We create chemistry

Safety data sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Lucantin® Yellow

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

Relevant identified uses: feed additive(s)

1.3. Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY

Contact address:
BASF plc
4th and 5th Floors, 2 Stockport Exchange
Railway Road, Stockport, SK1 3GG
UNITED KINGDOM

Telephone: +44 161 475 3000
E-mail address: product-safety-uk-and-ireland@basf.com

1.4. Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

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

2.2. Label elements

Globally Harmonized System, EU (GHS)

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

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline

Hazardous ingredients (GHS)
according to Regulation (EC) No. 1272/2008

ethoxyquin(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline

Content (W/W): >= 3 % - < 5 %	Acute Tox. 4 (oral)
CAS Number: 91-53-2	H302
EC-Number: 202-075-7	
INDEX-Number: 613-014-00-2	

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

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.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms: No significant symptoms are expected due to the non-classification of the product.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment: Symptomatic treatment (decontamination, vital functions).

SECTION 5: Fire-Fighting Measures

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

Unsuitable extinguishing media for safety reasons:
water jet

5.2. Special hazards arising from the substance or mixture
carbon oxides, harmful vapours
The substances/groups of substances mentioned can be released in case of fire. Evolution of fumes/fog. Dust explosion hazard.

5.3. Advice for fire-fighters
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.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions
Do not discharge into drains/surface waters/groundwater.

6.3. 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.

6.4. Reference to other sections
Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe 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.

7.2. 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.

7.3. 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.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

57-50-1: Sucrose

STEL value 20 mg/m3 (WEL/EH 40 (UK))
TWA value 10 mg/m3 (WEL/EH 40 (UK))

8.2. Exposure controls

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 P1or 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.

Environmental exposure controls
For information regarding environmental exposure controls, see Section 6.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic 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:	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

Relative vapour density (air):
not applicable

Solubility in water: dispersible
(> 35 °C)

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

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

Information on: ethoxyquin(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
Partitioning coefficient n-octanol/water (log Kow): 3.87
(25 °C)

Thermal decomposition: >= 145 °C

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

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.

9.2. Other information

Burning rate:
Study does not need to be conducted.

Self heating ability: It is a substance capable of spontaneous heating according to UN transport regulations class 4.2. Based on test results packaging < 3m³ are exempted from the classification. (VDI 2263, sheet 1, 1.4.2)

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

Bulk density: approx. 600 kg/m3

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

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

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

Peroxides: The product does not contain peroxides.

10.3. Possibility of hazardous reactions
Dust explosion hazard.

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

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

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

Information on: ethoxyquin(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline

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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
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.

SECTION 12: Ecological Information

12.1. 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.

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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
Microorganisms/Effect on activated sludge:
EC20 (30 min) approx. 60 mg/l, activated sludge, domestic (DIN EN ISO 8192, aerobic)

12.2. 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(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
Elimination information:
< 20 % BOD of the ThOD (25 d) (OECD Guideline 301 F) (aerobic, activated sludge, industrial)

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
The product has not been tested.

Information on: ethoxyquin(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline
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.

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: not determined

Information on: Ethyl 8'-apo-.beta.-caroten-8'-oate
Assessment transport between environmental compartments:
Volatility: The substance will rapidly evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is expected.

12.5. Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria. Self classification

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

SECTION 14: Transport Information

Land transport

ADR

UN number	UN3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO-ß-CAROTEN-8'-OATE)
Transport hazard class(es):	4.2
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Tunnel code: E Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

RID

UN number	UN3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO-ß-CAROTEN-8'-OATE)
Transport hazard class(es):	4.2
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Inland waterway transport

ADN

UN number	UN3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO-ß-CAROTEN-8'-OATE)
Transport hazard class(es):	4.2
Packing group:	III
Environmental hazards:	no
Special precautions for user:	Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

UN number:	UN 3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO-ß-CAROTEN-8'-OATE)
Transport hazard class(es):	4.2
Packing group:	III
Environmental hazards:	no Marine pollutant: NO
Special precautions for user:	Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

Air transport

IATA/ICAO

UN number:	UN 3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO-ß-CAROTEN-8'-OATE)
Transport hazard class(es):	4.2
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.

14.1. UN number
See corresponding entries for “UN number” for the respective regulations in the tables above.

14.2. UN proper shipping name
See corresponding entries for “UN proper shipping name” for the respective regulations in the tables above.

14.3. Transport hazard class(es)
See corresponding entries for “Transport hazard class(es)” for the respective regulations in the tables above.

14.4. Packing group
See corresponding entries for “Packing group” for the respective regulations in the tables above.

14.5. Environmental hazards
See corresponding entries for “Environmental hazards” for the respective regulations in the tables above.

14.6. Special precautions for user
See corresponding entries for “Special precautions for user” for the respective regulations in the tables above.

14.7. 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

Further information
Not dangerous goods of class 4.2 in packages up to 3000 litres capacity.
This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

SECTION 15: Regulatory Information

15.1. 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.

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

SECTION 16: Other Information

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

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

Acute Tox.	Acute toxicity
H302	Harmful if swallowed.

If you have any queries relating to this MSDS, it's contents or any other product safety related questions, please write to the following e-mail address: product-safety-uk-and-ireland@basf.com

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.