

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

Print Date 05/29/2015

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : LIQUINAT® L50
Substance name : Citric acid solution 50%
Chemical nature : Liquid

Manufacturer or supplier's details

Company : Jungbunzlauer Inc.
7 Wells Avenue
Newton Centre, Massachusetts 02459
USA
www.jungbunzlauer.com

Telephone : +1 617 969-0900
Telefax : +1 617 964-2921
E-mail address : msds@jungbunzlauer.com
Responsible/issuing person

Emergency telephone : CHEMTREC
number : +1 800 424 9300

Recommended use of the chemical and restrictions on use

Recommended use : Food/ feedstuff additives, Cosmetic additive, Medical aids,
Industrial use

Restrictions on use : None known.

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Eye irritation : Category 2

GHS-Labeling - Label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H319 Causes serious eye irritation.

Precautionary statements : **Prevention:**
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
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/

LIQUINAT® L50

Version 1.0

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attention.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical Name	CAS-No.	Concentration [%]
Hazardous components		
Citric acid anhydrous	77-92-9	>= 50
Non Hazardous components		
H2O	7732-18-5	<= 50

SECTION 4. FIRST AID MEASURES**First aid procedures**

- Protection of first-aiders : No hazards which require special first aid measures.
- If inhaled : Move to fresh air in case of accidental inhalation of vapours or decomposition products.
- In case of skin contact : Flush skin with large amounts of water. If irritation develops and persists, get medical attention.
- In case of eye contact : If easy to do, remove contact lens, if worn.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
If eye irritation persists, consult a specialist.
- If swallowed : Drink plenty of water.
If swallowed, DO NOT induce vomiting.

Notes to physician

- Symptoms : Eye irritation may cause mild and mechanical irritation and thus symptoms which would be redness and pain.
- Risks : Causes serious eye irritation.
- Treatment : Symptomatic treatment

SECTION 5. FIREFIGHTING MEASURES**Fire fighting**

- Suitable extinguishing media : Water spray
Dry powder
Foam
Carbon dioxide (CO₂)
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

Print Date 05/29/2015

In the event of fire and/or explosion do not breathe fumes.

Protective equipment and precautions for firefighters

- Specific hazards during firefighting : Do not use a solid water stream as it may scatter and spread fire.
Hazardous decomposition products formed under fire conditions.
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Wear fire resistant or flame retardant clothing.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Avoid contact with skin and eyes.
Avoid inhalation of vapour or mist.
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
No special environmental precautions required.
- Methods and materials for containment and cleaning up : Neutralize with lime milk or soda and flush with plenty of water.
After cleaning, flush away traces with water.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE**Handling**

- Advice on safe handling : Do not breathe vapours or spray mist.
Wear personal protective equipment.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Dust explosion class : Not applicable

Storage

- Requirements for storage areas and containers : Store in original container.
Keep in an area equipped with acid resistant flooring.
- Advice on common storage : Incompatible with bases.
- Storage temperature : > 41 °F (> 5 °C)
- Other data : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

Engineering measures : Provide adequate ventilation.

Personal protective equipment

Respiratory protection : Not required; except in case of aerosol formation.

Hand protection

Remarks

: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer.

Eye protection

: Safety glasses
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection

: Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

: Avoid contact with skin, eyes and clothing.
Handle in accordance with good industrial hygiene and safety practice.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

pH

: < 1, (25 °C)

: Not applicable

Boiling point/boiling range

: 102 - 108 °C

Flash point

: does not flash

Evaporation rate

: not determined

Flammability (solid, gas)

: does not ignite

Upper explosion limit

: Not applicable

Lower explosion limit

: Not applicable

Vapour pressure

: not determined

Relative vapour density

: not determined

Density

: 1.23 - 1.25 g/cm³ (20 °C)

Solubility(ies)

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

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Water solubility	: completely miscible
Partition coefficient: n-octanol/water	: log Pow: -1.8 - -0.2 Calculation
Ignition temperature	: Not applicable
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: 7 - 10 mPa.s (25 °C)
Oxidizing properties	: No oxidising effect.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Incompatible materials	: Strong bases Oxidizing agents
Hazardous decomposition products	: Build-up of dangerous/toxic fumes possible in cases of fire/high temperature.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Components:****Citric acid anhydrous:**

Acute oral toxicity : LD50 Oral Mouse: 5,400 mg/kg
Method: OECD Test Guideline 401

LD50 Oral Rat: 11,700 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal Rat: > 2,000 mg/kg

Acute toxicity (other routes of administration) : LD50 Rat: 725 mg/kg
Application Route: i.p.

LD50 Mouse: 940 mg/kg
Application Route: i.p.

Skin corrosion/irritation**Components:**

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

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Citric acid anhydrous:

: Species: Rabbit
Result: No skin irritation
Method: OECD Test Guideline 404
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation**Components:****Citric acid anhydrous:**

: Species: Rabbit
Result: Irritating to eyes.
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Components:****Citric acid anhydrous:**

: Test Method: Maximisation Test (GPMT)
Species: Guinea pig
Result: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

Germ cell mutagenicity**Components:****Citric acid anhydrous:**
Germ cell mutagenicity-
Assessment

: In vivo tests did not show mutagenic effects

Carcinogenicity**Components:****Citric acid anhydrous:**
Carcinogenicity -
Assessment

: Did not show carcinogenic or teratogenic effects in animal experiments.

Reproductive toxicity**Components:****Citric acid anhydrous:**
Reproductive toxicity -
Assessment

: No toxicity to reproduction

H2O:**STOT - single exposure**

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

Potential Health Effects

Aggravated Medical : None known.

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

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Condition

Symptoms of Overexposure : Eye irritation may cause mild and mechanical irritation and thus symptoms which would be redness and pain.

Experience with human exposure

Inhalation : Respiratory system
No information available.

Skin contact : Skin
May cause skin irritation in susceptible persons.

Eye contact : Eyes
Redness, Itching

Ingestion : Digestive organs
No information available.

NTP

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

IARC

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.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****Citric acid anhydrous :**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 440 mg/l
Exposure time: 48 h
Test Method: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): 1,535 mg/l
Exposure time: 24 h
Test Method: static test

Toxicity to algae : NOEC (Scenedesmus quadricauda (Green algae)): 425 mg/l
Exposure time: 8 d
Test Type: static test

Toxicity to bacteria : TT (Pseudomonas putida): > 10,000 mg/l

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

Print Date 05/29/2015

Exposure time: 16 h

Persistence and degradability**Components:****Citric acid anhydrous :**

Biodegradability : Biodegradation: 97 %
 Testing period: 28 d
 Method: OECD Test Guideline 301B
 Remarks: Readily biodegradable

Biodegradation: 100 %
 Testing period: 19 d
 Method: OECD Test Guideline 301E
 Remarks: Readily biodegradable

Biochemical Oxygen Demand (BOD) : 526 mg/g
 Chemical Oxygen Demand (COD) : 728 mg/g

Bioaccumulative potential**Product:**

Partition coefficient: n-octanol/water : log Pow: -1.8 - -0.2
 Remarks: Calculation

Components:**Citric acid anhydrous :**

Bioaccumulation : Remarks: The product is miscible in water and readily biodegradable in both water and soil. Accumulation is not expected.

Mobility in soil**Product:**

Stability in soil : Remarks: Adsorbs on soil.

Other adverse effects**Components:****Citric acid anhydrous :**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Where possible recycling is preferred to disposal or incineration.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**TDG_ ROAD**

UN number : 3265
 Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 Class : 8
 Packing group : III
 Labels : 8
 Environmentally hazardous : no

IATA

UN number : 3265
 Description of the goods : Corrosive liquid, acidic, organic, n.o.s.
 Class : 8
 Packing group : III
 Labels : 8
 Packing instruction (cargo aircraft) : 856
 Packing instruction (passenger aircraft) : 856
 Packing instruction (LQ) : Y841
 Environmentally hazardous : no

IMDG

UN number : 3265
 Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 Class : 8
 Packing group : III
 Labels : 8
 EmS Number 1 : F-A
 EmS Number 2 : S-B

 Marine pollutant : no
 Environmentally hazardous : no

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : CAUSES EYE IRRITATION

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

REACH On the inventory, or in compliance with the inventory
EINECS On the inventory, or in compliance with the inventory
TSCA On TSCA Inventory
DSL All components of this product are on the Canadian DSL

LIQUINAT® L50

Version 1.0

Revision Date 05/29/2015

Print Date 05/29/2015

Inventories

AICS (Australia), DSL (Canada), IECSC (China), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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