# SAFETY DATA SHEET

**Revision Date** 20-December-2025 **Revision Number** 4

**This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272**

## 1. Identification

**Product Name** **4-Chloromethyl-2-methylthiazole hydrochloride**

**Cat No. :** **CD09497CB; CD09497DA; CD09497DE; CD09497ZZ**

**CAS-No** 77470-53-2
**Synonyms** No information available

**Recommended Use** Laboratory chemicals.
**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**
**Importer/Distributor**
Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

**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

## 2. Hazard(s) identification

**Classification**

**WHMIS 2015 Classification** This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

| | |
|---|---|
| **Skin Corrosion/Irritation** | Category 1 B |
| **Serious Eye Damage/Eye Irritation** | Category 1 |

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
Causes severe skin burns and eye damage

**Precautionary Statements**
**Prevention**
Do not breathe dust/fumes/gas/mist/vapours/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
**Response**
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
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/doctor
Wash contaminated clothing before reuse
**Storage**
Store locked up
**Disposal**
Dispose of contents/container to an approved waste disposal plant

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | <=100 |

## 4. First-aid measures

**Eye Contact** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Inhalation** Remove from exposure, lie down. Remove to fresh air. If not breathing, give artificial respiration. Get medical attention.

**Ingestion** Do NOT induce vomiting. Call a physician immediately.

**Most important symptoms/effects** Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

**Notes to Physician** Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Carbon dioxide ($CO_2$). Dry chemical. Chemical foam.

**Unsuitable Extinguishing Media** No information available

| | |
|---|---|
| **Flash Point** | No information available |
| **Method -** | No information available |
| **Autoignition Temperature** | No information available |
| **Explosion Limits** | |
| **Upper** | No data available |
| **Lower** | No data available |
| **Sensitivity to Mechanical Impact** | No information available |
| **Sensitivity to Static Discharge** | No information available |

**Specific Hazards Arising from the Chemical**
Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**
Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide ($CO_2$). Sulfur oxides. Hydrogen cyanide (hydrocyanic acid). nitric acid. Hydrogen chloride gas.
**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

| Health | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 1 | 0 | N/A |

## 6. Accidental release measures

| | |
|---|---|
| **Personal Precautions** | Ensure adequate ventilation. Use personal protective equipment as required. |
| **Environmental Precautions** | See Section 12 for additional Ecological Information. |
| **Methods for Containment and Clean Up** | Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. |

## 7. Handling and storage

| | |
|---|---|
| **Handling** | Avoid contact with skin and eyes. Do not breathe dust. |
| **Storage.** | Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Incompatible Materials. Strong oxidizing agents. |

## 8. Exposure controls / personal protection

| | |
|---|---|
| **Exposure Guidelines** | This product does not contain any hazardous materials with occupational exposure limitsestablished by the region specific regulatory bodies. |
| **Engineering Measures** | Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.<br>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
**Hand Protection** Protective gloves

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|---|---|---|---|
| Nitrile rubber<br>Neoprene<br>Natural rubber<br>PVC | See manufacturers recommendations | - | Splash protection only |

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. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly
**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**
No information available.

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

## 9. Physical and chemical properties

**Appearance**

| Property | Values | Remarks • Method |
|---|---|---|
| **Physical State** | Powder Solid | |
| **Color** | Beige | |
| **Odor** | No information available | |
| **Odor Threshold** | No information available | |
| **Melting Point/Range** | 161 - 163 °C / 321.8 - 325.4 °F | |
| **Softening Point** | No data available | |
| **Boiling Point/Range** | No information available | |
| **Flash Point** | No information available | **Method -** No information available |
| **Flammability (liquid)** | Not applicable | Solid |
| **Flammability (solid,gas)** | No information available | |
| **Explosion Limits** | No data available | |
| **Autoignition Temperature** | No data available | |
| **Decomposition Temperature** | No data available | |
| **pH** | No information available | |
| **Viscosity** | Not applicable | Solid |
| **Water Solubility** | No information available | |
| **Solubility in other solvents** | No information available | |
| **Partition Coefficient (n-octanol/water)** | | |
| **Vapor Pressure** | No data available | |
| **Density / Specific Gravity** | No data available | |
| **Bulk Density** | No data available | |
| **Vapor Density** | Not applicable | Solid |
| **Particle characteristics** | No data available | |

**Other Information**

| | |
|---|---|
| **Molecular Formula** | C5 H6 Cl N S . H Cl |
| **Molecular Weight** | 184.09 |
| **Evaporation Rate** | Not applicable - Solid |

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

**Stability** Stable under normal conditions.

**Conditions to Avoid** Incompatible products.

**Incompatible Materials** Strong oxidizing agents

**Hazardous Decomposition Products** Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide ($CO_2$), Sulfur oxides, Hydrogen cyanide (hydrocyanic acid), nitric acid, Hydrogen chloride gas

**Hazardous Polymerization** No information available.

**Hazardous Reactions** None under normal processing.

## 11. Toxicological information

**Information on expected route of exposure**

**Inhalation** Avoid breathing dust or spray mist. May be harmful if inhaled.
**Ingestion** May be harmful if swallowed.
**Eyes** Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. Lachrymator (substance which increases the flow of tears).
**Skin** Avoid contact with skin. Causes burns. Skin Corrosion/Irritation.

**Toxicology data for the components**

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 1 B

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**
**Respiratory** No data available
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;**

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|---|---|---|---|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** Not applicable
Solid

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects,both acute and delayed** Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

**Ecotoxicity**
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

**Persistence and Degradability** No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT**

| | |
|---|---|
| **UN-No** | UN3261 |
| **Proper Shipping Name** | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| **Technical Shipping Name** | 4-Chloromethyl-2-methylthiazole hydrochloride |
| **Hazard Class** | 8 |
| **Packing Group** | III |

**TDG**

| | |
|---|---|
| **UN-No** | UN3261 |
| **Proper Shipping Name** | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| **Technical Shipping Name** | 4-Chloromethyl-2-methylthiazole hydrochloride |
| **Hazard Class** | 8 |
| **Packing Group** | III |

**IATA**

| | |
|---|---|
| **UN-No** | UN3261 |
| **Proper Shipping Name** | CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. |
| **Technical Shipping Name** | 4-Chloromethyl-2-methylthiazole hydrochloride |

**Hazard Class** 8
**Packing Group** III

**IMDG/IMO**

**UN-No** UN3261
**Proper Shipping Name** CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
**Technical Shipping Name** 4-Chloromethyl-2-methylthiazole hydrochloride
**Hazard Class** 8
**Packing Group** III

## 15. Regulatory information

**International Inventories**

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|---|---|---|---|---|---|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | - | - | - | - | - | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|---|---|---|---|---|---|---|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | - | - | - | - | - | - | - | - |

**Legend:**
X - Listed '-' - Not listed
**KECL** - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
**IECSC** - Chinese Inventory of Existing Chemical Substances
**KECL** - Korean Existing and Evaluated Chemical Substances
**ENCS** - Japanese Existing and New Chemical Substances
**AICS** - Australian Inventory of Chemical Substances
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**Canada**

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

**Other International Regulations**

**Authorisation/Restrictions according to EU REACH** Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**
Not applicable

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

| Component | CAS-No | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|---|---|---|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | Not applicable | Not applicable | Not applicable | Not applicable |

| Component | CAS-No | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Seveso III Directive (2012/18/EC) - Qualifying Quantities | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|---|---|---|---|---|---|

| | | for Major Accident Notification | for Safety Report Requirements | | |
|---|---|---|---|---|---|
| 4-(Chloromethyl)-2-methyl-1,3-thiazole hydrochloride | 77470-53-2 | Not applicable | Not applicable | Not applicable | Not applicable |

## 16. Other information

**Prepared By**
Product stewardship (Regulatory Affairs)
Thermo Fisher Scientific
email - begel.sdsdesk@thermofisher.com

**Revision Date** 20-December-2025
**Print Date** 20-December-2025
**Revision Summary** This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

**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 SDS**