

# Safety data sheet

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BASF Safety data sheet according to 91/155/EEC

Date / Revised: 26.09.2005

Product: **Lutein 5% DC**

Version: 1.0

(30267108/SDS\_GEN\_EU/EN)

Date of print 29.09.2005

## 1. Substance/preparation and company identification

### Lutein 5% DC

Use: food additive(s)

Company:

BASF Aktiengesellschaft

Fine Chemicals Division

67056 Ludwigshafen, Germany

E-mail address: basis-msds-label.me-qr@basf-ag.de

Emergency information:

Fire brigade BASF Ludwigshafen

Telephone: +49-621-60-43333

Telefax number: +49-621-60-92664

## 2. Composition/information on ingredients

Chemical naturePreparation based on: Lutein (Content (W/W):  $\geq 5\%$ ), Gelatins, Sucrose

stabilized with: 6-O-palmitoylascorbic acid

## 3. Hazard identification

No particular hazards known.

## 4. First-aid measures

General advice:

Remove contaminated clothing.

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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.

Note to physician:

Treatment: Symptomatic treatment (decontamination, vital functions).

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## 5. Fire-fighting measures

Suitable extinguishing media:

foam, carbon dioxide, dry extinguishing media

Specific hazards:

No particular hazards known.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

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## 6. Accidental release measures

Personal precautions:

No special precautions necessary.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking up:

For small amounts: Sweep/shovel up.

For large amounts: Sweep/shovel up.

Correctly dispose of recovered product immediately.

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## 7. Handling and storage

Handling

Handle in accordance with good industrial hygiene and safety practice.

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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.

#### Storage

Further information on storage conditions: Keep container tightly closed in a cool, well-ventilated place.

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## 8. Exposure controls and personal protection

#### Components with workplace control parameters

none

#### Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Particle filter Type P1 or FFP1 (low efficiency for solid particles e.g. EN143, 149).

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), polyvinylchloride (0.7 mm) and other

Supplementary note: The specifications are based on own 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 in accordance with EN 374.

Eye protection:

Safety glasses with side-shields (frame goggles) (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.

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## 9. Physical and chemical properties

Form: free flowing fine granules

Colour: dark orange

Bulk density: approx. 600 kg/m<sup>3</sup>

Solubility in water: dispersible  
(approx. 35 - 40 °C)

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Partitioning coefficient n-octanol/water (log Pow): approx. 15 (calculated)  
(25 °C)

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## 10. Stability and reactivity

Thermal decomposition: > 60 °C  
No decomposition if stored and handled as prescribed/indicated.

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

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## 11. Toxicological information

Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
LD50/oral/rat/male/female: > 2,000 mg/kg (OECD Guideline 423)  
The product has not been tested. The statement has been derived from products of a similar structure and composition.

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Virtually nontoxic after a single ingestion.

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Primary skin irritation/rabbit: non-irritant (OECD Guideline 404)  
The product has not been tested. The statement has been derived from products of a similar structure and composition.

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Primary irritations of the mucous membrane/rabbit: non-irritant (OECD Guideline 405)  
The product has not been tested. The statement has been derived from products of a similar structure and composition.

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Not irritating to the skin.  
Not irritating to the eyes.

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Information on: *.beta.,.epsilon.-Carotene-3,3'-diol*  
Sensitization/Guinea pig maximization test/guinea pig: Non-sensitizing. (OECD Guideline 406)  
The product has not been tested. The statement has been derived from products of a similar structure and composition.

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Further information:

*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

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

*The product has not been tested. The statement has been derived from products of a similar structure and composition.*

*Literature data.*

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## 12. Ecological information

### Ecotoxicity

*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

*Toxicity to fish:*

*DIN 38412 Part 15 static*

*Leuciscus idus/LC50 (96 h): > 100 mg/l*

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

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*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

*Microorganisms/Effect on activated sludge:*

*DIN 38412 Part 27 (draft) aerobic*

*Pseudomonas putida/EC50 (0.5 h): > 10,000 mg/l*

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

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*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

*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 products of a similar structure and composition.*

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### Persistence and degradability

*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

*Assessment: Not readily biodegradable (by OECD criteria).*

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### Bioaccumulation potential

*Information on: .beta.,.epsilon.-Carotene-3,3'-diol*

*Accumulation in organisms is expected.*

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## 13. Disposal considerations

Observe national and local legal requirements.

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## 14. Transport information

Not classified as hazardous under transport regulations ( ADR RID ADNR IMDG/GGVSee ICAO/IATA )

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## 15. Regulatory information

### Regulations of the European union (Labelling) / National legislation/Regulations

Directive 1999/45/EC ('Preparation Directive'):

S-phrase(s)

S47.60

Keep at temperature not exceeding 60 °C.

### Other regulations

Water hazard class (Annex 4 VwVwS (Germany) dated Mai, 17 th 1999): (1) Weakly water polluting.

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## 16. Other information

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

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.