

Safety data sheet

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BASF Safety data sheet according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended from time to time.

Date / Revised: 28.08.2023

Version: 8.0

Date previous version: 22.03.2023

Previous version: 7.0

Date / First version: 18.11.2002

Product: **Lutavit® E 50 S**

(ID no. 30040904/SDS_GEN_GB/EN)

Date of print 13.10.2025

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

1.1. Product identifier

Lutavit® E 50 S

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

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

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

2.2. Label elements

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

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

2.3. Other hazards

According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

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: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate (Content (W/W): $\geq 50\%$), Silicon dioxide

embedded in: carbohydrates

Hazardous ingredients (GHS)

No particular hazards known.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

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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 200-300 ml of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

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, dry powder, foam

Unsuitable extinguishing media for safety reasons:
water jet

Additional information:
Avoid whirling up the material/product because of the danger of dust explosion.

5.2. Special hazards arising from the substance or mixture

Endangering substances: harmful vapours, carbon oxides
Advice: 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

Dust can form an explosive mixture with air.

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

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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

Avoid dust formation. Take precautionary measures against static discharges. Provide exhaust ventilation if dust is formed.

Protection against fire and explosion:

Avoid dust formation. Avoid whirling up the material/product because of the danger of dust explosion.

Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep at temperature not exceeding 30 °C. Keep container tightly closed and dry. Protect from the effects of light.

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

112926-00-8: Silica gel, precipitated, crystalline free

TWA value 6 mg/m³ (WEL/EH 40 (UK)), Inhalable dust

TWA value 2.4 mg/m³ (WEL/EH 40 (UK)), Respirable dust

TWA value 10 mg/m³ (WEL/EH 40 (UK)), Inhalable dust

TWA value 4 mg/m³ (WEL/EH 40 (UK)), Respirable dust

8.2. Exposure controls

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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:

Chemical resistant protective gloves (EN ISO 374-1)

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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| | | |
|------------------------|--|-----------------------------|
| Form: | powder | |
| Colour: | white to off-white | |
| Odour: | almost odourless | |
| Odour threshold: | not determined | |
| pH value: | approx. 6 - 7 (approx. 100 g/l, approx. 20 °C) (as a dispersion) | |
| Melting point: | not determined | |
| Boiling point: | not applicable | |
| Flash point: | not applicable, the product is a solid | |
| Evaporation rate: | negligible | |
| Flammability: | not highly flammable | (Directive 92/69/EEC, A.10) |
| Lower explosion limit: | For solids not relevant for classification and labelling. | |
| Upper explosion limit: | For solids not relevant for classification and labelling. | |

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| | |
|---|---|
| Vapour pressure: | not applicable |
| Density: | No information is available for the absolute density. Instead the bulk density was determined as a more relevant value. |
| Relative vapour density (air): | not applicable |
| Solubility in water: | sparingly soluble, dispersible (approx. 20 °C) |
| Partitioning coefficient n-octanol/water (log Kow): | not applicable for mixtures |
| Thermal decomposition: | >= 125 °C |
| Viscosity, dynamic: | not applicable, the product is a solid |
| Viscosity, kinematic: | not applicable, the product is a solid |
| Explosion hazard: | Product is not explosive, however a dust explosion could result from an air / dust mixture. |
| Fire promoting properties: | Based on its structural properties the product is not classified as oxidizing. |

9.2. Other information

| | | |
|--------------------------|---|---|
| Burning rate: | 200 mm, 450 s The material doesn't meet the criteria specified in paragraph 33.2.4.4 of UN manual of tests and criteria. An ignition of the test substance does not lead to a propagation by burning with flame or smouldering. | (Directive 92/69/EEC, A.10) |
| Self heating ability: | It is not a substance capable of spontaneous heating. | (UN Test N.4 (self heating substances)) |
| Minimum ignition energy: | The product is capable of dust explosion. | |
| Bulk density: | approx. 350 kg/m ³ | |

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

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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. Avoid electro-static charge. See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid:

Alkalines, atmospheric moisture

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: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Experimental/calculated data:

LD50 rat (oral): > 10,000 mg/kg (BASF-Test)

Irritation

Assessment of irritating effects:

Not irritating to eyes and skin.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Experimental/calculated data:

Skin corrosion/irritation

rabbit: non-irritant (OECD Guideline 404)

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Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Experimental/calculated data:

Serious eye damage/irritation

rabbit: non-irritant (OECD Guideline 405)

Respiratory/Skin sensitization

Assessment of sensitization:

Skin sensitizing effects were not observed in animal studies.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Experimental/calculated data:

photo-allergy test guinea pig: Non-sensitizing.

Germ cell mutagenicity

Assessment of mutagenicity:

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

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment of mutagenicity:

No mutagenic effect was found in various tests with bacteria and mammals.

Carcinogenicity

Assessment of carcinogenicity:

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

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment of carcinogenicity:

In long-term animal studies in which the substance was given in high doses by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Assessment of reproduction toxicity:

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

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment of reproduction toxicity:

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

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Developmental toxicity

Assessment of teratogenicity:

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

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment of teratogenicity:

No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Specific target organ toxicity (single exposure)

Remarks: 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:

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

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment of repeated dose toxicity:

Repeated oral uptake of the substance did not cause substance-related effects.

Aspiration hazard

No aspiration hazard expected.

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.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Toxicity to fish:

*LC50 (96 h) > 11 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203, static)*

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The statement of the toxic effect relates to the analytically determined concentration. No toxic effects occur within the range of solubility.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Aquatic invertebrates:

EC50 (48 h) > 20.6 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration. No toxic effects occur within the range of solubility.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Microorganisms/Effect on activated sludge:

EC20 (30 min) > 927 mg/l, activated sludge, domestic (DIN EN ISO 8192, aquatic)

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

Assessment of terrestrial toxicity:

No data available.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

The product is not very soluble in water and can thus be removed from water mechanically in suitable effluent treatment plants.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment biodegradation and elimination (H₂O):

Moderately/partially biodegradable. Not readily biodegradable (by OECD criteria). The product is virtually insoluble in water and can thus be separated from water mechanically in suitable effluent treatment plants.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment bioaccumulation potential:

Accumulation in organisms is not to be expected.

12.4. Mobility in soil

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Assessment transport between environmental compartments:
Adsorption in soil: Adsorption to solid soil phase is expected.

Information on: 3,4-Dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate

Assessment transport between environmental compartments:

Volatility: The substance will slowly 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.

12.7. Additional information

Add. remarks environm. fate & pathway:

The product has not been tested. The statements on environmental fate and pathway have been derived from the properties of the individual components.

Other ecotoxicological advice:

The product has not been tested. The statement has been derived from the properties of the individual components.

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).

Contaminated packaging:

Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

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SECTION 14: Transport Information

Land transport

ADR

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

RID

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

Inland waterway transport

ADN

| | |
|-------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

| | |
|--------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |

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| | |
|------------------------------|----------------|
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

Air transport

IATA/ICAO

| | |
|------------------------------|--|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

14.1. UN number or ID number

See corresponding entries for "UN number or ID 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. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):

Listed in above regulation: no

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

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

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

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

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.

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