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Safety data sheet

BASF Safety data sheet according to UN GHS 4th rev.
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Product: **Lutavit® E 50**

(ID no. 30040915/SDS_GEN_IL/EN)
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1. Identification

Product identifier

Lutavit® E 50

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

Globally Harmonized System (GHS)

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

Other hazards

According to UN GHS criteria

The product is under certain conditions capable of dust explosion.

3. Composition/Information on Ingredients

Substances

Not applicable

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): >= 50 %), Silicon dioxide

Hazardous ingredients (GHS)
According to UN GHS criteria

No particular hazards known.

4. First-Aid Measures

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 200-300 ml of water.

Most important symptoms and effects, both acute and delayed

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

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, foam, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

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

Special hazards arising from the substance or mixture

harmful vapours, carbon oxides
Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire. 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

Dust can form an explosive mixture with air.

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.

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. 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.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Polypropylene (PP)
Further information on storage conditions: Keep container tightly closed and dry; store 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

No substance specific occupational exposure limits known.

Exposure controls

Personal protective equipment

Respiratory protection:
Breathing protection if dusts are formed. Particle filter with low efficiency for solid particles (e.g. EN 143 or 149, Type P1or 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:
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. 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:	white to off-white
Odour:	almost odourless
Odour threshold:	not determined

pH value:		
	insoluble	
Melting point:		
	not relevant	
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.	
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):		
	The product is a non-volatile solid.	
Solubility in water:	insoluble	
Partitioning coefficient n-octanol/water (log Kow):		
	not applicable for mixtures	
Thermal decomposition:	>= 175 °C (DSC (DIN 51007))	
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.	

Other information

Burning rate:	The material doesn't meet the criteria specified in paragraph 33.2.4.4 of UN manual of tests and criteria.	(Directive 92/69/EEC, A.10)
Self heating ability:	It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.	(UN Test N.4 (self heating substances))
SADT:	> 75 °C Heat accumulation / Dewar 500 ml (SADT, UN-Test H.4, 28.4.4)	

Minimum ignition energy:	1 - 3 mJ (20 °C) Inductivity: 1 mH Grain size distribution: < 63 µm The product is capable of dust explosion.	(VDI 2263, sheet 1, 2.5)
Bulk density:	approx. 450 - 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
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
Dust can form an explosive mixture with air.

Conditions to avoid
Avoid dust formation. Avoid electro-static charge. See SDS section 7 - Handling and storage.

Incompatible materials

Substances to avoid:
Alkalines, atmospheric moisture

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

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)

Information on: Silicon dioxide

Experimental/calculated data:
LD50 rat (oral): > 5.000 mg/kg (OECD Guideline 401)

Irritation

Assessment of irritating effects:
Not irritating to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from the properties of the individual components.

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)

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

Information on: Silicon dioxide
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: 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.

Information on: Silicon dioxide
Assessment of mutagenicity:
The substance was not mutagenic in bacteria. The substance was not mutagenic in a test with mammals.

Carcinogenicity

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

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.

Information on: Silicon dioxide
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: 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.

Information on: Silicon dioxide
Assessment of reproduction toxicity:
Not classified, due to lack of data.

Developmental toxicity

Assessment of teratogenicity:
Based on the ingredients, there is no suspicion of a teratogenic effect.

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.

Information on: Silicon dioxide
Assessment of teratogenicity:
Not classified, due to lack of data.

Specific target organ toxicity (single exposure)

Remarks: Based on available data, the classification criteria are not met. The product has not been tested. The statement has been derived from the properties of the individual components.

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.

Information on: Silicon dioxide
Assessment of repeated dose toxicity:
Not classified, due to lack of data.

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.

12. Ecological Information

Toxicity

Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The product has not been tested. The statement has been derived from the properties of the individual components.

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

Information on: Silicon dioxide
Toxicity to fish:
LC50 (96 h) > 10.000 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 84/449/EEC, C.1)

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: Silicon dioxide
Aquatic invertebrates:
EC50 (24 h) > 1.000 mg/l, Daphnia magna (OECD Guideline 202, part 1)

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.

Information on: Silicon dioxide
Microorganisms/Effect on activated sludge:
EC50 (3 h) > 2.500 mg/l (OECD Guideline 209)

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.

Information on: Silicon dioxide
Assessment biodegradation and elimination (H2O):
Inorganic product which cannot be eliminated from water by biological purification processes.

Bioaccumulative potential

Assessment bioaccumulation potential:
Significant 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.

Information on: Silicon dioxide
Assessment bioaccumulation potential:
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: 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.

Information on: Silicon dioxide
Assessment transport between environmental compartments:
Adsorption in soil: Study scientifically not justified.

Other adverse effects

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

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.

13. Disposal Considerations

Waste treatment methods

Observe national and local legal requirements.

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

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	None known

user

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
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

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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.

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.