



# MATERIAL SAFETY DATA SHEET

according to the Global Harmonized System

Revision Date 02/13/2013

Version 1.1

## SECTION 1. Identification

### Product identifier

Product number 100804  
Product name L(+)-Tartaric acid for analysis EMSURE® ACS,ISO,Reag. Ph Eur

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

Identified uses Reagent for analysis

### Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821,  
United States of America | SDS Phone Support: +1-978-715-1335 |  
General Inquiries: +1-978-751-4321 | Monday to Friday, 9:00 AM to  
4:00 PM Eastern Time (GMT-5)  
  
e-mail: mm\_sds@merckgroup.com

Emergency telephone 613-996-6666 CANUTEC (Canada)  
+1-703-527-3887 CHEMTREC (International)  
24 Hours/day; 7 Days/week

## SECTION 2. Hazards identification

### GHS Classification

Eye irritation, Category 2, H319

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

### GHS-Labeling

*Hazard pictograms*



*Signal Word*  
Warning

*Hazard Statements*

H319 Causes serious eye irritation.

*Precautionary Statements*

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

MATERIAL SAFETY DATA SHEET  
according to the Global Harmonized System

Product number 100804  
Product name L(+)-Tartaric acid for analysis EMSURE® ACS,ISO,Reag. Ph Eur

Version 1.1

lenses, if present and easy to do. Continue rinsing.

**Other hazards**

None known.

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**SECTION 3. Composition/information on ingredients**

Formula	HOOCCH(OH)CH(OH)COOH	C <sub>4</sub> H <sub>6</sub> O <sub>6</sub> (Hill)
CAS-No.	87-69-4	
Molar mass	150.08 g/mol	

**Hazardous ingredients**

*Chemical Name (Concentration)*

CAS-No.

*Tartaric acid (>= 90 % - <= 100 % )*

87-69-4

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**SECTION 4. First aid measures**

**Description of first-aid measures**

*Inhalation*

After inhalation: fresh air.

*Skin contact*

After skin contact: wash off with plenty of water. Remove contaminated clothing.

*Eye contact*

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.

*Ingestion*

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

Never give anything by mouth to an unconscious person.

**Most important symptoms and effects, both acute and delayed**

irritant effects, Diarrhea

**Indication of any immediate medical attention and special treatment needed**

No information available.

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**SECTION 5. Fire-fighting measures**

**Extinguishing media**

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

**Special hazards arising from the substance or mixture**

Combustible.

Forms explosive mixtures with air on intense heating.

Development of hazardous combustion gases or vapors possible in the event of fire.

MATERIAL SAFETY DATA SHEET  
according to the Global Harmonized System

Product number 100804  
Product name L(+)-Tartaric acid for analysis EMSURE® ACS,ISO,Reag. Ph Eur

---

Version 1.1

**Advice for firefighters**

*Special protective equipment for fire-fighters*

In the event of fire, wear self-contained breathing apparatus.

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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**SECTION 6. Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

**Environmental precautions**

Do not empty into drains.

**Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

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**SECTION 7. Handling and storage**

**Precautions for safe handling**

Observe label precautions.

**Conditions for safe storage, including any incompatibilities**

Tightly closed. Dry.

Storage temperature: no restrictions.

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**SECTION 8. Exposure controls/personal protection**

**Exposure limit(s)**

Contains no substances with occupational exposure limit values.

**Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

**Individual protection measures**

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

*Hygiene measures*

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

*Eye/face protection*

Safety glasses

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Product number 100804  
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Version 1.1

*Hand protection*

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

*Other protective equipment:*

protective clothing

*Respiratory protection*

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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**SECTION 9. Physical and chemical properties**

Physical state	solid
Color	white
Odor	odorless
Odor Threshold	No information available.
pH	ca. 1.6 at 100 g/l 77 °F (25 °C)
Melting point	168 - 170 °C
Boiling point/boiling range	not applicable
Flash point	410 °F (210 °C)
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapor pressure	low
Relative vapor density	No information available.
Relative density	1.76 g/cm <sup>3</sup> at 68 °F (20 °C)
Water solubility	1,390 g/l at 68 °F (20 °C)

MATERIAL SAFETY DATA SHEET  
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Product number 100804 Version 1.1  
Product name L(+)-Tartaric acid for analysis EMSURE® ACS,ISO,Reag. Ph Eur

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Partition coefficient: n-octanol/water	log Pow: -1.00 (calculated) (Lit.) Bioaccumulation is not expected (log Pow <1).
Autoignition temperature	No information available.
Decomposition temperature	> 338 °F (> 170 °C)
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Ignition temperature	797 °F (425 °C)
Bulk density	ca. 1,000 kg/m <sup>3</sup>

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## SECTION 10. Stability and reactivity

### Reactivity

Forms explosive mixtures with air on intense heating.  
The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Exothermic reaction with:  
Strong oxidizing agents, silver, hydrogen peroxide  
alkaline substances, with  
Water

Risk of explosion with:  
silver salt

Risk of ignition or formation of inflammable gases or vapors with:  
Fluorine

### Conditions to avoid

Strong heating.  
A range from approx. 15 Kelvin below the flash point is to be rated as critical.

### Incompatible materials

no information available

### Hazardous decomposition products

no information available

MATERIAL SAFETY DATA SHEET  
according to the Global Harmonized System

Product number 100804  
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Version 1.1

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**SECTION 11. Toxicological information**

**Information on toxicological effects**

*Likely route of exposure*

Eye contact, Skin contact, Ingestion

*Acute oral toxicity*

LDLO rat: 7,500 mg/kg (RTECS)

Symptoms: Diarrhea

*Acute inhalation toxicity*

Symptoms: Possible damages:, mucosal irritations

*Skin irritation*

slight irritation

*Eye irritation*

Causes serious eye irritation.

*Sensitization*

Sensitization test: guinea pig

Result: negative

(Lit.)

*Genotoxicity in vitro*

Ames test

Result: negative

(Lit.)

*Specific target organ systemic toxicity - single exposure*

The substance or mixture is not classified as specific target organ toxicant, single exposure.

*Specific target organ systemic toxicity - repeated exposure*

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

*Aspiration hazard*

Regarding the available data the classification criteria are not fulfilled.

**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.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

MATERIAL SAFETY DATA SHEET  
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Version 1.1

**Further information**

Substances which occur in nature  
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**

**Ecotoxicity**

*Toxicity to fish*

LC0 Carassius auratus (goldfish): 200 mg/l(Lit.)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia: 135 mg/l; 24 h (Lit.)

**Persistence and degradability**

*Biodegradability*

Readily biodegradable.

*Theoretical oxygen demand (ThOD)*

533 mg/g

(Lit.)

*Ratio BOD/ThBOD*

BOD5 56 %

(Lit.)

*Ratio COD/ThBOD*

98 %

(Lit.)

**Bioaccumulative potential**

*Partition coefficient: n-octanol/water*

log Pow: -1.00

(calculated)

(Lit.) Bioaccumulation is not expected (log Pow <1).

**Mobility in soil**

No information available.

**Other adverse effects**

*Additional ecological information*

Discharge into the environment must be avoided.

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**SECTION 13. Disposal considerations**

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

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Version 1.1

---

**SECTION 14. Transport information**

**Land transport (DOT)**

Not classified as dangerous in the meaning of transport regulations.

**Air transport (IATA)**

Not classified as dangerous in the meaning of transport regulations.

**Sea transport (IMDG)**

Not classified as dangerous in the meaning of transport regulations.

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**SECTION 15. Regulatory information**

**Canada**

**WHMIS Classification**

D2B Toxic Material Causing Other Toxic Effects  
E Corrosive Material

Eye irritant, Corrosive to metals

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

**Notification status**

TSCA: On TSCA Inventory

DSL: All components of this product are on the Canadian DSL.

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**SECTION 16. Other information**

**Training advice**

Provide adequate information, instruction and training for operators.

**Full text of H-Statements referred to under sections 2 and 3.**

H319 Causes serious eye irritation.

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

Revision Date 02/13/2013

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The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.



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