Tintometer[®] Group Water Testing



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Safety data sheet according to 1907/2006/EC, Article 31

Printing date 15.05.2024 Version number 10 (replaces version 9) Revision: 15.05.2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- · 1.1 Product identifier
- Product name: Chloride T2
- · Catalog number:

00515921, 515920BT, 515921BT, 00515920BT, 00515921BT, 4515920BT, 4515921BT, 00515929BT, SDT592

- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- · Application of the substance / the preparation: Reagent for water analysis
- · 1.3 Details of the supplier of the safety data sheet
- · Supplier:

Tintometer GmbH Schleefstraße 8-12 44287 Dortmund Made in Germany www.lovibond.com

phone: +49 (0)231 94510-0 e-mail: sales@lovibond.com

The Tintometer Limited Lovibond® House Sun Rise Way Amesbury Wiltshire SP4 7GR United Kingdom

/iltshire SP4 7GR phone : +44 1980 664800 nited Kingdom e-mail: SDS@lovibond.uk

Informing department:

e-mail: sds@lovibond.com Product Safety Department

· 1.4 Emergency telephone number:

+44 1235 239670 Languages: English

SECTION 2: Hazards identification

- · 2.1 Classification of the substance or mixture
- · Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

- · 2.2 Label elements
- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the GB CLP regulation.

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Product name: Chloride T2

· Hazard pictograms

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· Signal word Danger

Hazard-determining components of labelling:

potassium monopersulfate

silver nitrate

· Hazard statements

H314 Causes severe skin burns and eye damage.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Wear protective gloves/protective clothing/eye protection.

P273 Avoid release to the environment.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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

do. Continue rinsina.

P310 Immediately call a doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards No further relevant information available.

· Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

Determination of endocrine-disrupting properties

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

- 3.2 Mixtures
- · Description: Mixture of organic and inorganic compounds

· Dangerous components:		
	potassium monopersulfate	10–20%
EINECS: 274-778-7	🥎 Skin Corr. 1B, H314; Eye Dam. 1, H318; 🗘 Acute Tox. 4, H302	
	silver nitrate	1–≤2.5%
EINECS: 231-853-9	♠ Ox. Sol. 2, H272; ♦ Skin Corr. 1B, H314; ♠ Aquatic Acute 1, H400 (M=1000); Aquatic Chronic 1, H410 (M=100); ♠ Acute Tox. 4, H302	
Index No: 047-001-00-2	(M=1000); Aquatic Chronic 1, H410 (M=100); (Acute Tox. 4, H302)	
Reg.nr.: 01-2119513705-43-XXXX	·	

[•] Additional information For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

- · 4.1 Description of first aid measures
- · General information Instantly remove any clothing soiled by the product.
- · After inhalation Supply fresh air or oxygen; call for doctor.
- · After skin contact

Instantly wash with polyethylene glycol 400.

Instantly rinse with water.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

After eye contact

Rinse opened eye for several minutes (at least 15 min) under running water.

Call a doctor immediately.

· After swallowing

Rinse out mouth and then drink 1-2 glasses of water.

Do not induce vomiting; instantly call for medical help.

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

after inhalation:

coughing

breathing difficulty

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damage to the affected mucous membranes possible

after swallowing:

strong caustic effect.

sickness

vomiting

cramps

cardiovascular disorders

· Danger

Danger of impaired breathing.

Danger of gastric perforation.

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

If swallowed or in case of vomiting, danger of entering the lungs

Subsequent observation for pneumonia and pulmonary oedema

SECTION 5: Firefighting measures

- 5.1 Extinguishing media
- · Suitable extinguishing agents Use fire fighting measures that suit the environment.
- · 5.2 Special hazards arising from the substance or mixture

The product is not combustible.

Formation of toxic gases is possible during heating or in case of fire.

Can be released in case of fire:

nitrous gases

Sulphur oxides (SOx)

Nitrogen oxides (NOx)

Oxygen (O₂)

Dipotassium oxide

Sodium oxide

- 5.3 Advice for firefighters
- · Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

Additional information

Collect contaminated fire fighting water separately. It must not enter drains.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

- · 6.1 Personal precautions, protective equipment and emergency procedures
- · Advice for non-emergency personnel:

Wear protective equipment. Keep unprotected persons away.

Avoid substance contact.

Ensure adequate ventilation

Use breathing protection against the effects of fumes/dust/aerosol.

Advice for emergency responders: Protective equipment: see section 8

· 6.2 Environmental precautions:

Do not allow product to reach sewage system or water bodies.

Inform respective authorities in case product reaches water or sewage system.

6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Collect mechanically.

Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

SECTION 7: Handling and storage

- · 7.1 Precautions for safe handling
- · Advice on safe handling: No special precautions necessary if used correctly.

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· Hygiene measures:

Do not inhale dust / smoke / mist.

Do not get in eyes, on skin, or on clothing.

Take off immediately all contaminated clothing.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke when using this product.

· 7.2 Conditions for safe storage, including any incompatibilities

- · Requirements to be met by storerooms and containers: Store in cool location.
- Information about storage in one common storage facility:

Store away from flammable substances.

see chapter 10

· Further information about storage conditions:

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed containers.

Protect from the effects of light.

Store in the dark.

Protect from humidity and keep away from water.

This product is hygroscopic.

- Recommended storage temperature: 20°C +/- 5°C
- · 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· Components with limit	values that require monit	toring at the workplace:

CAS: 7761-88-8 silver nitrate

WEL (Great Britain) Long-term value: 0.01 mg/m³

as Ag

IOELV (European Union) Long-term value: 0.01 mg/m³

as Ag

Regulatory information

WEL (Great Britain): EH40/2020

IOELV (European Union): (EU) 2019/1831

·DNELs

CAS: 7761-88-8 silver nitrate

Inhalative DNEL 0.016 mg/m³ (Worker / long-term /systemic effects)

Recommended monitoring procedures:

Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

- · Additional information: The lists that were valid during the compilation were used as basis.
- · 8.2 Exposure controls

Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.

· Individual protection measures, such as personal protective equipment

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.

· Eye/face protection Tightly sealed safety glasses.

Hand protection

Protective gloves.

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

· Penetration time of glove material

Value for the permeation: Level = 1 (< 10 min)

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Other skin protection (body protection): Protective work clothing.

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- · Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.
- · Recommended filter device for short term use: Filter P2
- · Environmental exposure controls Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
 Physical state Solid.
 Form: Tablets

Colour: Whitish
 Odourless
 Odour threshold: Not applicable.
 Melting point/Freezing point: Not determined.
 Boiling point or initial boiling point and boiling range Not determined.

• Flammability The product is not combustible. • Explosive properties: Product is not explosive.

Lower and upper explosion limit

Lower:
Upper:
Not applicable.
Not applicable (solid).
Decomposition temperature:
Not determined.

· pH (12.9 g/l) at 20°C 2.2

· Kinematic viscosity Not applicable (solid).

· Solubility

· Water: Soluble

· Partition coefficient n-octanol/water (log value) Not applicable (mixture).

· Vapour pressure: Not applicable.

· Density and/or relative density

Density at 20°C:
Relative density:
Relative gas density
Particle characteristics
1.5 g/cm³
Not determined.
Not applicable (solid).
Not determined.

9.2 Other information

· Information with regard to physical hazard classes

· Corrosive to metals Void

· Other safety characteristics

Oxidising properties: CAS 70693-62-8: Oxidising potential

· Additional information

· Solids content: 100.0 %

SECTION 10: Stability and reactivity

· 10.1 Reactivity see section 10.3

· 10.2 Chemical stability

Stable at ambient temperature (room temperature). sensitivity to light

10.3 Possibility of hazardous reactions

Reacts with alcohols

Reacts with halogenated compounds

Reacts with alkali (lyes)
Reacts with reducing agents

· 10.4 Conditions to avoid To avoid thermal decomposition do not overheat.

· 10.5 Incompatible materials:

combustible substances

aluminium

steel

10.6 Hazardous decomposition products:

sodium monoxide

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In case of fire: see section 5.

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SECTION 11: Toxicological information

- · 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
- · Acute toxicity Based on available data, the classification criteria are not met.

	· LD/LC50 values	that are relevant for	classification:
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CAS: 70693-62-8 potassium monopersulfate

Oral LD50 1204 mg/kg (rat)

(IUCLID)

CAS: 7761-88-8 silver nitrate

Oral LD50 1173 mg/kg (rat)

(RTECS)

- · Skin corrosion/irritation Causes severe skin burns and eye damage.
- · Serious eye damage/irritation

Causes serious eye damage.

Risk of blindness!

- · Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Information on components:

CAS 70693-62-8: Sensitization possible in predisposed persons.

CAS: 70693-62-8 potassium monopersulfate

Sensitisation OECD 406 (guinea pig: negative)

- · Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.
- · STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.
- · Aspiration hazard Based on available data, the classification criteria are not met.
- · Additional toxicological information:

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

CAS: 7761-88-8 silver nitrate

(source: GESTIS)

Main toxic effects:

Acute: Irritant to caustic effect on mucous membranes and skin.

After ingestion of high doses: gastrointestinal complaints, disorders of the cardiovascular system and disorders of the central nervous system.

chronic: silver deposits in the tissues (argyria)

Further information:

Depending on the concentration, dust and solutions have an irritating to highly caustic effect on mucous membranes and skin. 5-50% solutions caused severe eye damage, in some cases permanent corneal opacity.

- · 11.2 Information on other hazards
- · Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- Other information

According to the information available to us, the chemical, physical and toxicological properties of the substances mentioned in Chapter 3 have not been thoroughly investigated.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

CAS: 70693-62-8 potassium monopersulfate

NOEC 32 mg/l/96h (zebrafish)

(IUCLID)

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CAS: 7761-88-8 silver nitrate

LC50 | 0.00022 mg/l/48h (Daphnia magna) (OECD 202) (Merck, Ag-lon)

EC10 | 0.0021 mg/l (Daphnia magna) (21) (Registrant, ECHA)

NOEC | 0.00037 mg/l (fathhead minnow) (OECD 210) (Merck)

LC50 | 0.0012 mg/l/96h (fathhead minnow) (US-EPA) (Merck, Ag-lon)

- Bacterial toxicity: sulphates toxic > 2.5 g/l
- · Other information:

Toxic for fish:

Sulphates > 7 g/l

- 12.2 Persistence and degradability No further relevant information available.
- · 12.3 Bioaccumulative potential No further relevant information available.
- · 12.4 Mobility in soil No further relevant information available.
- 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

- 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties.
- · 12.7 Other adverse effects Avoid transfer into the environment.
- · Water hazard:

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to disposers of hazardous waste.

· European waste catalogue

16 05 07* discarded inorganic chemicals consisting of or containing hazardous substances

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.
- · Recommended cleaning agent: Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number · ADR, IMDG, IATA	UN3260
· 14.2 UN proper shipping name	
· ADR	3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (potassium monopersulfate triple salt, SILVER NITRATE), ENVIRONMENTALLY HAZARDOUS
·IMDG	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (potassium monopersulfate triple salt, SILVER NITRATE), MARINE POLLUTANT
·IATA	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (potassium monopersulfate triple salt, SILVER NITRATE)

- · 14.3 Transport hazard class(es)
- · ADR



Class 8 (C2) Corrosive substances.

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· Label 8

·IMDG





· Class 8 Corrosive substances.

· Label 8

·IATA



· Class 8 Corrosive substances.

· Label

14.4 Packing group

· ADR, IMDG, IATA

• 14.5 Environmental hazards: Product contains environmentally hazardous substances: silver nitrate

• Marine pollutant: Yes Symbol (fish and tree)

· Special marking (ADR): Symbol (fish and tree)

• 14.6 Special precautions for user Warning: Corrosive substances.

Kemler Number: 80
EMS Number: F-A,S-B
Segregation groups (SGG1) Acids

Stowage Category B

· 14.7 Maritime transport in bulk according to IMO

instruments Not applicable.

· Transport/Additional information:

· ADR

Excepted quantities (EQ):

Limited quantities (LQ)

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

Transport category 2
Tunnel restriction code E

· IMDG

· Limited quantities (LQ) 1 kg · Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 500 g

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- · Poisons Act UK
- Regulated explosives precursors

None of the ingredients is listed.

Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

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· Reportable poisons

None of the ingredients is listed.

- · Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated
- Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients is listed.

· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients is listed.

· Substances of very high concern (SVHC) according to REACH, Article 57

This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

Substances of very high concern (SVHC) according to UK REACH

This product does not contain any substances of very high concern above the legal concentration limit of ≥ 0.1% (w / w).

- · Directive 2012/18/EU (SEVESO III):
- Named dangerous substances ANNEX I None of the ingredients is listed.
- · Seveso category E1 Hazardous to the Aquatic Environment
- · Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
- Information about limitation of use: Employment restrictions concerning young persons must be observed (94/33/EC).
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

- · Training hints Provide adequate information, instruction and training for operators.
- Relevant phrases

H272 May intensify fire; oxidiser.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

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

ICAO: International Civil Aviation Organisation

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

EC50: effective concentration, 50 percent (in vivo)

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of

Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (UK REACH) LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic SVHC: Substances of Very High Concern vPvB: very Persistent and very Bioaccumulative Ox. Sol. 2: Oxidizing solids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1

Data arise from safety data sheets, reference works and literature. GESTIS- Stoffdatenbank (Substance Database, Germany) ECHA: European CHemicals Agency http://echa.europa.eu IUCLID (International Uniform Chemical Information Database) RTECS (Registry of Toxic Effects of Chemical Substances)

* * Data compared to the previous version altered.