We create chemistry

Safety Data Sheet
DL-alpha-Tocopherol

1. Identification

Product identifier used on the label

DL-alpha-Tocopherol

Recommended use of the chemical and restriction on use

Recommended use*: food additive(s)
Unsuitable for use: Not intended for sale to or use by the general public.

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information
CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

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

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Sens.	1	Skin sensitization

Label elements

Pictogram:

Signal Word:
Warning

Hazard Statement:

H317	May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280	Wear protective gloves.
P261	Avoid breathing mist or vapour or spray.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.

Hazards not otherwise classified

No data available.

3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

D,L-alpha-Tocopherol
CAS Number: 10191-41-0
Content (W/W): 80.0 - 100.0%
Synonym: 2H-1-Benzopyran-6-ol, 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-

The actual concentration is withheld as a trade secret.

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing immediately and clean before re-use or dispose it if necessary.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention.

If on skin:
Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open.

If irritation develops, seek medical attention.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Information on: D,L-alpha-Tocopherol
Symptoms: Overexposure may cause:, allergic contact dermatitis, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps
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Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
water spray, carbon dioxide, dry powder, alcohol-resistant foam

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon oxides, harmful vapours
The substances/groups of substances mentioned can be released in case of fire. Burning produces harmful and toxic fumes. Generation of fumes/fog.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear self-contained breathing apparatus and chemical-protective clothing.

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Cool endangered containers with water-spray. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid dust formation.

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

Methods and material for containment and cleaning up
For small amounts: Sweep/shovel up.
For large amounts: Sweep/shovel up.
For residues: Sweep/shovel up.
Place into suitable container for disposal. Avoid raising dust.

7. Handling and Storage

Precautions for safe handling
Processing machines must be fitted with local exhaust ventilation. Take precautionary measures against static discharges. Keep away from sources of ignition - No smoking.

Ensure thorough ventilation of stores and work areas. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. Keep container tightly sealed.

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

Conditions for safe storage, including any incompatibilities
No applicable information available.

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Keep under inert gas. Protect from the effects of light. Protect from air. Protect against heat.

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:
Wear chemical resistant protective gloves.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Avoid inhalation of vapours/mists. Wear protective clothing as necessary to prevent contact. Wash soiled clothing immediately. 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

Physical state:	liquid	
Form:	viscous	
Odour:	mild, oily	
Colour:	light yellow	
pH value:	The substance does not dissociate.	
Melting point:	2.5 - 3.5 °C Literature data.	(other)
Freezing point:	No data available.	
Boiling point:	(1,013 hPa) The substance / product decomposes therefore not determined.	
Sublimation point:		
Flash point:	approx. 250 °C	
Flammability:	not highly flammable	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	420 °C	(Directive 92/69/EEC, A.15)
Vapour pressure:	approx. 13 mbar (approx. 155 °C) approx. 93 mbar (approx. 200 °C)	
Density:	0.95 g/cm3 (25 °C) Literature data.	
Relative density:	0.95 (25 °C) Literature data.	
Relative vapour density:	not determined	
Partitioning coefficient n-octanol/water (log Pow):	> 6 (25 °C)	(calculated)
Thermal decomposition:	405 °C (DSC (DIN 51007))	
Viscosity, dynamic:	4,200 mPa.s (20 °C)	(DIN 53019)
Viscosity, kinematic:	No data available.	
Solubility in water:	insoluble	
Solubility (quantitative):	No applicable information available.	

Solubility (qualitative):	soluble solvent(s): organic solvents,
Molecular weight:	430.71 g/mol

Particle characteristics

No applicable information available.

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.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

Chemical stability
The product is stable under inert gas.

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

Conditions to avoid
Avoid contact with air.
Avoid electro-static discharge. Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials
oxidizing agents

Hazardous decomposition products

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

Thermal decomposition:
405 °C (DSC (DIN 51007))

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

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

Oral
Type of value: LD50
Species: rat (male/female)
Value: > 10,000 mg/kg (OECD Guideline 401)
No mortality was observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Type of value: LD50
Species: rat (male/female)
Value: > 4,000 mg/kg (OECD Guideline 401)

Inhalation
No applicable information available.

Dermal
Type of value: LD50
Species: rat
Value: > 3,000 mg/kg (OECD Guideline 402)
No mortality was observed.

Assessment other acute effects
Assessment of STOT single:
Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

Irritation / corrosion
Assessment of irritating effects: Not irritating to eyes and skin.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit
Result: non-irritant
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: Caused skin sensitization in animal studies.

Mouse Local Lymph Node Assay (LLNA)
Species: mouse
Result: skin sensitizing
Method: OECD Guideline 429

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Causes mortality through prolonged or repeated exposure. The product has not been tested. The statement has been derived from the structure of the product.

Genetic toxicity
Assessment of mutagenicity: Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Carcinogenicity
Assessment of carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity
Assessment of teratogenicity: In animal studies the substance did not cause malformations. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

12. Ecological Information

Toxicity

Aquatic 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.

Toxicity to fish
LC50 (96 h) > 10,000 mg/l, Leuciscus idus (DIN 38412 Part 15, static)
The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic invertebrates
EC50 (48 h) > 500 mg/l, Daphnia magna (Directive 79/831/EEC, static)
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. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants
EC50 (72 h) > 25.8 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration. No toxic effects occur within the range of solubility.

Chronic toxicity to fish

No observed effect concentration (28 d) > 100 mg/l, Oncorhynchus mykiss (OECD Guideline 215, semistatic)
The details of the toxic effect relate to the nominal concentration. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to aquatic invertebrates
Study scientifically not justified.

Assessment of terrestrial toxicity
No data available.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
DIN 38412 Part 27 (draft) aquatic
bacterium/EC10 (30 min): > 10,000 mg/l
The details of the toxic effect relate to the nominal concentration.

DIN EN ISO 8192 aerobic
activated sludge, domestic/EC20 (30 min): > 900 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not readily biodegradable (by OECD criteria). Biodegradable.

Elimination information

70 - 80 % BOD of the ThOD (63 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic)

Assessment of stability in water
No data available.

Information on Stability in Water (Hydrolysis)
No data available.

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Bioaccumulation potential
Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
not determined

Additional information

Other ecotoxicological advice:
No data available.

13. Disposal considerations

Waste disposal of substance:
Observe national and local legal requirements.

Container disposal:
Dispose of in accordance with national, state and local regulations.

RCRA: None

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Cosmetic	TSCA, US	released / exempt
Food	TSCA, US	released / exempt
Chemical	TSCA, US	released / listed
Chemical	TSCA, US	

All substances are TSCA listed and active.

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

BASF Risk Assessment, CA Prop. 65:

Based on an evaluation of the product's composition and the use(s) described in this section below, this product does not require a California Proposition 65 Warning:

Human nutrition

Animal nutrition

NFPA Hazard codes:
Health: 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating
Health: 2 Flammability: 1 Physical hazard: 0

Assessment of the hazard classes according to UN GHS criteria (most recent version):

Skin Sens.	1B	Skin sensitization

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/08/07

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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END OF DATA SHEET