

Creation Date 19-Nov-2010

Revision Date 24-Jan-2024

Revision Number 3

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

| | |
|----------------------------------|---|
| Product Description: | Sodium cyanide |
| Cat No. : | 12137 |
| Synonyms | Hydrocyanic acid, sodium salt; Prussiate of soda; Cyanide of sodium |
| Index No | 006-007-00-5 |
| CAS No | 143-33-9 |
| EC No | 205-599-4 |
| Molecular Formula | C N Na |
| REACH registration number | - |

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

| | |
|---------------------------------------|---|
| Recommended Use | Laboratory chemicals. |
| Sector of use | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Product category | PC21 - Laboratory chemicals |
| Process categories | PROC15 - Use as a laboratory reagent |
| Environmental release category | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

Company

Thermo Fisher (Kandel) GmbH
Erlenbachweg 2, 76870 Kandel, Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300

Swiss distributor - Fisher Scientific AG
Neuhofstrasse 11, CH 4153 Reinach
Tel: +41 (0) 56 618 41 11
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

E-mail address

begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99
CHEMTREC Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:
Tox Info Suisse Emergency Number: **145 (24hr)**
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)
Chemtrec (24h) Toll-Free: 0800 564 402
Chemtrec Local: +41-43 508 20 11 (Zurich)

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SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Substances/mixtures corrosive to metal

Category 1 (H290)

Health hazards

Acute oral toxicity

Category 1 (H300)

Acute dermal toxicity

Category 1 (H310)

Acute Inhalation Toxicity - Dusts and Mists

Category 1 (H330)

Specific target organ toxicity - (repeated exposure)

Category 1 (H372)

Environmental hazards

Acute aquatic toxicity

Category 1 (H400)

Chronic aquatic toxicity

Category 1 (H410)

Full text of Hazard Statements: see section 16

2.2. Label elements



Signal Word

Danger

Hazard Statements

H290 - May be corrosive to metals

H372 - Causes damage to organs through prolonged or repeated exposure

H410 - Very toxic to aquatic life with long lasting effects

H300 + H310 + H330 - Fatal if swallowed, in contact with skin or if inhaled

EUH032 - Contact with acids liberates very toxic gas

Precautionary Statements

P390 - Absorb spillage to prevent material damage

P330 - Rinse mouth

P280 - Wear protective gloves/protective clothing

P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water

P310 - Immediately call a POISON CENTER or doctor/physician

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

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Toxic to terrestrial invertebrates
Toxicity to Soil Dwelling Organisms
Toxic to terrestrial vertebrates
This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

| Component | CAS No | EC No | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|----------------|----------|-------------------|----------|--|
| Sodium cyanide | 143-33-9 | EEC No. 205-599-4 | >95 | Met. Corr. 1 (H290) STOT RE 1 (H372) Acute Tox. 1 (H300) Acute Tox. 1 (H310) Acute Tox. 1 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) EUH032 |

| Component | Specific concentration limits (SCL's) | M-Factor | Component notes |
|----------------|---------------------------------------|----------|-----------------|
| Sodium cyanide | - | 10 | - |

| | |
|---------------------------|---|
| REACH registration number | - |
|---------------------------|---|

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|---|--|
| General Advice | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. |
| Eye Contact | In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required. |
| Ingestion | Do NOT induce vomiting. Call a physician or poison control center immediately. |
| Inhalation | Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| Self-Protection of the First Aider | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. |

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

None reasonably foreseeable. Systemic Toxicity: Respiratory disorders: Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock: May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood): Exposure may result in death

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

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Notes to Physician

Symptoms may be delayed. Treat as cyanide poisoning. Exposure may result in death. The effects may be delayed therefore medical observation is essential.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

Do not use water or foam.

5.2. Special hazards arising from the substance or mixture

Non-combustible. Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products

Nitrogen oxides (NO_x), Hydrogen cyanide (hydrocyanic acid).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and material for containment and cleaning up

Provide adequate ventilation. Wear self-contained breathing apparatus and protective suit. Avoid dust formation. Sweep up and shovel into suitable containers for disposal. Do not expose spill to water. Keep in suitable, closed containers for disposal. Prevent contact with water. Do NOT use water for clean-up: Use personal protective equipment as required

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before

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re-use. Wash hands before breaks and after work.

7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep locked up. Keep away from acids. Keep away from combustible material. Do not store in aluminum containers.

Technical Rules for Hazardous Substances (TRGS) 510
Storage Class (LGK) (Germany)

Storage Class/LGK 6.1B

Switzerland - Storage of hazardous substances

Storage class - SC 6.1
<https://www.kvu.ch/de/themen/stoffe-und-produkte>
<https://www.kvu.ch/fr/themes/substances-et-produits>
<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund). **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

| Component | European Union | The United Kingdom | France | Belgium | Spain |
|----------------|--|---|--|---|---|
| Sodium cyanide | TWA: 1 mg/m ³ (8h) STEL: 5 mg/m ³ (15min) Skin | STEL: 5 mg/m ³ 15 min TWA: 1 mg/m ³ 8 hr Skin | TWA / VME: 1 mg/m ³ (8 heures). TWA / VME: 5 mg/m ³ (8 heures). STEL / VLCT: 5 mg/m ³ . indicative limit Peau | TWA: 1 mg/m ³ 8 uren STEL: 5 mg/m ³ 15 minuten Huid | STEL / VLA-EC: 5 mg/m ³ (15 minutos). TWA / VLA-ED: 1 mg/m ³ (8 horas) Piel |

| Component | Italy | Germany | Portugal | The Netherlands | Finland |
|----------------|---|---|--|-----------------|--|
| Sodium cyanide | TWA: 1 mg/m ³ 8 ore. Time Weighted Average CN STEL: 5 mg/m ³ 15 minuti. Short-term Pelle | TWA: 1 mg/m ³ (8 Stunden). AGW - exposure factor 5 TWA: 3.8 mg/m ³ (8 Stunden). MAK TWA: 2 mg/m ³ (8 Stunden). MAK Höhepunkt: 3.8 mg/m ³ Höhepunkt: 2 mg/m ³ Haut | STEL: 5 mg/m ³ 15 minutos Ceiling: 5 mg/m ³ TWA: 1 mg/m ³ 8 horas Pele | | TWA: 1 mg/m ³ 8 tunteina STEL: 5 mg/m ³ 15 minuutteina Iho |

| Component | Austria | Denmark | Switzerland | Poland | Norway |
|----------------|--|--|---|--|---|
| Sodium cyanide | Haut MAK-KZGW: 5 mg/m ³ 15 Minuten MAK-TMW: 1 mg/m ³ 8 Stunden | TWA: 1 mg/m ³ 8 timer STEL: 5 mg/m ³ 15 minutter Hud | Haut/Peau STEL: 3.8 mg/m ³ 15 Minuten TWA: 3.8 mg/m ³ 8 Stunden | ceiling: 5 mg/m ³ TWA: 1 mg/m ³ 8 godzinach | TWA: 0.9 ppm 8 timer TWA: 1 mg/m ³ 8 timer TWA: 5 mg/m ³ 8 timer STEL: 4 ppm 15 minutter. value from the regulation STEL: 5 mg/m ³ 15 minutter. value from the regulation Hud |

| Component | Bulgaria | Croatia | Ireland | Cyprus | Czech Republic |
|----------------|--|--|---|---|------------------------------|
| Sodium cyanide | TWA: 1 mg/m ³ TWA: 1.0 mg/m ³ | kože TWA-GVI: 1 mg/m ³ 8 | TWA: 1 mg/m ³ 8 hr. CN STEL: 5 mg/m ³ 15 min | Skin-potential for cutaneous absorption | Ceiling: 5 mg/m ³ |

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| | | | | | |
|--|---|---|------|---|--|
| | STEL : 5 mg/m ³ Skin notation | satima. CN STEL-KGVI: 5 mg/m ³ 15 minutama. CN | Skin | STEL: 5 mg/m ³ TWA: 1 mg/m ³ | |
|--|---|---|------|---|--|

| Component | Estonia | Gibraltar | Greece | Hungary | Iceland |
|----------------|--|--|---|---------|--|
| Sodium cyanide | Nahk TWA: 1 mg/m ³ 8 tundides. CN STEL: 5 mg/m ³ 15 minutites. | Skin notation TWA: 1 mg/m ³ 8 hr STEL: 5 mg/m ³ 15 min | skin - potential for cutaneous absorption STEL: 5 mg/m ³ TWA: 1 mg/m ³ | | STEL: 5 mg/m ³ TWA: 1 mg/m ³ 8 klukkustundum. Skin notation |

| Component | Latvia | Lithuania | Luxembourg | Malta | Romania |
|----------------|---|---|---|---|---|
| Sodium cyanide | skin - potential for cutaneous exposure STEL: 5 mg/m ³ TWA: 1 mg/m ³ | Ceiling: 5 mg/m ³ CN TWA: 1 mg/m ³ IPRD CN Oda | Possibility of significant uptake through the skin TWA: 1 mg/m ³ 8 Stunden STEL: 5 mg/m ³ 15 Minuten | possibility of significant uptake through the skin TWA: 1 mg/m ³ STEL: 5 mg/m ³ 15 minuti | Skin notation TWA: 0.5 mg/m ³ 8 ore STEL: 1 mg/m ³ 15 minute |

| Component | Russia | Slovak Republic | Slovenia | Sweden | Turkey |
|----------------|--------|---|--|---|--------|
| Sodium cyanide | | Ceiling: 5 mg/m ³ Potential for cutaneous absorption TWA: 1 mg/m ³ | TWA: 1 mg/m ³ 8 urah Cyanide inhalable fraction Koža STEL: 5 mg/m ³ 15 minutah CN inhalable fraction | Binding STEL: 4 mg/m ³ 15 minuter CN TLV: 1 mg/m ³ 8 timmar. CN NGV Hud | |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

| Component | Acute effects local (Dermal) | Acute effects systemic (Dermal) | Chronic effects local (Dermal) | Chronic effects systemic (Dermal) |
|------------------------------------|---------------------------------|------------------------------------|-----------------------------------|--------------------------------------|
| Sodium cyanide 143-33-9 (>95) | | DNEL = 3.03mg/kg bw/day | | DNEL = 0.102mg/kg bw/day |

| Component | Acute effects local (Inhalation) | Acute effects systemic (Inhalation) | Chronic effects local (Inhalation) | Chronic effects systemic (Inhalation) |
|------------------------------------|-------------------------------------|--|---------------------------------------|--|
| Sodium cyanide 143-33-9 (>95) | | DNEL = 9.4mg/m ³ | | DNEL = 0.72mg/m ³ |

Predicted No Effect Concentration (PNEC)

See values below.

| Component | Fresh water | Fresh water sediment | Water Intermittent | Microorganisms in sewage treatment | Soil (Agriculture) |
|------------------------------------|--------------|------------------------------|--------------------|---------------------------------------|--------------------------|
| Sodium cyanide 143-33-9 (>95) | PNEC = 1µg/L | PNEC = 4µg/kg sediment dw | PNEC = 3.2µg/L | PNEC = 50µg/L | PNEC = 7µg/kg soil dw |

| Component | Marine water | Marine water | Marine water | Food chain | Air |
|-----------|--------------|--------------|--------------|------------|-----|
|-----------|--------------|--------------|--------------|------------|-----|

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| | | | | | |
|------------------------------------|----------------|--------------------------------|---------------------|--|--|
| | | sediment | Intermittent | | |
| Sodium cyanide 143-33-9 (>95) | PNEC = 0.2µg/L | PNEC = 0.8µg/kg sediment dw | | | |

8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)

Hand Protection Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|-----------------|-------------------|-----------------|----------------|--|
| Butyl rubber | > 480 minutes | 0.35 mm | EN 374 Level 6 | As tested under EN374-3 Determination of Resistance to Permeation by Chemicals |
| Viton (R) | > 480 minutes | 0.5mm | | |
| Neoprene gloves | > 60 minutes | 0.45mm | | |
| PVC | < 60 minutes | 0.18mm | | |

Skin and body protection Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Particulates filter conforming to EN 143

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Particle filtering: EN149:2001
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | |
|---------------------------------|--------------------------|--|
| Physical State | Solid | |
| Appearance | White | |
| Odor | bitter almonds | |
| Odor Threshold | No data available | |
| Melting Point/Range | 562 °C / 1043.6 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 1497 °C / 2726.6 °F | |
| Flammability (liquid) | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Flash Point | No information available | Method - No information available |

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| | | |
|---|--------------------------|----------------|
| Autoignition Temperature | No data available | |
| Decomposition Temperature | No data available | |
| pH | 11-12 | 20 g/l aq. sol |
| Viscosity | Not applicable | Solid |
| Water Solubility | 370 g/l (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Sodium cyanide | -0.44 | |
| Vapor Pressure | 1 hPa @ 817 °C | |
| Density / Specific Gravity | | |
| Bulk Density | 750 - 950 kg/m³ | |
| Vapor Density | Not applicable | Solid |
| Particle characteristics | No data available | |

9.2. Other information

| | |
|-------------------|------------------------|
| Molecular Formula | C N Na |
| Molecular Weight | 49 |
| Evaporation Rate | Not applicable - Solid |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Yes Contact with acids liberates very toxic gas

10.2. Chemical stability

Stable under normal conditions. Hygroscopic.

10.3. Possibility of hazardous reactions

| | |
|--------------------------|--|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

10.4. Conditions to avoid

Incompatible products. Exposure to moist air or water.

10.5. Incompatible materials

Acids. Strong oxidizing agents. Carbon dioxide (CO2). Metals.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Hydrogen cyanide (hydrocyanic acid).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

(a) acute toxicity;

| | |
|------------|------------|
| Oral | Category 1 |
| Dermal | Category 1 |
| Inhalation | Category 1 |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------|----------------------------|--------------------------------|------------------------------|
| Sodium cyanide | LD50 = 5.733 mg/kg (Rat) | LD50 = 14.602 mg/kg (Rabbit) | LC50 = 0.16 mg/L (Rat) 1 h |

(b) skin corrosion/irritation;

Based on available data, the classification criteria are not met

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(c) serious eye damage/irritation; Based on available data, the classification criteria are not met

(d) respiratory or skin sensitization;

Respiratory

Based on available data, the classification criteria are not met

Skin

Based on available data, the classification criteria are not met

(e) germ cell mutagenicity;

Based on available data, the classification criteria are not met

Not mutagenic in AMES Test

(f) carcinogenicity;

Based on available data, the classification criteria are not met

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity;

Based on available data, the classification criteria are not met

(h) STOT-single exposure;

Based on available data, the classification criteria are not met

(i) STOT-repeated exposure;

Category 1

Target Organs

Thyroid, Blood.

(j) aspiration hazard;

Not applicable

Solid

Symptoms / effects, both acute and delayed

Systemic Toxicity. Respiratory disorders. Symptoms may include tightness in the chest, flushing, headache, nausea, vomiting, respiratory depression, weakness, irregular heartbeat, abdominal pain, convulsions, and shock. May cause cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood). Exposure may result in death.

11.2. Information on other hazards

Endocrine Disrupting Properties

Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae |
|----------------|--|------------|------------------|
| Sodium cyanide | LC50: 0.0558 - 0.0586 mg/L, 96h flow-through (Oncorhynchus mykiss) LC50: 0.0391 - 0.0548 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 0.15 mg/L, 96h static (Lepomis macrochirus) LC50: 0.0712 - 0.0936 mg/L, 96h flow-through (Pimephales promelas) LC50: = 0.17 mg/L, 96h static (Pimephales promelas) | | |

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| | | | |
|--|---|--|--|
| | LC50: 0.066 - 0.0852 mg/L, 96h flow-through (Lepomis macrochirus) | | |
|--|---|--|--|

| Component | Microtox | M-Factor |
|----------------|----------|----------|
| Sodium cyanide | | 10 |

| | |
|--|---|
| 12.2. Persistence and degradability | Expected to be biodegradable |
| Persistence | Soluble in water, Persistence is unlikely, based on information available. |
| Degradability | Not relevant for inorganic substances. |
| Degradation in sewage treatment plant | Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants. |

| | |
|--|-----------------------------|
| 12.3. Bioaccumulative potential | Bioaccumulation is unlikely |
|--|-----------------------------|

| Component | log Pow | Bioconcentration factor (BCF) |
|----------------|---------|-------------------------------|
| Sodium cyanide | -0.44 | No data available |

| | |
|-------------------------------|--|
| 12.4. Mobility in soil | The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils |
|-------------------------------|--|

| | |
|---|--|
| 12.5. Results of PBT and vPvB assessment | In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment. |
|---|--|

| | |
|--|---|
| 12.6. Endocrine disrupting properties | |
| Endocrine Disruptor Information | This product does not contain any known or suspected endocrine disruptors |

| | |
|-------------------------------------|--|
| 12.7. Other adverse effects | |
| Persistent Organic Pollutant | This product does not contain any known or suspected substance |
| Ozone Depletion Potential | This product does not contain any known or suspected substance |

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

| | |
|--|--|
| Waste from Residues/Unused Products | Should not be released into the environment. Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations. |
| Contaminated Packaging | Dispose of this container to hazardous or special waste collection point. |
| European Waste Catalogue (EWC) | According to the European Waste Catalog, Waste Codes are not product specific, but application specific. |
| Other Information | Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment. |
| Switzerland - Waste Ordinance | Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600 https://www.fedlex.admin.ch/eli/cc/2015/891/en |

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

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14.1. UN number UN1689
14.2. UN proper shipping name SODIUM CYANIDE, SOLID
14.3. Transport hazard class(es) 6.1
Subsidiary Hazard Class P
14.4. Packing group I

ADR

14.1. UN number UN1689
14.2. UN proper shipping name SODIUM CYANIDE, SOLID
14.3. Transport hazard class(es) 6.1
14.4. Packing group I

IATA

14.1. UN number UN1689
14.2. UN proper shipping name SODIUM CYANIDE, SOLID
14.3. Transport hazard class(es) 6.1
14.4. Packing group I

14.5. Environmental hazards Dangerous for the environment
Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6. Special precautions for user No special precautions required.

14.7. Maritime transport in bulk according to IMO instruments Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component | CAS No | EINECS | ELINCS | NLP | IECSC | TCSI | KECL | ENCS | ISHL |
|----------------|----------|-----------|--------|-----|-------|------|----------|------|------|
| Sodium cyanide | 143-33-9 | 205-599-4 | - | - | X | X | KE-31401 | X | X |

| Component | CAS No | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDSL | AICS | NZIoC | PICCS |
|----------------|----------|------|---|-----|------|------|-------|-------|
| Sodium cyanide | 143-33-9 | X | ACTIVE | X | - | X | X | X |

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Authorisation/Restrictions according to EU REACH

| Component | CAS No | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------|----------|---|---|---|
| Sodium cyanide | 143-33-9 | - | Use restricted. See item 75. (see link for restriction details) | - |

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

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Seveso III Directive (2012/18/EC)

| Component | CAS No | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements |
|----------------|----------|---|--|
| Sodium cyanide | 143-33-9 | Not applicable | Not applicable |

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification

See table for values

| Component | Germany - Water Classification (AwSV) | Germany - TA-Luft Class |
|----------------|---------------------------------------|-------------------------|
| Sodium cyanide | WGK3 | |

Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H290 - May be corrosive to metals

H300 - Fatal if swallowed

H310 - Fatal in contact with skin

H330 - Fatal if inhaled

H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

EUH032 - Contact with acids liberates very toxic gas

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

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WEL - Workplace Exposure Limit
ACGIH - American Conference of Governmental Industrial Hygienists
DNEL - Derived No Effect Level
RPE - Respiratory Protective Equipment
LC50 - Lethal Concentration 50%
NOEC - No Observed Effect Concentration
PBT - Persistent, Bioaccumulative, Toxic

TWA - Time Weighted Average
IARC - International Agency for Research on Cancer
Predicted No Effect Concentration (PNEC)
LD50 - Lethal Dose 50%
EC50 - Effective Concentration 50%
POW - Partition coefficient Octanol:Water
vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road
IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code
OECD - Organisation for Economic Co-operation and Development
BCF - Bioconcentration factor

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association
MARPOL - International Convention for the Prevention of Pollution from Ships
ATE - Acute Toxicity Estimate
VOC - (volatile organic compound)

Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>
Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical incident response training.

| | |
|-------------------------|--|
| Prepared By | Health, Safety and Environmental Department |
| Creation Date | 19-Nov-2010 |
| Revision Date | 24-Jan-2024 |
| Revision Summary | New emergency telephone response service provider. |

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006. COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006 .

For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, ChemO (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet