

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 12/07/2022

Reviewed on 12/07/2022

#### 1 Identification

- **Product identifier**
- **Trade name:** Cyanide-11
- **Catalogue number:** 418875-11, 418874-11, 2418874 (Set: Cyanide-11)
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

#### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.
- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms** none
- **Signal word** none
- **Hazard statements**  
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**  
P273 Avoid release to the environment.
- **Other hazards** No further relevant information available.

#### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds

##### · **Composition and Information on Ingredients:**

|  |  |          |
|--|--|----------|
| CAS: 7757-82-6<br>EINECS: 231-820-9  | sodium sulphate  | 40–50%   |
| CAS: 51580-86-0<br>EINECS: 220-767-7<br>Index number: 613-030-01-7<br>RTECS: XZ1910000 | sodium dichloroisocyanurate, dihydrate<br>⚠ Aquatic Acute 1, H400 (M=1); Aquatic Chronic 1, H410 (M=1); ⚠ Acute Toxicity - Oral 4, H302; Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H335 | 0.25–<1% |

- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

#### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air.
- **After skin contact:** Immediately rinse with plenty of water.
- **After eye contact:**  
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.

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If symptoms persist consult doctor.

- **Most important symptoms and effects, both acute and delayed**

- irritations

- mucous membrane irritation

- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

- **For safety reasons unsuitable extinguishing agents:**

- For this substance / mixture no limitations of extinguishing agents are given.

- **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.

- In case of fire, the following can be released:

- Hydrogen chloride (HCl)

- Sulfur oxides (SOx)

- Sodium oxide

- **Advice for firefighters**

- **Protective equipment:**

- Wear self-contained respiratory protective device.

- Wear fully protective suit.

- **Additional information**

- Collect contaminated fire fighting water separately. It must not enter the sewage system.

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

- Ambient fire may liberate hazardous vapours.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

- **Advice for non-emergency personnel:**

- Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation

- Avoid formation of dust.

- **Advice for emergency responders:** Protective equipment: see section 8

- **Environmental precautions:**

- Do not allow product to reach sewage system or any water course.

- Inform respective authorities in case of seepage into water course or sewage system.

- **Methods and material for containment and cleaning up:**

- Ensure adequate ventilation.

- Pick up mechanically.

- Dispose contaminated material as waste according to item 13.

- **Reference to other sections**

- See Section 8 for information on personal protection equipment.

- See Section 13 for disposal information.

### 7 Handling and storage

- **Precautions for safe handling**

- **Advice on safe handling:** No special precautions are necessary if used correctly.

- **Hygiene measures:**

- Take off immediately all contaminated clothing.

- Wash hands before breaks and at the end of work.

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

- **Conditions for safe storage, including any incompatibilities**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.

- **Information about storage in one common storage facility:** see chapter 10

- **Further information about storage conditions:**

- Protect from heat and direct sunlight.

- Store in cool, dry conditions in well sealed receptacles.

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- Protect from exposure to the light.
- Protect from humidity and water.
- This product is hygroscopic.
- **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

**CAS: 7757-82-6 sodium sulphate**

|           |   |
|-----------|---|
| TLV (USA) | Short-term value: NIC-0.2 mg/m <sup>3</sup><br>thoracic fraction of aerosol |
|-----------|---|

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
- **Personal protective equipment:**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:**  
Under normal use conditions according to the instruction manual no personal protective equipment is needed.  
If exposure limits are exceeded or health impacts are experienced use respiratory protective device against the effects of fume/dust/aerosol.
- **Recommended filter device for short term use:** Filter P1
- **Protection of hands:**  
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**  
Breakthrough time: > 480 min  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **Appearance:**
- **Form / Physical state:** Powder
- **Color:** White
- **Odor:** Chlorine-like
- **Odor threshold:** Not determined.
- **pH-value (10 g/l) at 20°C (68°F):** 6.3
- **Melting point/freezing point:** Not determined.
- **Initial boiling point and boiling range:** Not determined.
- **Flash point:** Not applicable.
- **Flammability (solid, gas):** The product is not combustible.
- **Ignition temperature:** Not applicable (solid).
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not self-igniting.

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|   |   |
|---|---|
| · <b>Danger of explosion:</b>                     | Product does not present an explosion hazard. |
| · <b>Flammability or explosive limits:</b>        |   |
| · <b>Lower:</b>                                   | Not applicable.                               |
| · <b>Upper:</b>                                   | Not applicable.                               |
| · <b>Oxidizing properties:</b>                    | none  |
| · <b>Vapor Pressure:</b>                          | Not applicable (solid).                       |
| · <b>Density:</b>                                 | Not determined.                               |
| · <b>Relative density:</b>                        | Not determined.                               |
| · <b>Vapor density:</b>                           | Not applicable.                               |
| · <b>Evaporation rate:</b>                        | Not applicable.                               |
| · <b>Solubility(ies)</b>                          |   |
| · <b>Water:</b>                                   | Soluble.                                      |
| · <b>Partition coefficient (n-octanol/water):</b> | Not applicable (mixture).                     |
| · <b>Viscosity:</b>                               |   |
| · <b>Kinematic:</b>                               | Not applicable (solid).                       |
| · <b>Other information</b>                        |   |
| · <b>Solids content:</b>                          | 100 %   |

## 10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**  
Reacts with acids, alkalis and oxidizing agents.  
--> Forms heat.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** alkali metals
- **Hazardous decomposition products:** see section 5

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

|   |       |  |
|---|-------|--|
| · <b>LD/LC50 values that are relevant for classification:</b> |       |  |
| <b>CAS: 7757-82-6 sodium sulphate</b>                         |       |  |
| Oral  | LD50. | >2000 mg/kg (rat) (OECD 423)<br>(Registrant, ECHA, limit test) |
| Dermal  | LD50. | >2000 mg/kg (rat)  |
| <b>CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate</b> |       |  |
| Oral  | LD50  | 1671 mg/kg (rat) (EPA OPP 81-1)<br>(ECHA)                      |
| Dermal  | LD50  | >5000 mg/kg (rat) (EPA OPP 81-2)<br>(ECHA)                     |

- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.

|   |          |                             |
|---|----------|-----------------------------|
| · <b>Information on components:</b>                           |          |                             |
| <b>CAS: 7757-82-6 sodium sulphate</b>                         |          |                             |
| Irritation of skin  | OECD 404 | (rabbit: no irritation)     |
| Irritation of eyes  | OECD 405 | (rabbit: slight irritation) |
| <b>CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate</b> |          |                             |
| Irritation of eyes  | OECD 405 | (rabbit: burns) (US-EPA)    |

- **Sensitization:** Based on available data, the classification criteria are not met.

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|   |   |
|---|---|
| <b>Information on components:</b>   |   |
| <b>CAS: 7757-82-6 sodium sulphate</b>   |   |
| Sensitization   | OECD 406 (guinea pig: negative)   |
| <b>CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate</b>   |   |
| Sensitization   | OECD 406 (guinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)                      |
| <b>Carcinogenic categories</b>  |   |
| <b>IARC (International Agency for Research on Cancer)</b>   |   |
| None of the ingredients is listed.  |   |
| <b>NTP (National Toxicology Program)</b>  |   |
| None of the ingredients is listed.  |   |
| <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>  |   |
| None of the ingredients is listed.  |   |
| · <b>Other information:</b> see section 8 / 15  |   |
| · <b>Synergistic Products:</b> None   |   |
| · <b>CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):</b> The following statements refer to the mixture:    |   |
| · <b>Germ cell mutagenicity</b> Based on available data, the classification criteria are not met.                                   |   |
| · <b>Carcinogenicity</b> Based on available data, the classification criteria are not met.  |   |
| · <b>Reproductive toxicity</b> Based on available data, the classification criteria are not met.                                    |   |
| · <b>STOT (specific target organ toxicity) -single exposure</b> Based on available data, the classification criteria are not met.   |   |
| · <b>STOT (specific target organ toxicity) -repeated exposure</b> Based on available data, the classification criteria are not met. |   |
| · <b>Aspiration hazard</b> Based on available data, the classification criteria are not met.  |   |
| <b>Information on components:</b>   |   |
| OECD 414: Teratogenicity testing  |   |
| OECD 473: Mutagenicity testing  |   |
| OECD 471, 474, 476, 487: Germ cell mutagenicity testing   |   |
| <b>CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate</b>   |   |
| Oral  | OECD 475 (negative) (Chromosomal Aberration Test)<br>(rat, male)                                  |
|   | OECD 471 (guinea pig: negative) (Bacterial Reverse Mutation Test - Ames test)<br>Escherichia coli |

## \*12 Ecological information

|   |  |
|---|--|
| <b>Toxicity</b>   |  |
| <b>Aquatic toxicity:</b>                                      |  |
| <b>CAS: 7757-82-6 sodium sulphate</b>                         |  |
| EC50  | 2564 mg/l/48h (Daphnia magna)<br>(IUCLID)                        |
| LC50  | 120 mg/l/96h (mosquitofish)<br>(IUCLID)                          |
|   | 13500–14500 mg/l/96h (fathhead minnow)                           |
| <b>CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate</b> |  |
| EC50  | 0.28 mg/l/48h (Daphnia magna)<br>(ECOTOX)                        |
| NOEC  | 2600 mg/l (Daphnia magna) (OECD 2011, 21d)<br>(Registrant, ECHA) |
|   | 1000 mg/l (rainbow trout) (OECD 2015, 28d)<br>(Registrant, ECHA) |
| LC50  | 0.25 mg/l/96h (rainbow trout)<br>(ECOTOX)                        |
| <b>Bacterial toxicity:</b>                                    |  |
| sulfates toxic > 2.5 g/l                                      |  |

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**CAS: 7757-82-6 sodium sulphate**

|      |   |
|------|---|
| EC10 | >1000 mg/l (Pseudomonas putida) (16h)<br>(IUCLID) |
|------|---|

· **Other information:**

Toxic for fish:  
sulfates > 7 g/l

· **Persistence and degradability****CAS: 51580-86-0 sodium dichloroisocyanurate, dihydrate**

|          |                |
|----------|----------------|
| OECD 306 | 4 /% / 60d (.) |
|----------|----------------|

- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Other adverse effects** Avoid transfer into the environment.

### 13 Disposal considerations

· **Waste treatment methods**· **Recommendation:**

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

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

### \* 14 Transport information

· **UN-Number**

|                   |      |
|-------------------|------|
| · DOT, IMDG, IATA | none |
|-------------------|------|

· **UN proper shipping name**

|                   |      |
|-------------------|------|
| · DOT, IMDG, IATA | none |
|-------------------|------|

· **Transport hazard class(es)**

## · DOT, IMDG, IATA

|         |      |
|---------|------|
| · Class | none |
|---------|------|

· **Packing group**

|                   |      |
|-------------------|------|
| · DOT, IMDG, IATA | none |
|-------------------|------|

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**

Not dangerous according to the above specifications.

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (Extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

CAS No. 51580-86-0 listed under CAS No. 2782-57-2 Dichloroisocyanuric acid (Troclosene)

All components have the value ACTIVE.

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|   |  |
|---|--|
| <b>· Hazardous Air Pollutants</b>   |  |
| None of the ingredients is listed.  |  |
| <b>· Proposition 65</b>   |  |
| <b>· Chemicals known to cause cancer:</b>   |  |
| None of the ingredients is listed.  |  |
| <b>· Chemicals known to cause reproductive toxicity for females:</b>                        |  |
| None of the ingredients is listed.  |  |
| <b>· Chemicals known to cause reproductive toxicity for males:</b>                          |  |
| None of the ingredients is listed.  |  |
| <b>· Chemicals known to cause developmental toxicity:</b>                                   |  |
| None of the ingredients is listed.  |  |
| <b>· New Jersey Right-to-Know List:</b>   |  |
| None of the ingredients is listed.  |  |
| <b>· New Jersey Special Hazardous Substance List:</b>                                       |  |
| None of the ingredients is listed.  |  |
| <b>· Pennsylvania Right-to-Know List:</b>   |  |
| CAS: 7757-82-6  | sodium sulphate                        |
| CAS: 51580-86-0   | sodium dichloroisocyanurate, dihydrate |
| <b>· Pennsylvania Special Hazardous Substance List:</b>                                     |  |
| CAS: 7757-82-6  | sodium sulphate                        |
|   | E                                      |
| <b>· EPA (Environmental Protection Agency)</b>  |  |
| None of the ingredients is listed.  |  |
| <b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>                   |  |
| None of the ingredients is listed.  |  |
| <b>· Information about limitation of use:</b> Not required.                                 |  |
| <b>· Chemical safety assessment:</b> A Chemical Safety Assessment has not been carried out. |  |

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### · Relevant phrases

- H302 Harmful if swallowed.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

### · Last revision / date of preparation :

13  
12/07/2022

### · Abbreviations and acronyms:

- 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
- ACGIH® - American Conference of Governmental Industrial Hygienists
- A1 - Confirmed human carcinogen
- A2 - Suspected human carcinogen
- A3 - Confirmed animal carcinogen with unknown relevance to humans
- A4 - Not classifiable as a human carcinogen
- A5 - Not suspected as a human carcinogen
- IARC - International Agency for Research on Cancer
- Group 1 - Carcinogenic to humans
- Group 2A - Probably carcinogenic to humans
- Group 2B - Possibly carcinogenic to humans
- Group 3 - Not classifiable as to carcinogenicity to humans
- Group 4 - Probably not carcinogenic to humans

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NTP - National Toxicology Program, U.S. Department of Health and Human Services

•Group K - Known to be Human Carcinogens

•Group R - Reasonably Anticipated to be Human Carcinogens

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

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

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European CHemicals Agency <http://echa.europa.eu>

ECOTOX Database

• \* Data compared to the previous version altered.

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