

## Material Safety Data Sheet

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Regulation (EC) No 1907/2006

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1 - Product and Company Information

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Product Name L(+)-TARTARIC ACID R. G., REAG.  
ACS, REAG . ISO, REAG. PH. EUR.  
Product Number 33801  
Company Sigma-Aldrich Company Ltd.  
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2 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Irritating to eyes, respiratory system and skin.

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3 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
L(+)-TARTARIC ACID	87-69-4	201-766-0	None

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Formula C4H6O6  
Molecular Weight 150.09 AMU  
Synonyms Butanedioic acid, 2,3-dihydroxy- \*  
Dextrotartaric acid \* 2,3-Dihydrosuccinic acid \*  
2,3-Dihydroxybutanedioic acid \*  
1,2-Dihydroxyethane-1,2-dicarboxylic acid \*  
d-alpha,beta-Dihydroxysuccinic acid \* Kyselina  
2,3-dihydroxybutandiova (Czech) \* Kyselina vinna  
(Czech) \* Malic acid, 3-hydroxy- \* Succinic  
acid, 2,3-dihydroxy- \* Threonic acid \*  
(+)-Tartaric acid \* d-Tartaric acid \*  
L-(+)-Tartaric acid \* (2R,3R)-(+)-Tartaric acid  
\* (R,R)-Tartaric acid

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4 - First Aid Measures

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## AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give  
artificial respiration. If breathing is difficult, give oxygen.

## AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious  
amounts of water.

## AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts

of water for at least 15 minutes.

#### AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### 6 - Accidental Release Measures

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#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

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### 9 - Physical and Chemical Properties

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#### Appearance

Physical State: Solid

Color: White

Form: Fine crystals

Property	Value	At Temperature or Pressure
pH	1.0 - 2.0	
BP/BP Range	N/A	
MP/MP Range	170.0 - 172.0 °C	
Flash Point	150 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	425 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	5.18 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 1 M in H <sub>2</sub> O, 20°C complete, colorless	

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## 10 - Stability and Reactivity

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### STABILITY

Stable: Stable.

Materials to Avoid: Bases, Oxidizing agents, Reducing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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## 11 - Toxicological Information

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RTECS NUMBER: WW7875000

### ACUTE TOXICITY

LD50

Intravenous

Mouse

485 MG/KG

Remarks: Blood: Hemorrhage. Behavioral: Convulsions or effect on seizure threshold.

### IRRITATION DATA

Eyes

Remarks: Moderate irritation effect

### SIGNS AND SYMPTOMS OF EXPOSURE

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

ROUTE OF EXPOSURE

Skin Contact: Causes skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes eye irritation.  
Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.  
Ingestion: May be harmful if swallowed.

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12 - Ecological Information

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No data available.

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13 - Disposal Considerations

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SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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14 - Transport Information

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RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

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15 - Regulatory Information

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CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xi  
Irritant.

R-PHRASES: 36/37/38

Irritating to eyes, respiratory system and skin.

S-PHRASES: 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 3

Self-Classification

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16 - Other Information

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WARRANTY

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 Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.  
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