

## Safety Data Sheet (SDS)

Jindan Lactic Acid 88% Foodgrade

Issue date 01/17/2017

Reviewed on 09/24/2018

### 1. Identification

- **Product Identifier**
- **Name of the product:** Lactic Acid
- **Recommended Use:** Food flavoring
  
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**  
Ramsay Browne Chemical & Company  
PO Box 6425  
Moraga, CA 94570  
General Number: (925) 280-1661
- **Emergency telephone number: (925) 280-1661**

### 2. Hazard(s) Identification

- **Classification of the substance or mixture:**



- **Health hazard, Environment, and other Warnings**
- **Signal Word:** Warning
  
- **Hazard statements:**
- H315: Causes skin irritation
- H319: Causes serious eye irritation

#### GHS Label elements, including precautionary statements

##### Prevention:

**P264:** Wash thoroughly after handling

**P280:** Wear protective gloves/protective clothing/eye protection/face protection

##### Response:

**P302+P352:** IF ON SKIN: Wash with plenty of soap and water

**P332+P313:** If skin irritation occurs: Get medical advice/attention

**P305+P351+P338:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**P337+P313:** If eye irritation persists: Get medical advice/attention

**P362:** Take off contaminated clothing and wash before reuse

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### 2. Hazard(s) Identification (continued)

**Supplemental Hazard information:** No information available

**Special rules for supplemental label elements for certain mixtures:** No information available

### 3. Composition / Information on ingredients

- **Common name:** Lactic Acid
- **CAS No:** 79-33-4
- **Purity:** 78-92% (the other is balanced with water)
- **EC No:** 201-196-2

### 4. First-aid measures

- **General notes:** In all cases of doubt, or when symptoms persist, seek medical attention.
- **Following inhalation:** Immediate medical attention is not required. Move to fresh air.
- **Following skin contact:** Immediate medical attention is not required. Wash off immediately with soap and plenty of water removing all contaminated clothes, and shoes.
- **Following eye contact:** Immediate medical attention is not required. Rinse immediately with plenty of water, also under the eyelids for at least 15 minutes. If eye irritation persists, consult a specialist.
- **Following ingestion:** Immediate medical attention is required. Drink plenty of water. Do not induce vomiting. Call a physician immediately.
- **Notes for the doctor:** Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident.
  
- **Most important symptoms and effects, both acute and delayed:** Not available.
- **Indication of the immediate medical attention and special treatment needed:** Not available.

### 5. Firefighting measures

- **Suitable extinguishing media:**
- **Small fire:** Use dry chemical powder.
- **Large fire:** Use water spray, fog or foam.
- **Unsuitable extinguishing media:** None
- **Hazardous combustion products:** Thermal decomposition can lead to release of irritating gases and vapors.
- **Advice for fire-fighters:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective gear.

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### 6. Accidental release measures

- **Personal precautions:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Environmental precautions:** Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- **Methods and material for containment and cleaning up:** Neutralize with soda or sodium carbonate. Soak up with inert absorbent material and dispose of as hazardous waste. (E.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. After cleaning, flush away traces with plenty of water.
- **Reference to other sections:** None.

### 7. Handling and storage

- **Precautions for safe handling:** Normal measures for preventive fire protection. Keep container dry. Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
- **Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Keep in properly labeled containers. Keep in cool, dry, sunless and ventilative place.
- **Packaging materials:** Plastic or stainless steel 316 L containers.
- **Storage class:** 1 (VCI Storage system).
- **Acid resistant floors; avoid temperatures above 100°C.**
- **Specific end use:** Not available.

### 8. Exposure controls / personal protection

- **Control parameters:** Not available.
- **Exposure Controls:**
  - Appropriate engineering controls; Ensure adequate ventilation, especially in confined areas.
- **Personal protective equipment:**
  - **Eye and face protection:** Safety glasses, Face-shield
  - **Hand protection:** Rubber gloves. Break through time > 8h.
  - **Respiratory protection:** Not required; except in case of aerosol formation. Breathing apparatus needed only when aerosol or mist is formed.
- **Thermal hazards:** Not available
- **Environmental exposure controls:** Prevent from entering sewers, basements and workpans, or any place where its accumulation can be dangerous.
- **Consumer exposure controls:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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### 9. Physical and chemical properties

- **Appearance:** Liquid
- **Color:** Yellow/yellowish/colorless
- **Odor:** Mild acid odor
- **pH:** < 2.0 at 20°C (10% solution)
- **Melting point:** 53°C
- **Boiling point:** 122°C
- **Decomposition temperature:** >200°C
- **Flash point:** Not applicable
- **Auto-ignition temperature:** Not applicable
- **Vapor pressure:** 0.0813 hPa at 25°C
- **Vapor density:** 3.11 (air=1)
- **Density:** 1.19-1.21 g/cm<sup>3</sup> at 25°C (80% solution)
- **Bulk density:** Not applicable
- **Solubility(ies):** Completely soluble in water at 20°C
- **Partition coefficient (n-octanol/water):** Log Pow = ca. -0.62 at 20°C (OECD Guide-line 117)
- **Viscosity, dynamic:** No data available
- **Flammability:** Not auto flammable

### 10. Stability and reactivity

- **Reactivity:** Decomposition when heated. Incompatible with iodides, hydrofluoric acid and nitric acid, oxidizing agents, Albumin. Mixtures of lactic acid, hydrofluoric acid and nitric acid are unstable and should not be stored. Lactic acid and nitric acid react autocatalytically after a quiescent period, attaining a temperature of about 90°C with vigorous gas evolution after about 12 h.
- **Chemical stability:** Stable under recommended storage conditions.
- **Possibility of hazardous reactions:** No dangerous reactions known. Hazardous polymerization does not occur.
- **Conditions to avoid:** Heating, avoid temperatures above 200°C. Incompatible materials.
- **Incompatible materials:** Oxidizing agents, alkali materials.
- **Hazardous decomposition products:** Thermal decomposition can lead to release of irritating gases and vapors. Hazardous decomposition products formed under fire conditions. -Carbon oxides.

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### 11. Toxicological information

- **Acute toxicity:**
- **Acute Oral toxicity:** LD50 = 3730 mg/kg (rat)
- **Acute Inhalation toxicity:** No data available
- **Acute Dermal toxicity:** LD50 > 2000 mg/kg (rabbit)
  
- **Skin corrosion/irritation:**
- **Draize test, rabbit, skin:** 500 mg/24h Severe
- **Draize test, rabbit, skin:** 100 mg/24h Moderate
- **Skin, rabbit:** irritating
  
- **Serious eye damage/irritation:**
- **Draize test, rabbit, eye:** 750 ug Severe
- **Respiratory or skin sensitization:** No data available.
- **Carcinogenicity:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP, OSHA.
- **Mutagenicity:** Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
- **Toxicity for Reproduction:** No data available
- **STOT-single exposure and repeated exposure:** No data available.
- **In case of ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause stomach perforation.
- **In case of skin contact:** May cause skin irritation. Prolonged skin contact may produce dermatitis.
- **In case of inhalation:** Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough. Inhalation of vapors in high concentration may cause shortness of breath (lung oedema). Chronic exposure may cause dermatitis, gastrointestinal disturbance, coughing.
- **In case of eye contact:** Severe eye irritation. Risk of serious damage to eyes. Liquid causes severe inflammation of conjunctiva and may cause severe damage of the cornea.

### 12. Ecological information

- **Acute fish toxicity:** LC50 = 320 mg/l/96h (Brachydanio rerio)
- **Acute daphnia toxicity:** EC50 = 240 mg/l/48h (Daphnia magna)
- **Acute algae toxicity:** EC50 = 3500 mg/l/70h
- **Persistence and degradability:**
- **Degradation:** 80% L-(+)-lactic acid, 50% after 5 days and 67% after 20 days
- **Biochemical oxygen demand (BOD) 5** = 0.45 mg O<sub>2</sub>/mg
- **Biochemical oxygen demand (BOC) 20** = 0.60 mg O<sub>2</sub>/mg

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### 12. Ecological information (continued)

- **Chemical oxygen demand (COD) = 0.90 mg O<sub>2</sub>/mg**
- **Result: readily biodegradable, according to appropriate OECD test.**
- **Bioaccumulative potential:**
- **Low Pow = ca. -0.62 at 20°C**
- No appreciable bioaccumulation potential is to be expected.
- **Mobility in soil:** Based on best current information, there is not data known associated with this product.
- **Results of PBT and vPvB assessment:** Based on best current information, there is no data known associated with this product.
- **Other adverse effects:** No data available.

### 13. Disposal considerations

- **Waste treatment methods:** Can be disposed as waste water, landfilled or incinerated, when in compliance with local regulations. Clean container with water. Empty containers should be taken for local recycling, recovery or waste disposal.

### 14. Transport information

- **Land transport (ADR/RID/GGVSE):** This product is not regulated as a hazardous material or dangerous goods for transportation.
- **Sea transport (IMDG):** This product is not regulated as a hazardous material or dangerous goods for transportation.
- **Air transport (ICAO-TI/IATA-DGR):** This product is not regulated as a hazardous material or dangerous goods for transportation.
- **Additional information:** No data available.

### 15. Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **FDA (USA):** GRAS

### 16. Other information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Ramsay Browne Chemical & Co. be liable for any claims, losses, or damages of any third party or for lost profits or any special,

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### **16. Other information (continued)**

indirect, incidental, consequential or exemplary damages, howsoever arising, even if Ramsay Browne Chemical & Co. has been advised of the possibility of such damages.