

SECTION 1: Identification

1.1. Product identifier

Trade name : TRISODIUM CITRATE 2hydr
 Type of product : Hygroscopic substance. Preventive measures apply to the substance in dry state only
 EC-No. : 200-675-3
 CAS-No. : 6132-04-3
 Product code : 119105xxx
 Formula : C6H5Na3O7.2H2O

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses and restrictions : For laboratory use only

1.3. Supplier's details

Labchem (Pty)Ltd
 6 Wakefield Road
 Founders Hill
 1609 Johannesburg - South Africa
 T +27 11 452 1116 - F +27 86 588 0293
techlab@labchem.co.za - www.labchem.co.za

1.4. Emergency telephone number

Emergency number : +27 11 452 1116

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral) Not classified
 Hazardous to the aquatic environment -
 Acute Hazard Not classified
 Full text of H statements : see section 16

2.2. Label elements

Labelling according to the United Nations GHS

No labelling applicable

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance identification codes: See section 1.1

| Name | Product identifier | % | Classification according to the United Nations GHS |
|----------------------------------------------------|---------------------|------|------------------------------------------------------------------|
| trisodium citrate, dihydrate (Main constituent) | (CAS-No.) 6132-04-3 | ≥ 99 | Acute Tox. Not classified (Oral) Aquatic Acute Not classified |

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.
 First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
 First-aid measures after skin contact : Rinse with water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists. Wash skin with plenty of water.
 First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists. Rinse eyes with water as a precaution.
 First-aid measures after ingestion : Rinse mouth with water. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Call a poison center or a doctor if you feel unwell.

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According to SANS 10234:2019 and SANS 11014:2010

4.2. Most important symptoms and effects, both acute and delayed

| | |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Symptoms/effects after inhalation | : AFTER INHALATION OF DUST: Coughing. |
| Symptoms/effects after skin contact | : Not irritating. |
| Symptoms/effects after eye contact | : Slight irritation. Redness of the eye tissue. |
| Symptoms/effects after ingestion | : AFTER INGESTION OF HIGH QUANTITIES: Gastrointestinal complaints. Change in the haemogramme/blood composition. Slowing heart action. |
| Chronic symptoms | : No effects known. |
| Potential adverse human health effects and symptoms | : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Not irritant to skin. Slightly irritant to eyes. |

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam. Water spray. Dry powder. Foam. |
| Unsuitable extinguishing media | : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher. |

5.2. Special hazards arising from the substance or mixture

| | |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire hazard | : DIRECT FIRE HAZARD: Not easily combustible. In finely divided state: increased fire hazard. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard. |
| Explosion hazard | : DIRECT EXPLOSION HAZARD: Fine dust is explosive with air. INDIRECT EXPLOSION HAZARD: Dust cloud can be ignited by a spark. |
| Hazardous decomposition products in case of fire | : Upon combustion: CO and CO2 are formed. |

5.3. Advice for firefighters

| | |
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| Precautionary measures fire | : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows. |
| Firefighting instructions | : No specific fire-fighting instructions required. |
| Protection during firefighting | : Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

| | |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Protective equipment | : Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. |
| Emergency procedures | : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes. |

6.1.2. For emergency responders

| | |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For containment | : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. Powdered form: no compressed air for pumping over spills. |
| Methods for cleaning up | : Mechanically recover the product. Stop dust cloud by humidifying. Scoop solid spill into closing containers. Powdered: do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| | |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Powdered form: no compressed air for pumping over. Keep container tightly closed. |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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According to SANS 10234:2019 and SANS 11014:2010

Hygiene measures : Observe normal hygiene standards. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.
Storage area : Store in a dry area. Meet the legal requirements. Keep container in a well-ventilated place.
Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. water/moisture.
Special rules on packaging : SPECIAL REQUIREMENTS: closing. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Materials for protective clothing : GIVE GOOD RESISTANCE: PVC
Hand protection : Gloves
Eye protection : Safety glasses. In case of dust production: protective goggles. Safety glasses
Skin and body protection : Protective clothing
Respiratory protection : Dust production: dust mask with filter type P1

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Crystalline solid. Crystalline powder. Grains.
Molecular mass : 294.1 g/mol
Colour : White.
Odour : Odourless.
Odour threshold : No data available
pH : 8 – 9 (5 %)
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : 150 °C
Freezing point : Not applicable
Boiling point : Not applicable
Flash point : > 290 °C
Auto-ignition temperature : Not applicable
Decomposition temperature : 150 °C
Flammability (solid, gas) : Non flammable.
Vapour pressure : No data available
Vapour pressure at 50 °C : No data available
Relative vapour density at 20 °C : Not applicable
Relative density : 0.9
Relative density of saturated gas/air mixture : No data available
Density : 900 kg/m³

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| | |
|-------------------------------------------------|------------------------------------------|
| Relative gas density | : No data available |
| Solubility | : Soluble in water. Water: 77 g/100ml |
| Partition coefficient n-octanol/water (Log Pow) | : No data available |
| Partition coefficient n-octanol/water (Log Kow) | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |
| Lower explosive limit (LEL) | : No data available |
| Upper explosive limit (UEL) | : No data available |

9.2. Other information

| | |
|------------------|----------------|
| VOC content | : 0 % |
| Other properties | : Hygroscopic. |

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Hygroscopic.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|-----------------------------|-------------------|
| Acute toxicity (oral) | : Not classified. |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

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| | |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| LD50 oral rat | > 8000 mg/kg (Rat, Literature study, Oral) |
| Skin corrosion/irritation | : Not classified pH: 8 – 9 (5 %) |
| Serious eye damage/irritation | : Not classified pH: 8 – 9 (5 %) |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Potential adverse human health effects and symptoms | : Non-toxic if swallowed (LD50 oral, rat > 5000 mg/kg). Not irritant to skin. Slightly irritant to eyes. |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-------------------|--------------------------------------------------------------------------------------------------------------|
| Ecology - general | : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008. |
| Ecology - air | : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). |

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According to SANS 10234:2019 and SANS 11014:2010

| | |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Ecology - water | : Not harmful to crustacea. Not harmful to fishes. Mild water pollutant (surface water). Not harmful to algae. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified. |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

| TRISODIUM CITRATE 2hydr (6132-04-3) | |
|-------------------------------------|----------------------------------------------------------|
| LC50 fish 1 | > 18000 mg/l (96 h, Poecilia reticulata, Solution >=50%) |
| EC50 Daphnia 1 | 5600 mg/l (48 h, Daphnia magna, Solution >=50%) |

12.2. Persistence and degradability

| TRISODIUM CITRATE 2hydr (6132-04-3) | |
|-------------------------------------|---------------------------------|
| Persistence and degradability | Readily biodegradable in water. |

12.3. Bioaccumulative potential

| TRISODIUM CITRATE 2hydr (6132-04-3) | |
|-------------------------------------|------------------------------------|
| Bioaccumulative potential | No bioaccumulation data available. |

12.4. Mobility in soil

| TRISODIUM CITRATE 2hydr (6132-04-3) | |
|-------------------------------------|-------------------------------------|
| Mobility in soil | No additional information available |

12.5. Other adverse effects

| | |
|-----------------------|---------------------------------------|
| Ozone | : Not classified |
| Other adverse effects | : No additional information available |

SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Product/Packaging disposal recommendations | : Remove waste in accordance with local and/or national regulations. Remove to an authorized waste treatment plant. |
| Additional information | : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997. |

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

| SANS | IMDG | IATA |
|------------------------------------------|------------------------------------|------------------------------------|
| 14.1. UN number | | |
| Not regulated for transport | | |
| 14.2. Proper Shipping Name | | |
| Not applicable | Not applicable | Not applicable |
| 14.3. Transport hazard class(es) | | |
| Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable |
| 14.4. Packing group | | |
| Not applicable | Not applicable | Not applicable |
| 14.5. Environmental hazards | | |
| Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |
| : No supplementary information available | | |

14.6. Special precautions for user

- SANS

Transport regulations (UN) : Not subject

- IMDG

Transport regulations (IMDG) : Not subject

- IATA

Transport regulations (IATA) : Not subject

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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According to SANS 10234:2019 and SANS 11014:2010

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

Regulatory reference : SANS 10234:2008; SANS 11014:2010; SANS 10228:2012;SANS 10229:2010; SANS 10232(1,2,4), SANS 10231:2018; Occupational Health and Safety Act 85 of 1993; National Road Traffic Act 93 of 1996.

SECTION 16: Other information

Issue date : 01/07/2020

Revision date : 01/07/2025

SDS South Africa

The data provided in this Safety Data Sheet (SDS) is correct to the best of our knowledge. The data relates to the specific product as named and is intended as a guide to the safe handling of the product in all its facets. The data may no longer be valid if the product is used in any process or in combination with other products. This SDS is not a quality specification nor any form of guarantee.