



山东中蓝化工有限公司

ZHONGLAN INDUSTRY CO.,LTD.

ADD: 7/F SANQING FENGRUN BLDG,NO.100 SOUTH GONGYE ROAD,
JINAN CITY, CHINA.P.C.:250100

EMAIL ID: sale@zhonglanindustry.com

WEBSITE : www.cosmeticchem.com

MSDS of Trimethyl citrate

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Chemical Name: Triethyl citrate

CAS No.: 77-93-0

Company : Zhonglan Industry Co., Ltd

Add: 7/F, Sanqing Fengrun Building, No. 100 South Gongye Road, Jinan City , Shandong Province, China

Tel:+86-531-82956570

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E-mail address : sale@zhonglanindustry.com

2. HAZARDS IDENTIFICATION

Emergency Overview

WHMIS Classification

D1B Toxic Material Causing Immediate and Serious

Toxic Effects

Toxic by inhalation.

Not a hazardous substance or mixture.

HMIS Classification

Health hazard: 1

Flammability: 1

Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion May be harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Ethyl citrate

Formula : C₁₂H₂₀O₇

Molecular weight : 276.28 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Trimethyl citrate			
77-93-0	201-070-7	-	<=100%

4. FIRST AID MEASURES

If inhaled



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If breathed in, move person into fresh air. If not breathing, give artificial respiration.

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIREFIGHTING MEASURES

Conditions of flammability

Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Explosion data - sensitivity to mechanical impact

No data available

Explosion data - sensitivity to static discharge

No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapours, mist or gas.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387)

respirator cartridges. Use respirators and components tested and approved under appropriate government



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standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching

glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 480 min

Material tested:Dermatril® P (KCL 743 / Aldrich Z677388, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 120 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the

supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial

hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be

construed as offering an approval for any specific use scenario.

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH

(US) or EN 166(EU).

Skin and body protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount

of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

Specific engineering controls

Use mechanical exhaust or laboratory fumehood to avoid exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form clear, liquid

Colour light yellow



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Safety data

pH No data available

Melting

point/freezing point

Melting point/range: < -39.99 °C (< -39.98 °F) - OECD Test Guideline 102

Boiling point 235 °C (455 °F) at 200 hPa (150 mmHg) - lit.

Flash point 155 °C (311 °F) - closed cup

Ignition temperature No data available

Auto-ignition

temperature

355 °C (671 °F) at 1,009 - 1,014 hPa (757 - 761 mmHg)

Lower explosion limit No data available

Upper explosion limit No data available

Vapour pressure 1 hPa (1 mmHg) at 107 °C (225 °F)

Density 1.14 g/cm³ at 25 °C (77 °F)

Water solubility 58.1 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - completely soluble

Partition coefficient:

n-octanol/water

log Pow: 1.17 at 40 °C (104 °F)

Viscosity, kinematic 32.17 mm²/s at 20 °C (68 °F)

Relative vapour

density

9.54

- (Air = 1.0)

Odour No data available

Odour Threshold No data available

Evaporation rate No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

No data available

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

11. TOXICOLOGICAL INFORMATION



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Acute toxicity

Oral LD50

LD50 Oral - Rat - 5,900 mg/kg

Remarks: Behavioral:Altered sleep time (including change in righting reflex). Respiratory disorder

Nutritional and

Gross Metabolic:Changes in:Body temperature decrease.

Inhalation LC50

LC50 Inhalation - Rat - 6 h - 1300 ppm

Remarks: Lungs, Thorax, or Respiration:Acute pulmonary edema. Lungs, Thorax, or Respiration:Pleural effusion.

Lungs, Thorax, or Respiration:Dyspnea.

Dermal LD50

LD50 Dermal - Rabbit - > 5,000 mg/kg

Other information on acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

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.

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.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

No data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.



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Eyes May cause eye irritation.

Signs and Symptoms of Exposure

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

Synergistic effects

No data available

12. ECOLOGICAL INFORMATION

Toxicity

Toxicity to daphnia
and other aquatic
invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h

Toxicity to algae Growth inhibition EC50 - Pseudokirchneriella subcapitata (green algae) - > 100 mg/l - 72 h

Method: OECD Test Guideline 201

Persistence and degradability

Biodegradability aerobic

Result: 77 % - Readily biodegradable

Method: OECD Test Guideline 301F

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods



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15. REGULATORY INFORMATION

WHMIS Classification

D1B Toxic Material Causing Immediate and Serious

Toxic Effects

Toxic by inhalation.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the

MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

NA