We create chemistry

Safety Data Sheet
Lucantin® Red

1. Identification

Product identifier used on the label

Lucantin® Red

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 Canthaxanthin

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:

May form combustible dust concentration in air.

Hazards not otherwise classified

The product is under certain conditions capable of dust explosion.

3. Composition / Information on Ingredients

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

Sucrose
CAS Number: 57-50-1
Content (W/W): 30.0 - 50.0%
Synonym: .alpha.-D-Glucopyranoside, .beta.-D-fructofuranosyl-

Ethoxyquin
CAS Number: 91-53-2
Content (W/W): 1.0 - 5.0%
Synonym: 6-Ethoxy-1,2-dihydro-2,2,4-trimethylquinoline

Sunflower oil
CAS Number: 8001-21-6
Content (W/W): 1.0 - 5.0%
Synonym: No data available.

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 irritation develops, seek medical attention.

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

If irritation develops, seek immediate medical attention.

If swallowed:
Rinse mouth and then drink 200-300 ml of water.

Most important symptoms and effects, both acute and delayed

Symptoms: No data available.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Symptomatic treatment (decontamination, vital functions).

5. Fire-Fighting Measures

Extinguishing media

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
Burning produces harmful and toxic fumes. Dust explosion hazard.

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.

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

Avoid dust formation. Information regarding personal protective measures, see section 8.

Environmental precautions

Methods and material for containment and cleaning up

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Contain with dust binding material and dispose of.
Dispose of absorbed material in accordance with regulations.

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 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

Suitable materials for containers: Low density polyethylene (LDPE), glass, Paper/Fibreboard, High density polyethylene (HDPE), Aluminium, tinned carbon steel (Tinplate)

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:
Wear a NIOSH-certified (or equivalent) particulate respirator. Breathing protection if breathable aerosols/dust are formed.

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:
Avoid inhalation of dust. Avoid contact with the skin, eyes and clothing. Ensure adequate ventilation. Wear protective clothing as necessary to minimize contact. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:	powder	
Odour:	faint odour, hay-like	
Odour threshold:	not determined	
Colour:	red to brown	
pH value:	6 (5 %(m), 20 °C)	
Melting point:	> 100 °C	
Freezing point:	> 100 °C	
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.	
SADT:	> 75 °C Heat accumulation / Dewar 500 ml (SADT, UN-Test H.4, 28.4.4)	
Vapour pressure:	negligible	
Bulk density:	approx. 650 kg/m3	
Vapour density:	not applicable	
Partitioning coefficient n-octanol/water (log Pow):	not applicable for mixtures	
Information on: canthaxanthin		
Partitioning coefficient n-octanol/water (log Pow):	14.1 (25 °C)	(calculated)
Information on: Ethoxyquin		
Partitioning coefficient n-octanol/water (log Pow):	3.39	(measured)
	3.18	(measured)
	3.19	(measured)

Thermal decomposition:	>= 150 °C	
Viscosity, dynamic:	not applicable, the product is a solid	
Viscosity, kinematic:	not applicable, the product is a solid	
Solubility in water:	(> 35 °C) dispersible	
Miscibility with water:	miscible	
Molar mass:	No data available.	
Evaporation rate:	negligible	

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.

Possibility of hazardous reactions
Dust explosion hazard.

Conditions to avoid
See SDS section 7 - Handling and storage. Avoid dust formation. Avoid all sources of ignition: heat, sparks, open flame.

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:
>= 150 °C

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.

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

Information on: Ethoxyquin
Assessment of acute toxicity:Virtually nontoxic after a single skin contact. Of moderate toxicity after single ingestion. Of moderate toxicity after short-term inhalation.

Information on: Sucrose

Assessment of acute toxicity:Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation.

Oral

Information on: canthaxanthin
Type of value: LD50
Species: rat
Value: > 5,600 mg/kg (BASF-Test)

Information on: Ethoxyquin
Type of value: LD50
Species: rat (female)
Value: 1,675 mg/kg (OECD Guideline 401)

Inhalation
No data available.

Dermal
No data available.

Assessment other acute effects
No data available.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin.

Information on: Sucrose
Assessment of irritating effects: Not irritating to eyes and skin.

Skin
Species: rabbit
Method: BASF-Test
No data available.

Eye
Species: rabbit
Method: BASF-Test
No data available.

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

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

Information on: Ethoxyquin
Assessment of sensitization:
No sensitizing effect.

Aspiration Hazard
No data available.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No data available.

Genetic toxicity
Assessment of mutagenicity: Based on available Data, the classification criteria are not met.

Information on: canthaxanthin
Assessment of mutagenicity: No mutagenic effect was found in various tests with bacteria and mammalian cell culture. Literature data.

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

Carcinogenicity
Assessment of carcinogenicity: Based on the ingredients there is no suspicion of a carcinogenic effect in humans.

Information on: canthaxanthin
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Literature data.

Reproductive toxicity
Assessment of reproduction toxicity: Based on available Data, the classification criteria are not met.

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

Teratogenicity

Information on: canthaxanthin
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. Literature data.

Information on: Ethoxyquin
Assessment of teratogenicity: Based on available Data, the classification criteria are not met.
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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.

Aquatic toxicity

Information on: Ethoxyquin
Assessment of aquatic toxicity:
Acutely toxic for aquatic organisms. Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible. The chronic aquatic risk classification is based on acute aquatic toxicity study data and the environmental fate properties of the product.

Toxicity to fish

Information on: canthaxanthin
LC50 (96 h) > 10,000 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The details of the toxic effect relate to the nominal concentration.

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

Assessment of terrestrial toxicity
No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Information on: canthaxanthin
DIN 38412 Part 27 (draft) bacterium/EC10 (30 min): > 10,000 mg/l
The details of the toxic effect relate to the nominal concentration.
DIN EN ISO 8192-OECD 209-88/302/EEC,P. C aerobic
activated sludge, domestic/EC20 (30 min): > 1,000 mg/l

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

Persistence and degradability

Assessment biodegradation and elimination (H2O)
The product has not been tested.

Assessment biodegradation and elimination (H2O)

Information on: canthaxanthin

Not readily biodegradable (by OECD criteria). Poorly biodegradable.

Information on: Ethoxyquin

Not readily biodegradable (by OECD criteria).

Elimination information

Information on: canthaxanthin
< 20 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EEC, C.4-D) (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.

Bioaccumulation potential
No data available.

Assessment bioaccumulation potential

Information on: Ethoxyquin

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

Information on: canthaxanthin

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

Mobility in soil

Assessment transport between environmental compartments
not determined

Additional information

Other ecotoxicological advice:
No data available.

13. Disposal considerations

Waste disposal of substance:
Observe national and local legal requirements.
Dispose of in accordance with national, state and local regulations.

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

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 CANTHAXANTHIN)

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 CANTHAXANTHIN)

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 CANTHAXANTHIN)

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

15. Regulatory Information

Federal Regulations

Registration status:

Feed	TSCA, US	released / exempt
Chemical	TSCA, US	blocked / not listed

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

State regulations

State RTK	CAS Number	Chemical name
PA	57-50-1	Sucrose
	8001-21-6	Sunflower oil

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: 2020/06/01

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.