

Safety Data Sheet

Lucantin® Yellow

Revision date : 2017/11/22

Version: 3.0

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(30041147/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Lucantin® Yellow

Recommended use of the chemical and restriction on use

Recommended use*: feed additive(s)

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Synonyms: Preparation based on Ethyl 8'-apo- β -caroten-8'-oat

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Combustible Dust Combustible Dust (1) Combustible Dust

Label elements

Signal Word:
Warning

Hazard Statement:

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May form combustible dust concentration in air.

Hazards not otherwise classified

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

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
57-50-1	36.0 - 40.0%	Sucrose
8001-21-6	3.0 - 5.0%	Sunflower oil
91-53-2	3.0 - 5.0%	Ethoxyquin

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Wash thoroughly with soap and water.

If in eyes:

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

If swallowed:

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

Most important symptoms and effects, both acute and delayed

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

Indication of any immediate medical attention and special treatment needed

Note to physician

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

5. Fire-Fighting Measures

Extinguishing media

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

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:

carbon oxides, harmful vapours

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

Advice for fire-fighters

Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. Cool endangered containers with water-spray.

Dusty conditions may ignite explosively in the presence of an ignition source causing flash fire.

6. Accidental release measures

Further accidental release measures:

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Avoid the formation and build-up of dust - danger of dust explosion. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition.

Personal precautions, protective equipment and emergency procedures

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 and material for containment and cleaning 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.

Nonsparking tools should be used.

7. Handling and Storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:

Avoid dust formation. Dust in sufficient concentration can result in an explosive mixture in air. Handle to minimize dusting and eliminate open flame and other sources of ignition. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static

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electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2013 Edition) for safe handling.

Conditions for safe storage, including any incompatibilities

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

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Sucrose	OSHA PEL	PEL 15 mg/m3 Total dust ; PEL 5 mg/m3 Respirable fraction ; TWA value 15 mg/m3 Total dust ; TWA value 5 mg/m3 Respirable fraction ;
	ACGIH TLV	TWA value 10 mg/m3 ;
Sunflower oil	OSHA PEL	PEL 15 mg/m3 Total dust ; PEL 5 mg/m3 Respirable fraction ; TWA value 5 mg/m3 Respirable fraction ; TWA value 15 mg/m3 Total dust ;

Advice on system design:

Ensure adequate ventilation. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use only appropriately classified electrical equipment and powered industrial trucks.

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended. Avoid inhalation of dust. Avoid contact with the skin, eyes and clothing. Eye wash fountains and safety showers must be easily accessible. 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.

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9. Physical and Chemical Properties

Form:	powder	
Odour:	faint specific odour	
Odour threshold:	not determined	
Colour:	brick-red	
pH value:	not determined	
Melting point:	not determined	
Boiling point:	not applicable	
Flash point:	not applicable, the product is a solid	
Flammability:	not highly flammable	(VDI 2263, sheet 1, 1.1)
Lower explosion limit:	For solids not relevant for classification and labelling.	
Upper explosion limit:	For solids not relevant for classification and labelling.	
Vapour pressure:	not applicable	
Bulk density:	approx. 600 kg/m ³	
Vapour density:	not applicable	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
<i>Information on: ethyl 8'-apo-beta-caroten-8'-oate</i>		
Partitioning coefficient n-octanol/water (log Pow):	12.79	(calculated)
	(25 °C)	
<i>Information on: Ethoxyquin</i>		
Partitioning coefficient n-octanol/water (log Pow):	3.87	
	(25 °C)	

Thermal decomposition:	>= 145 °C (DSC (OECD 113))	
Viscosity, dynamic:	not applicable, the product is a solid	
Solubility in water:	(> 35 °C)	
	dispersible	
Evaporation rate:	not applicable	

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.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Minimum ignition energy:

> 1 J (DIN EN 13821)

The product is capable of dust explosion.

Chemical stability

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

Peroxides: The product does not contain peroxides.

Possibility of hazardous reactions

Dust explosion hazard.

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Conditions to avoid

Incompatible materials

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

Hazardous decomposition products

Decomposition products:

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

Thermal decomposition:

$\geq 145\text{ }^{\circ}\text{C}$ (DSC (OECD 113))

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

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

Oral

Information on: Ethoxyquin

Type of value: LD50

Species: rat

Value: 800 - 1,000 mg/kg (other)

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

Type of value: LD50

Species: rat (male/female)

Value: > 10,000 mg/kg

Assessment other acute effects

Assessment of STOT single:

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

Irritation / corrosion

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

Information on: Sodium benzoate

Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation.

Sensitization

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

Information on: Ethoxyquin

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Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Aspiration Hazard

No data available.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Not classified, due to lack of data.

Genetic toxicity

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.

Other Information

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

Symptoms of Exposure

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

12. Ecological Information

Toxicity

Aquatic toxicity

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.

Toxicity to fish

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

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

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.

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Persistence and degradability

Assessment biodegradation and elimination (H₂O)

The product has not been tested.

Elimination information

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

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

Information on: Ethoxyquin

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

Bioaccumulative potential

Assessment bioaccumulation potential

The product has not been tested.

Assessment bioaccumulation potential

Information on: Ethoxyquin

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

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.

Mobility in soil

Assessment transport between environmental compartments

not determined

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

The substance will rapidly evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is expected.

13. Disposal considerations

Waste disposal of substance:

Observe national and local legal requirements.

Container disposal:

Dispose of in accordance with national, state and local regulations.

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14. Transport Information

Land transport

USDOT

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
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

Federal Regulations

Registration status:

Chemical TSCA, US blocked / not listed

Feed TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK

PA

CAS Number

57-50-1

8001-21-6

Chemical name

Sucrose

Sunflower oil

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NFPA Hazard codes:

Health: 0 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 0 Flammability: 1 Physical hazard: 0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2017/11/22

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