazards which do not result in classification:

The product is under certain conditions capable of dust explosion.

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 91 - 97 %, dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 71 - 76 %, oral The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 91 - 97 %, Inhalation - dust

3. Composition/information on ingredients

Chemical nature

Substance nature: mixture

Preparation based on:
 retinyl acetate

in a matrix of: carbohydrates
 , Gelatins

Hazardous ingredients

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retinyl acetate

Content (W/W): $\geq 15\%$ - $< 25\%$
CAS Number: 127-47-9

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

ethoxyquin

Content (W/W): $\geq 3\%$ - $< 5\%$
CAS Number: 91-53-2

Acute Tox.: Cat. 4 (oral)
Acute Tox.: Cat. 5 (Inhalation - mist)
Aquatic Acute: Cat. 2
Aquatic Chronic: Cat. 2

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.

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

Additional information:

Avoid whirling up the material/product because of the danger of dust explosion.

Specific hazards:

harmful vapours, carbon oxides

The substances/groups of substances mentioned can be released in case of fire. Dust explosion hazard.

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.

Cool endangered containers with water-spray.

6. Accidental Release Measures

Personal precautions:

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

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Contain with dust binding material and dispose of.

For large amounts: Sweep/shovel up. Collect waste in suitable containers, which can be labeled and sealed.

Avoid raising dust. Dispose of absorbed material in accordance with regulations. Cleaning operations should be carried out only while wearing breathing apparatus.

Additional information: Dust can form an explosive mixture with air.

7. Handling and Storage

Handling

Avoid dust formation. Provide exhaust ventilation if dust is formed. Avoid contact with the skin, eyes and clothing.

Protection against fire and explosion:

Avoid dust formation. The product is capable of dust explosion. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Use explosion-proof apparatus and fittings.

Storage

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE)

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air.

8. Exposure controls and personal protection

Components with occupational exposure limits

| starch, 9005-25-8;

TWA value 10 mg/m³ (ACGIHTLV)

TWA value 10 mg/m³ (OEL (SG))

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for lower concentrations or short-term effect: 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:

Under no circumstances should the product come into contact with the skin of pregnant women or be inhaled by them. Females in early pregnancy must never be exposed to the substance. Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. 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:	powder
Colour:	tan to brown
Odour:	earthy
Odour threshold:	Not determined due to potential health hazard by inhalation.

pH value:

(20 °C)
not applicable, of very low solubility

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Melting temperature:	approx. 60 °C	
Boiling point:	The product is a non-volatile solid.	
Flash point:	not applicable, the product is a solid	
Evaporation rate:	The product is a non-volatile solid.	
Flammability (solid/gas):	not highly flammable	(other)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Ignition temperature:	No data available.	
Thermal decomposition:	≥ 100 °C	(DSC (DIN 51007))
Self heating ability:	Not tested on account of the low melting-point.	
SADT:	No data available.	
Minimum ignition energy:	The product is capable of dust explosion.	(VDI 2263, sheet 1, 2.5 (May 1990))
Explosion hazard:	Product is not explosive, however a dust explosion could result from an air / dust mixture.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	negligible	
Density:	No information is available for the absolute density. Instead the bulk density was determined as a more relevant value.	
Relative density:	No data available.	
Bulk density:	570 kg/m ³	
Relative vapour density (air):	not applicable	
Solubility in water:	sparingly soluble	
Solubility (qualitative) solvent(s):	organic solvents easily soluble	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	

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Viscosity, kinematic:
not applicable, the product is a solid

Particle characteristics

Particle size distribution: No data available. -

Specific Surface Area:
No data available.

Particle Shape:
No data available.

Dustiness:
No data available.

10. Stability and Reactivity

Conditions to avoid:
Avoid dust formation. See SDS section 7 - Handling and storage.

Thermal decomposition: ≥ 100 °C (DSC (DIN 51007))

Substances to avoid:
No substances known that should be avoided.

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:
Dust explosion hazard.

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

Acute oral toxicity

Experimental/calculated data:
(oral): No data available.

Acute inhalation toxicity

(by inhalation): No data available.

Acute dermal toxicity

(dermal): No data available.

Assessment of acute toxicity

Virtually nontoxic after a single ingestion.

Information on: retinyl acetate

Acute oral toxicity

Experimental/calculated data:

LD50 rat (oral): > 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.

Information on: ethoxyquin

Acute oral toxicity

Experimental/calculated data:

LD50 rat (oral): 1,726 mg/kg (similar to OECD guideline 401)

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

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 91 - 97 %, dermal

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 71 - 76 %, oral

The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 91 - 97 %, Inhalation - dust

Irritation

Assessment of irritating effects:

Skin contact causes slight irritation. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation: No data available.

Serious eye damage/irritation: No data available.

Information on: retinyl acetate

Experimental/calculated data:

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

Respiratory/Skin sensitization

Assessment of sensitization:

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

Experimental/calculated data:

No data available.

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

Information on: ethoxyquin
Experimental/calculated data:
Buehler test guinea pig: Non-sensitizing. (similar to OECD guideline 406)

Germ cell mutagenicity

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

Information on: retinyl acetate
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.

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

Carcinogenicity

Assessment of carcinogenicity:
Not classified, due to lack of data.

Experimental/calculated data:
No data available.

Reproductive toxicity

Assessment of reproduction toxicity:
Substances which cause concern for humans owing to possible developmental toxic effects.

Experimental/calculated data:
No data available.

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

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

Developmental toxicity

Assessment of teratogenicity:

The substance caused malformations/developmental toxicity in laboratory animals.

Information on: retinyl acetate

Assessment of teratogenicity:

May cause harm to the unborn child.

Specific target organ toxicity (single exposure)

Remarks: 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.

Experimental/calculated data:

No data available.

Information on: retinyl acetate

Assessment of repeated dose toxicity:

Repeated exposure to large quantities may affect certain organs.

Aspiration hazard

not applicable

Other relevant toxicity information

The product has not been tested. The statement has 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.

Toxicity to fish:

No data available.

Aquatic invertebrates:

No data available.

Aquatic plants:

No data available.

Microorganisms/Effect on activated sludge:

No data available.

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Chronic toxicity to fish:

No data available.

Chronic toxicity to aquatic invertebrates:

No data available.

Information on: retinyl acetate

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.

Information on: ethoxyquin

Toxicity to fish:

LC50 (96 h) 18 mg/l, *Oncorhynchus mykiss* (OPP 72-1 (EPA-Guideline), Flow through.)

Information on: retinyl acetate

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.

Information on: ethoxyquin

Aquatic invertebrates:

EC50 (48 h) 2 mg/l, *Daphnia magna* (OPP 72-2 (EPA-guideline), Flow through.)

Information on: retinyl acetate

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.

Information on: ethoxyquin

Aquatic plants:

EC50 (72 h) > 16 mg/l (growth rate), *Pseudokirchneriella subcapitata* (Guideline 92/69/EEC, C.3, static)

No observed effect concentration (72 h) 2.3 mg/l (growth rate), *Pseudokirchneriella subcapitata* (Guideline 92/69/EEC, C.3, static)

Information on: retinyl acetate

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.

Information on: ethoxyquin

Microorganisms/Effect on activated sludge:

EC20 (30 min) approx. 60 mg/l, activated sludge, domestic (DIN EN ISO 8192, aerobic)

Assessment of terrestrial toxicity:

No data available.

Mobility

Assessment transport between environmental compartments:

No data available.

Adsorption to solid soil phase is expected.

Information on: retinyl acetate

Assessment transport between environmental compartments:

No data available.

Adsorption to solid soil phase is expected.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria).

Information on: retinyl acetate

Assessment biodegradation and elimination (H₂O):

Not readily biodegradable (by OECD criteria). Moderately/partially biodegradable.

Information on: ethoxyquin

Bioaccumulation potential

Assessment bioaccumulation potential:

The product contains components with potential for bioaccumulation

Information on: retinyl acetate

Assessment bioaccumulation potential:

Significant accumulation in organisms is not to be expected.

Information on: ethoxyquin

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Additional information

Add. remarks environm. fate & pathway:

The product has not been tested. The statements on environmental fate and pathway have been derived from the properties of the individual components.

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

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
	Marine pollutant: no
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

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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.