

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

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

Perihalan Produk: **Chloromethylphosphonothioic dichloride**
 Product Description: **Chloromethylphosphonothioic dichloride**
 Cat No. : A18456
 CAS No 1983-27-3
 Molecular Formula CH₂ Cl₃ PS

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

Recommended Use Laboratory chemicals.
 Uses advised against No Information available

Company

Thermo Fisher Scientific Fisher Scientific (M) Sdn Bhd
 Hap Seng Business Park, Lot 01-03, 01-04 Aras 1 Unity Square,
 No 12, Persiaran Perusahaan, Seksyen 23, 40300 Shah Alam,
 Selangor Darul Ehsan, Malaysia.
 Main line: +60 3-5525 7888

Supplier

E-mail address Enquiry.my@thermofisher.com

Emergency Telephone Number

Tel: +03-5525 7888
 CHEMTREC Malaysia **1-800-815-308** (Malay)
 CHEMTREC Malaysia (Kuala Lumpur) **+(60)-327884561** (Malay)

SECTION 2: HAZARDS IDENTIFICATION
Classification of the substance or mixture

| | |
|-----------------------------------|---------------------|
| Skin Corrosion/Irritation | Category 1 B (H314) |
| Serious Eye Damage/Eye Irritation | Category 1 (H318) |

Label Elements

Signal Word
Danger
Hazard Statements

H314 - Causes severe skin burns and eye damage

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

Precautionary Statements

Prevention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

P310 - Immediately call a POISON CENTER or doctor

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 or shower

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

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

P362 + P364 - Take off contaminated clothing and wash it before reuse

Storage

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other Hazards

EUH014 - Reacts violently with water

This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|--|-----------|----------|
| Chloromethylphosphonothioic dichloride | 1983-27-3 | <=100 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

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

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.

Ingestion

Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.

Inhalation

If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.

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.

Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

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.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam.

Extinguishing media which must not be used for safety reasons

Water.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes. Reacts violently with water.

Hazardous Combustion Products

None under normal use conditions.

Advice for fire-fighters

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

Personal Precautions, Protective Equipment and Emergency Procedures

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

Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods and Material for Containment and Cleaning Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Do not expose spill to water.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water.

Conditions for Safe Storage, Including any Incompatibilities

ALFAAA18456

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

Corrosives area. Keep away from water or moist air. Keep containers tightly closed in a dry, cool and well-ventilated place.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Exposure Controls

Engineering Measures

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 |
| Hand Protection | Protective gloves |
| Skin and body protection | Long sleeved clothing |

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure 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.

Remove gloves with care avoiding skin contamination.

| | |
|---------------------------------|---|
| Respiratory Protection | When workers are facing concentrations above the exposure limit they must use appropriate certified respirators |
| Recommended Filter type: | Organic gases and vapours filter Type A Brown conforming to EN14387 |
| | To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly |
| | When RPE is used a face piece Fit Test should be conducted |

| | |
|--------------------------------|---|
| <u>Hygiene Measures</u> | Handle in accordance with good industrial hygiene and safety practice |
|--------------------------------|---|

| | |
|---|--------------------------|
| <u>Environmental exposure controls</u> | No information available |
|---|--------------------------|

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|-----------------------|--------------------------|
| Appearance | Colorless |
| Physical State | Liquid |
| Odor | Acrid |
| Odor Threshold | No data available |
| pH | No information available |

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

| | | |
|------------------------------|-----------------------------|-----------------------------------|
| Melting Point/Range | No data available | |
| Softening Point | No data available | |
| Boiling Point/Range | 88 - 90 °C / 190.4 - 194 °F | |
| Flash Point | No information available | Method - No information available |
| Evaporation Rate | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | No data available | |
| Vapor Pressure | No data available | |
| Vapor Density | No data available | (Air = 1.0) |
| Specific Gravity / Density | No data available | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | No information available | |
| Solubility in other solvents | No information available | |

Partition Coefficient (n-octanol/water)

| | |
|---------------------------|--------------------------|
| Autoignition Temperature | No data available |
| Decomposition Temperature | No data available |
| Viscosity | No data available |
| Explosive Properties | No information available |
| Oxidizing Properties | No information available |

| | |
|-------------------|------------|
| Molecular Formula | CH2 Cl3 PS |
| Molecular Weight | 183.42 |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Yes.

Chemical Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

| | |
|--------------------------|--|
| Hazardous Polymerization | No information available. |
| Hazardous Reactions | None under normal processing. Reacts violently with water. |

Conditions to Avoid

Exposure to moist air or water. Exposure to moisture.

Incompatible Materials

None known.

Hazardous Decomposition Products

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

None under normal use conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Product Information

(a) acute toxicity;

| | |
|------------|-------------------|
| Oral | No data available |
| Dermal | No data available |
| Inhalation | No data 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; No data available

There are no known carcinogenic chemicals in this product

(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; No data available

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.

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

Ecotoxicity effects

Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants.

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

| | |
|---|--|
| <u>Persistence and degradability</u> Persistence | No information available Persistence is unlikely, based on information available. |
| <u>Bioaccumulative potential</u> | Bioaccumulation is unlikely |
| <u>Mobility in soil</u> | The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air. |
| <u>Endocrine Disruptor Information</u> | This product does not contain any known or suspected endocrine disruptors |
| <u>Other adverse effects</u> | No information available |

SECTION 13: DISPOSAL CONSIDERATIONS

| | |
|---|---|
| <u>Waste treatment methods</u> Waste from Residues/Unused Products | 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 |
| <u>Contaminated Packaging</u> | Dispose of this container to hazardous or special waste collection point. |
| <u>Other Information</u> | 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 flush to sewer Large amounts will affect pH and harm aquatic organisms |

SECTION 14: TRANSPORT INFORMATION

| | |
|--|--|
| <u>IMDG/IMO</u> | |
| UN-No | UN3265 |
| Hazard Class | 8 |
| Packing Group | II |
| Proper Shipping Name | Corrosive liquid, acidic, organic, n.o.s. (Chloromethylphosphonothioic dichloride) |
| <u>Road and Rail Transport</u> | |
| UN-No | UN3265 |
| Hazard Class | 8 |
| Packing Group | II |
| Proper Shipping Name | Corrosive liquid, acidic, organic, n.o.s. (Chloromethylphosphonothioic dichloride) |
| <u>IATA</u> | |
| UN-No | UN3265 |
| Hazard Class | 8 |
| Packing Group | II |
| Proper Shipping Name | Corrosive liquid, acidic, organic, n.o.s. (Chloromethylphosphonothioic dichloride) |
| <u>Special Precautions for User</u> | No special precautions required |

SECTION 15: REGULATORY INFORMATION

ALFAAA18456

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

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

International Inventories

X = listed

National Regulations

Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 16: OTHER INFORMATION

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/NDL - 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

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

POW - Partition coefficient Octanol:Water

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

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

Prepared By

Health, Safety and Environmental Department

Revision Date

29-Mar-2025

Revision Summary

Not applicable.

In accordance with local and national regulations: Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013

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,

SAFETY DATA SHEET

Chloromethylphosphonothioic dichloride

Revision Date 29-Mar-2025

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