

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

1. Identification of the substance/mixture and company

Trade name: Triethyl citrate
Non-microbicial deodorant active substance
INCI Triethyl citrate
CAS No. : 77-93-0
EINECS No. : 201-070-7
REACH pre-registration No. : -
Utilization: Raw material for cosmetic or professional use
Supplier company identification: Elemental SRL, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania
Tel/Fax: +40259-436.755, www.elemental.eu
Emergency: RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate Publică București.
International emergency number: +49 180 2273-112

2. Hazards Identification

2.1 Classification of the substance or mixture

According to UN GHS criteria
No need for classification according to GHS criteria for this product

2.2 Label elements

Globally Harmonized System (GHS)

The product does not require a hazard warning label in accordance with GHS criteria.

2.2 Other hazards

According to UN GHS criteria

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Declaration of ingredients

3.1 Substances

Chemical nature: Triethyl citrate, CAS Number: 77-93-0, EC-Number: 201-070-7

3.2 Mixtures

Not applicable

Material safety data sheet
According to EU Regulation 1907/2006 in the current version
Triethyl citrate

4. First aid measures

4.1 Description of first aid measures

If adverse health effects develop seek medical attention.

If inhaled: not relevant.

On skin contact: After contact with skin, wash immediately with plenty of water.

On contact with eyes: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water.
Seek medical attention if necessary.

On ingestion: Rinse mouth and then drink 200-300 ml of water.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: No significant symptoms are expected due to the non-classification of the product.

Hazards: No hazard is expected under intended use and appropriate handling.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing media: water spray, carbon dioxide, dry powder, foam.

5.2 Special hazards arising from the substance or mixture

Harmful vapors.

Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

5.3 Advice for fire-fighters

Special protective equipment: Wear a self-contained breathing apparatus.

Further information: Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective clothing.

6.2 Environmental precautions

Do not discharge into drains/surface waters/groundwater.

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

6.3 Methods and material for containment and cleaning up

For small amounts: Pick up with suitable absorbent material.

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations.

6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

7. Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion: Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

7.2 Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Stove-lacquer RDL 50, Stove lacquer R 78433.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. At the usual storage and transportation conditions no impairments of the product are to be expected.

Above temperature limit the product properties change. The property change is reversible. Please refer to the technical leaflet for further information.

Storage stability:

Storage temperature: $\leq 30^{\circ}\text{C}$

Protect from temperatures above: 30°C

Properties of the product change reversibly on exceeding the limit temperature.

7.3 Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

8. Exposure controls / personal protection

8.1 Control parameters

Components with occupational exposure limits: No occupational exposure limits known.

8.2 Exposure controls

Personal protective equipment:

Respiratory protection: Respiratory protection not required.

Hand protection: Hand protection not required.

Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

Body protection: Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures: Handle in accordance with good industrial hygiene and safety practice. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form: liquid

Color: colorless

Odor: odorless

Odor threshold: not applicable

pH value: 4,5 – 4,7 (water, 20 °C)

Melting point: -46 °C

Boiling point: 294 °C (1.013 hPa)

Flash point: 112,0 °C

Evaporation rate: Value can be approximated from Henry's Law Constant or vapor pressure.

Flammability: not flammable

Flammability of Aerosol Products: not applicable, the product does not form flammable aerosols

Lower explosion limit: For liquids not relevant for classification and labeling.

Upper explosion limit: For liquids not relevant for classification and labeling.

Ignition temperature: not determined

Vapor pressure: not determined

Density: 1,135 - 1,139 g/cm³ (25 °C)

Relative vapor density (air): not applicable

Solubility in water: poorly soluble

Partitioning coefficient n-octanol/water (log K_{ow}): not determined

Self ignition: not applicable

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

Viscosity, dynamic: not determined

Viscosity, kinematic: not determined

Explosion hazard: not explosive

Fire promoting properties: not fire-propagating

9.2 Other Information

If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and reactivity

10.1 Reactivity

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

No hazardous reactions if stored and handled as prescribed/indicated.

10.2 Chemical stability

The product is stable if stored and handled as prescribed/indicated.

10.3 Possibility of hazardous reactions

None if used for intended purpose.

10.4 Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5 Incompatible materials

Substances to avoid: No substances known that should be avoided.

10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion.

Experimental/calculated data: LD50 rat (oral):

> 5.000 mg/kg (Directive 84/449/EEC, B.1)

Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:

Skin corrosion/irritation rabbit: non-irritant (Draize test)

Serious eye damage/irritation rabbit: non-irritant (Draize test)

Respiratory/Skin sensitization

Assessment of sensitization:

No sensitizing effect.

Experimental/calculated data:

Guinea pig maximization test guinea pig: Non-sensitizing.
(Directive 84/449/EEC, B.6)

Germ cell mutagenicity

Assessment of mutagenicity:

The chemical structure does not suggest a specific alert for such an effect.

Experimental/calculated data:

Ames-test Bacteria: negative (Directive 84/449/EEC, B.14)

Carcinogenicity

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

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|--|---|
| Assessment of carcinogenicity: | The chemical structure does not suggest a specific alert for such an effect. |
| Reproductive toxicity Assessment of reproduction toxicity: | The chemical structure does not suggest a specific alert for such an effect. |
| Developmental toxicity Assessment of teratogenicity: | No data was available concerning toxicity to development. |
| Specific target organ toxicity (single exposure) Assessment of STOT single: | Based on available Data, the classification criteria are not met. |
| Repeated dose toxicity and Specific target organ toxicity (repeated exposure) Assessment of repeated dose toxicity: | The information available on the product provides no indication of toxicity on target organs after repeated exposure. |
| Aspiration hazard No aspiration hazard expected. | |

12. Ecological information

12.1 Toxicity

| | |
|--|---|
| Toxicity to fish: | LC50 > 100 mg/l, Leuciscus idus (DIN EN ISO 7346-2) |
| Microorganisms/Effect on activated sludge: | EC0 > 100 mg/l, Pseudomonas putida (OECD Guideline 209) |

12.2 Persistence and degradability

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| Assessment biodegradation and elimination (H2O): | Easily eliminated from water. |
|--|-------------------------------|

12.3 Bioaccumulative potential

| | |
|---------------------------------------|--------------------|
| Assessment bioaccumulation potential: | No data available. |
|---------------------------------------|--------------------|

12.4 Mobility in soil

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|--|----------------|
| Assessment transport between environmental compartments: Volatility: | not applicable |
|--|----------------|

12.5 Results of PBT and vPvB assessment

According to Annex XIV of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH): The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

12.6 Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

Material safety data sheet
According to EU Regulation 1907/2006 in the current version
Triethyl citrate

13. Disposal considerations

13.1 Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging: Uncontaminated packaging can be re-used.

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport information

14.1 Land transport

ADR

| | |
|--|----------------|
| Not classified as a dangerous good under transport regulations | |
| UN number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

RID

| | |
|--|----------------|
| Not classified as a dangerous good under transport regulations | |
| UN number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

14.2 Inland waterway transport

ADN

| | |
|--|----------------|
| Not classified as a dangerous good under transport regulations | |
| UN number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |

Material safety data sheet
According to EU Regulation 1907/2006 in the current version
Triethyl citrate

| | |
|--------------------------------------|----------------|
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |
| Transport in inland waterway vessel: | Not evaluated |

14.3 Sea transport

IMDG

| | |
|--|----------------|
| Not classified as a dangerous good under transport regulations | |
| UN number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

14.4 Air transport

| | |
|--|----------------|
| Not classified as a dangerous good under transport regulations | |
| UN number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

14.5 UN number

See corresponding entries for "UN number" for the respective regulations in the tables above.

14.6 UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.7 Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

14.8 Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.9 Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.10 Special precautions for user See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.11 Transport in bulk according to Annex II of MARPOL and the IBC Code

| | |
|---------------------|---------------|
| Regulation: | Not evaluated |
| Shipment approved: | Not evaluated |
| Pollution name: | Not evaluated |
| Pollution category: | Not evaluated |
| Ship Type: | Not evaluated |

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Additional information

Information on intended use: This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use. This includes the mentioned and recommended usage. Any other intended applications should be discussed with the manufacturer. In particular this concerns the application for products that are the object of special standards and regulations.

16.1 Abbreviations:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

Triethyl citrate

IMDG: International Maritime Code for Dangerous Goods.

INCI: International Nomenclature of Cosmetic Ingredients.

LTE: Long-term exposure.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

STE: Short-term exposure.

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.