

SAFETY DATA SHEET

| | |
|-----------------------|------------|
| Version: | 1.1 |
| Revision Date: | 2016-09-13 |
| Print Date: | 2016-09-13 |

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

1.1 Product identifiers

| | |
|-------------------------|-----------------------------------|
| Product Number: | C0232 |
| Product name: | 2-Chloro-5-(chloromethyl)thiazole |
| CAS Registry Nr: | 105827-91-6 |

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

Laboratory chemicals, Manufacture of substances.

1.3 Details of the supplier of the safety data sheet

| | |
|-----------------|---------------------------|
| Company: | Chemodex AG |
| | CH - 9000 St. Gallen |
| | Switzerland, Europe |
| | Tel: +41 71 244 48 25 |
| | Fax: +41 71 244 48 26 |
| | Email: info@chemodex.com |
| | Website: www.chemodex.com |

1.4 Emergency telephone number

| | |
|-------------------------|------------------|
| Tox Info Suisse: | +41 44 251 51 51 |
|-------------------------|------------------|

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

| | |
|-------------------------------------|------|
| Acute toxicity, Oral (Category 4) | H302 |
| Acute toxicity, Dermal (Category 3) | H311 |
| Skin corrosion (Category 1B) | H314 |
| Serious eye damage (Category 1) | H318 |
| Skin sensitisation (Category 1) | H317 |

| | |
|--|------|
| Acute aquatic toxicity (Category 2) | H401 |
| Chronic aquatic toxicity (Category 2) | H411 |
| For the full text of the H-Statements mentioned in this Section, see Section 16. | |

2.2 GHS Label elements, including precautionary statements

| | |
|-------------|---|
| Pictogram |  |
| Signal word | Danger |

Hazard statement(s)

| | |
|------|--|
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H411 | Toxic to aquatic life with long lasting effects. |

Precautionary statement(s)

| | |
|---------------------------|---|
| P260 | Do not breathe dust or mist. |
| P264 | Wash skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P301 + P312 + P330 | IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. |
| P301 + P330 + P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304 + P340 + P310 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. |
| P305 + P351 + P338 + P310 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/ attention. |
| P362 | Take off contaminated clothing and wash before reuse. |
| P391 | Collect spillage. |
| P405 | Store locked up. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

| | |
|--------------------------|---|
| Synonyms: | BR32762 2-Chloro-5-thiazolymethyl chloride |
| Formula: | C4H3Cl2NS |
| Molecular weight: | 168 g/mol |
| CAS-No.: | 105827-91-6 |
| EC-No.: | 429-830-5 |
| Index-No.: | 613-266-00-3 |

Hazardous components

| Component | Classification | Concentration |
|---------------------------------|---|---------------|
| 2-Chloro-5-chloromethylthiazole | Acute Tox. 4; Acute Tox. 3; Skin Corr. 1B; Eye Dam. 1; Skin Sens. 1; Aquatic Acute 2; Aquatic Chronic 2; H302, H311, H314, H317, H318, H411 | <=100% |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature 2 - 8 °C
Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 240 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | | |
|----|--|--|
| a) | Appearance: | Form: clear, liquid Colour: light brown |
| b) | Odour: | No data available |
| c) | Odour Threshold: | No data available |
| d) | pH: | No data available |
| e) | Melting point/freezing point: | 30 °C (86 °F) |
| f) | Initial boiling point and boiling range: | No data available |
| g) | Flash point: | No data available |
| h) | Evaporation rate: | No data available |
| i) | Flammability (solid, gas): | No data available |
| j) | Upper/lower flammability or explosive limits: | No data available |
| k) | Vapour pressure: | No data available |
| l) | Vapour density: | No data available |
| m) | Relative density: | No data available |
| n) | Water solubility: | No data available |
| o) | Partition coefficient (n-octanol/water): | Log Pow: 2.2 |
| p) | Auto-ignition temperature: | No data available |
| q) | Decomposition temperature: | No data available |
| r) | Viscosity: | No data available |
| s) | Explosive properties: | No data available |
| t) | Oxidizing properties: | No data available |

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Inhalation: No data available

Dermal: No data available

No data available

Skin corrosion/irritation

Causes skin burns.

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

May cause sensitisation by skin contact.

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

Biodegradability

Result: - According to the results of tests of biodegradability this product is not readily biodegradable.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**DOT (US)**

| | | |
|---------------------------|--|-------------------|
| UN number: 2922 | Class: 8 (6.1) | Packing group: II |
| Proper shipping name: | Corrosive liquids, toxic, n.o.s. (2-Chloro-5-chloromethylthiazole) | |
| Reportable Quantity (RQ): | | |
| Poison Inhalation Hazard: | No | |

IMDG

| | | | |
|-----------------------|---|-------------------|------------------|
| UN number: 2922 | Class: 8 (6.1) | Packing group: II | EMS-No: F-A, S-B |
| Proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (2-Chloro-5-chloromethylthiazole) | | |
| Marine pollutant: | yes | | |

IATA

| | | |
|-----------------------|---|-------------------|
| UN number: 2922 | Class: 8 (6.1) | Packing group: II |
| Proper shipping name: | Corrosive liquid, toxic, n.o.s. (2-Chloro-5-chloromethylthiazole) | |

SECTION 15: Regulatory information**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

2-Chloro-5-chloromethylthiazole

CAS-No. 105827-91-6

Revision Date

New Jersey Right To Know Components

2-Chloro-5-chloromethylthiazole

CAS-No. 105827-91-6

Revision Date

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

| | |
|-----------------|--|
| Acute Tox. | Acute toxicity |
| Aquatic Acute | Acute aquatic toxicity |
| Aquatic Chronic | Chronic aquatic toxicity |
| Eye Dam. | Serious eye damage |
| H302 | Harmful if swallowed. |
| H311 | Toxic in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H401 | Toxic to aquatic life. |
| H411 | Toxic to aquatic life with long lasting effects. |
| Skin Corr. | Skin corrosion |

HMIS Rating

Health hazard: 3
Chronic Health Hazard:
Flammability: 0
Physical Hazard 0

NFPA Rating

Health hazard: 2
Fire Hazard: 0
Reactivity Hazard: 0

Further information

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The above information is believed to be correct but shall not be taken as being all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Chemodex Ltd. and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.chemodex.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.