

Safety data sheet

Page: 1/14

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

1. Identification

Product identifier

Lucantin® Yellow

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

Relevant identified uses: feed additive(s)

Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Nutrition and Health

Telephone: +49 621 60-48434

E-mail address: EN-global-safety-data@basf.com

Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

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

Label elements

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

Globally Harmonized System (GHS)

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

Other hazardsAccording to UN GHS criteria

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**Substances**

Not applicable

MixturesChemical 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 UN GHS criteria

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

Content (W/W): $\geq 3\%$ - $< 5\%$	Acute Tox. 4 (oral)
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CAS Number: 91-53-2	H302
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INDEX-Number: 613-014-00-2

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures**Description of first aid measures**

| Remove contaminated clothing.

| If inhaled:

| Keep patient calm, remove to fresh air.

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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.

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

| 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

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

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, 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.

Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and Storage**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.

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.

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.

8. Exposure Controls/Personal Protection**Control parameters**

Components with occupational exposure limits

57-50-1: Sucrose

91-53-2: ethoxyquin(ISO); 6-ethoxy-1,2-dihydro-2,2,4-trimethylquinoline

8001-21-6: Sunflower oil

9000-70-8: Gelatins

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 P1 or FFP1)

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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

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.	

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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 (DSC (OECD 113))

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.**Other information**

Burning rate:

Study does not need to be
conducted.

Self heating ability:

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

Minimum ignition energy: > 1 J

(DIN EN 13821)

The product is capable of dust
explosion.

Bulk density:

approx. 600 kg/m³

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.

Chemical stability

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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.

Conditions to avoid

Avoid dust formation. See MSDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:

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

Hazardous decomposition products

Hazardous decomposition products:

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

11. Toxicological Information**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.

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

*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.

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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**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)*

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)

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.

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.

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

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

Other adverse effects

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

13. Disposal Considerations**Waste treatment methods**

Observe national and local legal requirements.

14. Transport Information**Land transport**

ADR

UN number	UN3088
UN proper shipping name:	SELF-HEATING SOLID, ORGANIC, N.O.S. (contains ETHYL-8'-APO- β -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- β -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- β -CAROTEN-8'-OATE)
Transport hazard class(es):	4.2

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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- β -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- β -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.

UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

UN proper shipping name

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

Transport hazard class(es)

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

Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

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.

15. Regulatory Information**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.

16. Other Information

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

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

Acute Tox.	Acute toxicity
H302	Harmful if swallowed.

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

BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 16.10.2017

Version: 1.1

Product: **Lucantin® Yellow**

(ID no. 30041147/SDS_GEN_00/EN)

Date of print 14.10.2025

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.

Vertical lines in the left hand margin indicate an amendment from the previous version.