

Safety data sheet

Page: 1/10

BASF Safety data sheet
Date / Revised: 23.10.2017
Product: **Lucantin® Yellow**

Version: 4.0

(30041147/SDS_GEN_VN/EN)

Date of print 23.10.2025

1. Substance/preparation and manufacturer/supplier identification

Lucantin® Yellow

Use: feed additive(s)

Manufacturer/supplier:

BASF Vietnam Co. Ltd.
Level 23, Deutsches Haus, 33 Le Duan,
Sai Gon Ward, Ho Chi Minh City, Vietnam
Telephone: +84 28 3824 3833
Telefax number: +84 28 3824 3832
E-mail address: minh-triet.thieu@basf.com

Emergency information:

18001703 (Vietnam)
Telefax number: +84 28 3824 3832
International emergency number:
Telephone: +49 180 2273-112

2. Hazard identification

Classification of the substance and mixture:

No need for classification according to GHS criteria for this product.

Label elements and precautionary statement:

The product does not require a hazard warning label in accordance with GHS criteria.

Other hazards which do not result in classification:

The product is under certain conditions capable of dust explosion. The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

3. Composition/information on ingredients

Chemical nature

Preparation based on: ethyl 8'-apo-beta-caroten-8'-oate (Content (W/W): 10 %)

in a matrix of: carbohydrates, Gelatins

stabilized with: ethoxyquin

Hazardous ingredients

ethoxyquin

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

Acute Tox.: Cat. 4 (oral)

4. First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

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

On ingestion:

Rinse mouth and then drink plenty of water.

Note to physician:

Symptoms: No significant symptoms are expected due to the non-classification of the product.

Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

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. Dust explosion hazard.

Special protective equipment:
Wear a self-contained breathing apparatus.

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.

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.
Dispose of absorbed material in accordance with regulations. Avoid raising dust.

7. Handling and Storage

Handling

Handle in accordance with good industrial hygiene and safety practice.

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

Storage

Further information on storage conditions: Protect contents from the effects of light. Keep container tightly closed and in a cool place.

8. Exposure controls and personal protection

Components with occupational exposure limits

sucrose, 57-50-1;
TWA value 10 mg/m³ (ACGIHTLV)

sunflower oil, 8001-21-6;
TWA value 10 mg/m³ (OEL (VN)), Mist

Personal protective equipment

Respiratory protection:

Breathing protection if breathable aerosols/dust are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1 or FFP1)

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.

Eye protection:

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

Body protection:

chemical protection overall (f.e. according to EN 13982) if dust is formed.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. 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: brick-red
Odour: faint specific odour
Odour threshold: not determined

pH value:
not determined

Melting point:
not determined

Boiling point:
not applicable

Flash point:
not applicable, the product is a solid

Evaporation rate:
not applicable

Flammability (solid/gas): not highly flammable (VDI 2263, sheet 1, 1.1)

Lower explosion limit:
For solids not relevant for classification and labelling.

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Upper explosion limit: For solids not relevant for classification and labelling.

Thermal decomposition: $\geq 145\text{ °C}$ (DSC (OECD 113))
Self heating ability: It is a substance capable of spontaneous heating according to UN transport regulations class 4.2. Based on test results packaging $< 3\text{m}^3$ are exempted from the classification. (VDI 2263, sheet 1, 1.4.2)

Minimum ignition energy: $> 1\text{ J}$ (DIN EN 13821)
The product is capable of dust explosion.

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.

Vapour pressure: not applicable

Bulk density: approx. 600 kg/m^3
Relative vapour density (air): not applicable

Solubility in water: dispersible ($> 35\text{ °C}$)

Partitioning coefficient n-octanol/water (log Pow): not applicable for mixtures

Information on: ethyl 8'-apo-beta-caroten-8'-oate
Partitioning coefficient n-octanol/water (log Pow): 12.79 (calculated)
(25 °C)

Information on: ethoxyquin
Partitioning coefficient n-octanol/water (log Pow): 3.87
(25 °C)

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

10. Stability and Reactivity

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

Thermal decomposition: $\geq 145\text{ °C}$ (DSC (OECD 113))

Substances to avoid:
None known during use and storage if used according to instructions.

Corrosion to metals: Corrosive effects to metal are not anticipated.

Hazardous reactions:
Dust explosion hazard.

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

11. Toxicological Information

Acute toxicity

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

Information on: ethoxyquin
Experimental/calculated data:
LD50 rat (oral): 800 - 1,000 mg/kg (other)

Information on: ethyl 8'-apo-beta-caroten-8'-oate
Experimental/calculated data:
LD50 rat (oral): > 10,000 mg/kg

Irritation

Assessment of irritating effects:
Not irritating to eyes and skin.

Information on: ethyl 8'-apo-beta-caroten-8'-oate
Assessment of irritating effects:
Not irritating to the skin. Not irritating to the eyes.

Information on: ethoxyquin
Assessment of irritating effects:
May cause slight irritation to the skin. May cause slight irritation to the eyes.

Respiratory/Skin sensitization

Assessment of sensitization:
There is no evidence of a skin-sensitizing potential.

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

Germ cell mutagenicity

Assessment of mutagenicity:

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

Information on: ethyl 8'-apo-beta-caroten-8'-oate

Assessment of mutagenicity:

The substance was not mutagenic in bacteria. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. Literature data.

Carcinogenicity

Assessment of carcinogenicity:

Not classified, due to lack of data.

Reproductive toxicity

Assessment of reproduction toxicity:

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

Information on: ethyl 8'-apo-beta-caroten-8'-oate

Assessment of reproduction toxicity:

The results of animal studies gave no indication of a fertility impairing effect. Literature data.

Information on: ethoxyquin

Assessment of reproduction toxicity:

On the basis of animal study findings, an effect on fertility cannot be excluded when given in high doses. Literature data.

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:

Not classified, due to lack of data.

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

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Date of print 23.10.2025

Assessment of aquatic toxicity:

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: ethyl 8'-apo-beta-caroten-8'-oate**Toxicity to fish:**

LC50 (96 h) approx. 5,300 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

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

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

Information on: ethyl 8'-apo-beta-caroten-8'-oate**Microorganisms/Effect on activated sludge:**

EC10 (30 min) > 10,000 mg/l, *Pseudomonas putida* (DIN 38412 Part 27 (draft), aquatic)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

EC20 (30 min) > 1,000 mg/l, activated sludge (DIN EN ISO 8192, aerobic)

Information on: ethoxyquin**Microorganisms/Effect on activated sludge:**

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

Mobility

Assessment transport between environmental compartments:
not determined

Information on: ethyl 8'-apo-beta-caroten-8'-oate**Assessment transport between environmental compartments:**

The substance will rapidly evaporate into the atmosphere from the water surface.

Adsorption to solid soil phase is expected.

Persistence and degradability**Assessment biodegradation and elimination (H₂O):**

The product has not been tested.

Information on: ethyl 8'-apo-beta-caroten-8'-oate**Elimination information:**

10 - 20 % BOD of the ThOD (28 d) (OECD Guideline 301 F) (aerobic, activated sludge, domestic)

Information on: ethoxyquin**Elimination information:**

< 20 % BOD of the ThOD (25 d) (OECD Guideline 301 F) (aerobic, activated sludge, industrial)

Bioaccumulation potential

Assessment bioaccumulation potential:
The product has not been tested.

Information on: ethoxyquin

Assessment bioaccumulation potential:

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow).

Information on: ethyl 8'-apo-beta-caroten-8'-oate

Assessment bioaccumulation potential:

No significant accumulation in organisms is expected as a result of the distribution coefficient of n-octanol/water (log Pow). The product will not be readily bioavailable due to its consistency and insolubility in water.

13. Disposal Considerations

Observe national and local legal requirements.

14. Transport Information

Domestic transport:

Hazard class:	4.2
Packing group:	III
ID number:	UN 3088
Hazard label:	4.2
Proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO- β -CAROTEN-8'-OATE)

Sea transport

IMDG

Hazard class:	4.2
Packing group:	III
ID number:	UN 3088
Hazard label:	4.2
Marine pollutant:	NO
Proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO- β -CAROTEN-8'-OATE)

Air transport

IATA/ICAO

Hazard class:	4.2
Packing group:	III
ID number:	UN 3088
Hazard label:	4.2

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Proper shipping name: SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO- β -CAROTEN-8'-OATE)

Further information

Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

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.