

# SAFETY DATA SHEET

This SDS is referred to L(+) – tartaric acid natural for food and pharmaceutical use and, in accordance with Reach Regulation, is not subject to reach registration because it is not intended for industrial and/or chemical use.

**This SDS complies with EU Regulation No. 830/2015 of the Commission of 28 May 2015** amending Annex II of Reg. (EC) n. 1907/2006, already amended by Regulation 453/2010 Annex I.

MSDS n.01\_TAc

Sostanza:  
L(+) TARTARIC ACID,  
NATURAL FOR  
FOOD AND  
PHARMACEUTICAL USE

Language: English

Date of issue

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No

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## 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

### 1.1 IDENTIFICATION OF THE SUBSTANCE:

Product name: **L(+) TARTARIC ACID , NATURAL  
(2R, 3R) 2, 3 DIHYDROXYBUTANE 1,4 DIOIC ACID**

Commercial name and synonyms:

- **L(+) TARTARIC ACID, NATURAL FOR FOOD AND PHARMACEUTICAL USAGE;**
- **L(+) TARTARIC ACID NATURAL FOOD GRADE- PHARMACEUTICAL GRADE;**

1.2 Relevant uses of the substance and identified using recommended

**FOOD AND PHARMACEUTICAL USE**

1.3 Information about the supplier of the safety data sheet:

Head Office:

**DISTILLERIE BONOLLO S.p.A.**  
**VIA MOSCA 5**  
**I - 41043 FORMIGINE (MO)**  
**Ph.: 0039 059 578700**  
**Fax: 0039 059 571196**  
[www.bonollo.com](http://www.bonollo.com)  
[info@bonollo.com](mailto:info@bonollo.com)

Factory :

**DISTILLERIE BONOLLO S.p.A**  
**LOCALITA' PADUNI**  
**I – 03012 ANAGNI (FR)**  
**Ph.: 0039 0775 778252**  
**Fax: 0039 0775 778240**  
[tartaric.sales@bonollo.com](mailto:tartaric.sales@bonollo.com)

1.4 EMERGENCY TELEPHONE.

**Ph.: 0039 02 66 10 10 29 CENTRO ANTIVELENI - OSPEDALE DI NIGUARDA - MILANO**

**Ph.: 0039 0775 77821 SEDE DI ANAGNI (FR) Monday to Friday from 8.00 am to 5.00 pm**

**Safety Manager: Sig. Mario Ascenzi Ph: 0039 0775 778217 e-mail: [mario.ascenzi@bonollo.com](mailto:mario.ascenzi@bonollo.com)**

## 2. HAZARDS IDENTIFICATION


### 2.1 Product Classification

**The tartaric acid is not classified as hazardous under the provisions of Directives 67/548/EEC and 1999/45/CD and / or Regulation EC 1272/2008 (CLP) and subsequent amendments and adjustments.**

### 2.2 Label elements

**Labelling according to Regulation (EC) No. 1272/2008 (CLP)**

**Hazard pictograms**

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GHS05

**Risk**  
Dangerous indication H318

**Warning**  
It causes severe eye damage.

**Safety advice**

P280 Wear protective gloves / protective clothing / eye protection / face  
 P305+P351+P338: IN CASE OF CONTACT WITH EYES: Rinse thoroughly with water for several minutes.  
 Remove contact lenses, if worn, and if easy to do. Continue to rinse

2.3 Other Hazards

None

### 3. Composition information on ingredients

3.1 Substance

NAME	(+) – tartaric acid	CONSTITUENT	CONCENTRATION RANGE
FORMULA	C4H6O6		
No. CAS	87-69-4		
No. CE	201-766-0	(+) – tartaric acid	≥ 99.7 - ≤ 100.0 %(v/v)
Molecular Mass	150.0868 g/size		

### 4. First aid measure

4.1 Description of first aid, Major symptoms and effects, both acute and delayed indication of the possible need to seek immediate medical attention and special treatment

**General Information**

Immediate medical intervention is not necessary but is recommended at a later time if any problems persist. Show this safety data sheet to doctor.

**If inhaled**

If breathed in, move person to fresh air. In case of arrest of respiration with artificial respiration, seek medical attention.

**In case of contact with skin**

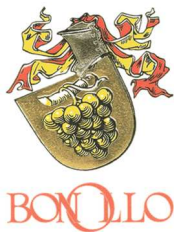
Wash / rinse the skin with large amounts of water and possibly with soap. If skin irritation continues, consult a doctor.

**In case of eye contact**

Rinse thoroughly with water for several minutes. Remove contact lenses, if worn, and if easy to do. Continue rinsing. If redness or irritation persist consult a physician / ophthalmologist.

**Swallowing**

Do not induce vomiting. Rinse mouth with water, drink 1 or 2 glasses of water, in serious cases, seek immediate medical attention.



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## 5. Fire-fighting measures

- 5.1 Extinguishing media  
**CO2, alcohol resistant foam, water spray, dry chemical**
- 5.2 Special hazards caused by the substance  
**The hazards caused by the products of its combustion or flue gases regarding carbon monoxide and carbon dioxide**
- 5.3 Recommendations for fire-fighters  
**As in every fire, wear a self-contained pressure-demand, approved by MSHA / NIOSH (or equivalent) and full protective gear**

## 6. Measures in case of accidental release

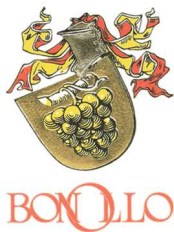
- 6.1 Personal precautions, protective equipment and procedures in case of emergency  
Personal precautions: **Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation**
- 6.2 Environmental precautions  
**Do not let product enter drains, sewers and surface waters**
- 6.3 Methods and materials for containment and remediation  
**Collect the spilled material in appropriate containers and send it for disposal in accordance with the rules. Wash the area with plenty of water**

## 7. Handling and storage

- 7.1 Precautions for safe handling  
**Avoid contact with eyes and skin. If clothing is contaminated, remove and rinse the affected parts of body thoroughly. Wash contaminated clothing before reuse. Do not swallow. Use adequate ventilation. Avoid creating dust.**
- 7.2 Conditions for safe storage, including any incompatibilities  
**Keep container in a cool, dry and well ventilated area. Keep away from strong oxidizers. The tartaric acid is packaged in sacks or big bags lined with plastic suitable for food, chemical and industrial**
- 7.3 Specific end uses  
**See the recommended uses in Section 1.2 of this MSDS and the exposure assessment (scenarios) attached.**

## 8. Exposure controls/Personal protection

- 8.1 Control parameters
  - 8.1.4 DN (M) ELS for workers (DERIVED NO EFFECT LEVEL)  
**Long Term Systemic Effects:**
    - Dermal: DNEL: 2.9 mg / kg bw / d



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- Inhalation: DNEL: 5.2 mg/m<sup>3</sup>

Exposure limit has not been established

DN (M) ELS for the general population (DERIVED NO EFFECT LEVEL)

Long Term Systemic Effects:

- Dermal: DNEL: 1.5 mg / kg bw / d

- Inhalation: DNEL: 1.3 mg/m<sup>3</sup>

- Oral: DNEL: 8.1 mg / kg bw / d

PNEC (CALCULATION OF PREDICTED NO EFFECT CONCENTRATION)

PNEC fresh water /marine water: 0.3125 mg / l

PNEC intermittent release: 0.514 mg / l

PNEC sewage treatment plant: 10 mg / L

PNEC sediment freshwater /marine water: 1.141 mg / kg

PNEC soil: 0.0449 mg / kg

PNEC oral: -

## 8.2 Exposure controls

Personal protective equipment:

### Respiratory Protection

Where the risk assessment shows the need for air-purifying respirators, use a dust mask type P1 (EN 143). Use respirators and components tested and approved by the competent authorities such as NIOSH (U.S.) or CEN (EU).

### Hand Protection

The selected protective gloves must meet the requirements of EU Directive 89/686/EEC and standard EN 374 derived from it. Handle with gloves.

### Eye Protection

Safety glasses with side shields conforming to EN166

### Skin and Body

Please choose a type of body protection according to the amount and concentration of hazardous substances to the workplace.

### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash your hands before breaks and at the end of the workday. Keep away from food and drink.

## 9. Physical and chemical proprieties

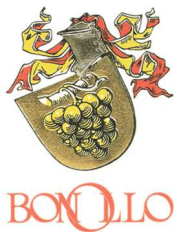
### 9.1 Information on the basic physical and chemical properties (referred to (+) – tartaric acid)

#### Appearance

Form: **crystal, crystalline powder**

Color: **White**

Odor: **odorless**



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## Change in condition

Melting point / Melting range: **169 ° C at 1013 hPa**

Boiling point / Boiling range: **179.1 ° C at 1013 hPa**

Relative density at 20 ° C: **1.7598**

Vapor pressure at 20 ° C: **<5 Pa**

Solubility in water at 20 ° C: **1.390 g / l**

Partition coefficient n-octanol/water (log value) at 20 ° C: **Log Kow (Pow): -1.91**

Flash Point:> **100 ° C to 102.3kPa**

Flash point: **not flammable**

Explosive Properties: **not explosive.**

Auto-ignition temperature: **375 ° C to 1013hPa**

Oxidizing Properties: **not oxidizing**

Stability in organic solvents: **It is not considered critical because it contains no volatile groups of reactions**

Dissociation constant: **pKa 2.98 at 20 ° C**

Viscosity: **The substance is a solid**

## 10. Stability and reactivity

### 10.1 Reactivity

**Not reactive**

### 10.2 Chemical stability

**Stable**

### 10.3 Possibility of hazardous reactions

**None**

### 10.4 Conditions to avoid

**In case of thermic decomposition toxic vapours may be generated. Avoid to breath smoke.**

**Avoid humidity.**

### 10.5 Incompatible materials

**strong oxidizing agents, fluorine, silver, metals**

### 10.6 Hazardous decomposition materials:

**Carbon monoxide, carbon dioxide**

## 11. Toxicological information

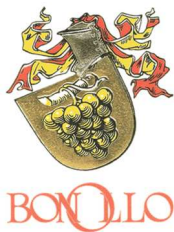
### 11.1 Information on toxicological effects

#### Acute toxicity

Oral LD50 - rat - 7,060 mg / kg

Remarks: Lungs, Thorax, or Respiration: Other changes

LC50 Inhalation - Rat - 10 h - 20000 ppm



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## Skin corrosion / irritation

Skin - rabbit - Irritating to skin. - 24 h

## Serious eye damage / eye irritation serious

Eyes - rabbit - Mild eye irritation - 24 h

## Respiratory / skin sensitization

no data available

## Germ cell mutagenicity

no data available

## Carcinogenicity

Carcinogenicity - mouse - Oral

Oncogenes: doubt second oncogenic agent RTECS Liver: tumors Blood: Lymphoma including Hodgkin's disease

This product is not classifiable as to its effect carcinogen according to IARC, ACGIH, NTP or EPA.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen by IARC known or expected

## Reproductive toxicity

Reproductive toxicity - human - female - Oral

Effects on Newborn: Apgar index (men only), other effects on newborns: addiction

## Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

## Specific target organ toxicity - repeated exposure

no data available

## Risk of excess intake

no data available

## Potential health effects

**Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through the skin causing skin irritation.

**Eyes** Causes eye irritation to eyes.

## Signs and symptoms of exposure

Central nervous system depression, narcosis, cardiac injury, the best of our knowledge, chemical, physical and toxicological properties have not been thoroughly investigated.

## more information

RTECS: KQ6300000

## 12. Ecological information

### 12.1 Toxicity

**There is no information on humans**

#### Acute Toxicity

**Oral Toxicity (female rat): LD50:> 2000 - <= 5000 mg / kg**

**Oral toxicity (male rat): LD50:> 5000 mg / kg**

**Oral toxicity (dog): LD100: approx. 5000 mg / kg**

**Oral toxicity rat (male) LD50 <= 5000 mg / kg**

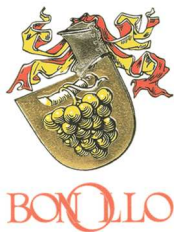
**EC50 - Daphnia magna (Water flea) - 9.30 mg / l - 48 h**

### 12.2 Persistence and degradability

**No data available**

### 12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value) at 20 ° C: **Log Kow (Pow): -1.91**



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**N-octanol/water partition coefficient: No bioaccumulation is not expected log Kow Pow <1 (-1.91)**

12.4 Mobility in soil

**No data available**

12.5 Results of PBT and vPvB

**No data available**

12.6 Other adverse effects

**No data available**

## 13. Disposal considerations

13.1 Methods of waste treatment

**Advice:**

**Not discharge with household waste. Do not discharge into drains.**

**Recycle if possible or contact a company authorized for industrial waste disposal.**

**Observe all European, state and local regulations on environmental protection.**

**Waste Code:**

**The European Union does not establish uniform rules for the removal of chemical waste, as that they are special waste. Their treatment and elimination depend on the domestic legislation of each country. So, for each case, you should contact the competent authority or those companies legally authorized to eliminate waste.**

## 14. Transport information

**By Road/by Rail ADR/RID (across the border):**

Class ADR/RID-GGVS/E: **NON HAZARDOUS PRODUCT**

**BY Sea IMDG:**

Class IMDG: **NON HAZARDOUS PRODUCT**

**BY Air ICAO-TI and IATA-DGR:**

Class ICAO/IATA: **NON HAZARDOUS PRODUCT**


## 15. Regulatory information

15.1 Standards and legislation on health, safety and environmental specifications for the substance or mixture

**L(+)- tartaric acid Chemical Safety Report**

15.2 Chemical Safety Assessments

L(+)- tartaric acid Chemical Safety Report

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## 16. Other information

The data described are obtained from information in literature, sources are listed below.

The company Distillerie Bonollo S.p.A. can not be held responsible for any damage resulting from handling or from contact with the substance covered by this SDS.

The company Distillerie Bonollo S.p.A. is exempted from liability for any damage or injury resulting from misuse of the substance covered by this SDS.

### Bibliographic references:

- CSR (Chemical Safety Report) L ( ) - Tartaric acid
- ECDIN (Environmental Chem. Data and Information→ Network)
- IUCLID (International Uniform Chemical Information→ Database)
- NIOSH - Registry of Toxic Effects of Chemical→ Substances
- Roth - Wassergefährdende Textiles
- Verschueren - Handbook of Environmental Data on→ Organic Chemicals
- ChemDAT - from E. Merck Safety Data Sheets on→ CD-ROM
- Merian - Metals and Their Compounds in the→ Environment
- Eu-Pharmacopeia
- Reg.CE→2008/84

### Normative references:

- Dir 67/548/EEC and subsequent→ amendments
- Regulation (EC) N ° 1907/2006 of the European→ Parliament and the Council of 18 December 2006, REACH.
- Regulation (EC) No. 1272/2008 of the European→ Parliament and the Council of 16 December 2008, CLP, and amended
- Globally Harmonized System, GHS
- Leg. 81/2008 and subsequent amendments
- Regulation (EU) No.→ 453/2010 of the Commission of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

**Replaces previous version Rev.13 dated 05 January 2015**