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

1.1 Product identifiers

Product name: (±)-α-Tocopherol

Product Number: T3251

Brand: Sigma

REACH No.: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

CAS-No.: 10191-41-0

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

Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.

3050 SPRUCE ST
ST. LOUIS MO  63103
UNITED STATES

Telephone: +1 314 771-5765

Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin sensitization (Category 1), H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word: Warning
The life science business of Merck operates as MilliporeSigma in the US and Canada

Section 2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substances
Synonyms:
Vitamin E
DL-all-rac-α-Tocopherol

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL-α-Tocopherol</td>
<td>Skin Sens. 1; H317</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>10191-41-0</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>233-466-0</td>
<td></td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Remove contact lenses.
The life science business of Merck operates as MilliporeSigma in the US and Canada.
7.2 **Conditions for safe storage, including any incompatibilities**

**Storage conditions**
Tightly closed.

**Storage stability**
Recommended storage temperature
2 - 8 °C

7.3 **Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

**Ingredients with workplace control parameters**

8.2 **Exposure controls**

**Personal protective equipment**

**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

**Full contact**
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

**Splash contact**
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

**Body Protection**

**protective clothing**
**Respiratory protection**
Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Control of environmental exposure**
Do not let product enter drains.

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**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

- **a)** Appearance
  - Form: viscous
  - Color: light yellow

- **b)** Odor
  - odorless

- **c)** Odor Threshold
  - No data available

- **d)** pH
  - No data available

- **e)** Melting point/freezing point
  - Melting point: 2,5 - 3,5 °C

- **f)** Initial boiling point and boiling range
  - 208 - 210 °C at 0,0266 hPa

- **g)** Flash point
  - No data available

- **h)** Evaporation rate
  - No data available

- **i)** Flammability (solid, gas)
  - No data available

- **j)** Upper/lower flammability or explosive limits
  - No data available

- **k)** Vapor pressure
  - 13 hPa at 155 °C

- **l)** Vapor density
  - No data available

- **m)** Relative density
  - 0,95 at 25 °C

- **n)** Water solubility
  - 0,00001 g/l at 20 °C - OECD Test Guideline 105

- **o)** Partition coefficient: n-octanol/water
  - log Pow: > 6 - (External MSDS), Potential bioaccumulation

- **p)** Autoignition temperature
  - No data available

- **q)** Decomposition temperature
  - > 300 °C -

- **r)** Viscosity
  - Viscosity, kinematic: No data available
  - Viscosity, dynamic: 4.200 mPa.s at 20 °C

- **s)** Explosive properties
  - No data available

- **t)** Oxidizing properties
  - No data available

**9.2 Other safety information**

No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature). Exposure to light.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Exposure to air.
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - male and female - > 4.000 mg/kg
(OECD Test Guideline 401)
LD50 Dermal - Rat - male and female - > 3.000 mg/kg
(OECD Test Guideline 402)

Skin corrosion/irritation
Skin - Rabbit
Result: slight irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: positive
(OECD Test Guideline 429)

Germ cell mutagenicity
No data available
Mutagenicity (mammal cell test): chromosome aberration.
Chinese hamster lung cells
Result: negative
Remarks:
(ECHA)
Ames test
S. typhimurium
Result: negative
Mutagenicity (mammal cell test): chromosome aberration.
Human lymphocytes
Result: negative
OECD Test Guideline 474
Mouse - male - Bone marrow

**Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

11.2 **Additional Information**

RTECS: GA8746000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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**SECTION 12: Ecological information**

12.1 **Toxicity**

<table>
<thead>
<tr>
<th>Toxity to fish</th>
<th>static test LC50 - Oncorhynchus mykiss (rainbow trout) - &gt; 100 mg/l - 96 h (OECD Test Guideline 203)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxity to daphnia and other aquatic invertebrates</td>
<td>static test EC50 - Daphnia magna (Water flea) - &gt; 23,53 mg/l - 48 h (OECD Test Guideline 202)</td>
</tr>
<tr>
<td>Toxity to algae</td>
<td>static test ErC50 - Pseudokirchneriella subcapitata (green algae) - &gt; 25,8 mg/l - 72 h (OECD Test Guideline 201)</td>
</tr>
<tr>
<td>Toxity to bacteria</td>
<td>static test EC20 - activated sludge - &gt; 927 mg/l - 30 min (DIN/EN ISO 8192)</td>
</tr>
</tbody>
</table>

12.2 **Persistence and degradability**

| Biodegradability | aerobic - Exposure time 28 d Result: 20 % - Not readily biodegradable. |
12.3 **Bioaccumulative potential**  
No data available

12.4 **Mobility in soil**  
No data available

12.5 **Results of PBT and vPvB assessment**  
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 **Other adverse effects**  
Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

13.1 **Waste treatment methods**

**Product**  
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

### SECTION 14: Transport information

14.1 **UN number**  
ADR/RID: -  
IMDG: -  
IATA: -

14.2 **UN proper shipping name**  
ADR/RID: Not dangerous goods  
IMDG: Not dangerous goods  
IATA: Not dangerous goods

14.3 **Transport hazard class(es)**  
ADR/RID: -  
IMDG: -  
IATA: -

14.4 **Packaging group**  
ADR/RID: -  
IMDG: -  
IATA: -

14.5 **Environmental hazards**  
ADR/RID: no  
IMDG Marine pollutant: no  
IATA: no

14.6 **Special precautions for user**  
**Further information**  
Not classified as dangerous in the meaning of transport regulations.

### SECTION 15: Regulatory information

15.1 **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**National legislation**  
Seveso III: Directive 2012/18/EU of the : Not applicable

: Not applicable

Other regulations
Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
H317 May cause an allergic skin reaction.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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