

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: **Antimony trichloride**
 Product Description: **Antimony trichloride**
 Cat No. : A/8200/50
 Synonyms Trichlorostibine; Antimonous chloride; Antimony(III) chloride
 CAS No 10025-91-9
 Molecular Formula Cl₃ Sb

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) |
| Specific target organ toxicity - (single exposure) | Category 3 (H335) |
| Chronic aquatic toxicity | Category 2 (H411) |

Label Elements


Signal Word

Danger

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Hazard Statements

H314 - Causes severe skin burns and eye damage
H335 - May cause respiratory irritation
H411 - Toxic to aquatic life with long lasting effects

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

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
P310 - Immediately call a POISON CENTER or doctor
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

Hygroscopic
Absorbs moisture from air and becomes liquid
Reacts with water and forms HCl
This product does not contain any known or suspected endocrine disruptors

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS No | Weight % |
|----------------------|------------|----------|
| Antimony trichloride | 10025-91-9 | >95 |

SECTION 4: FIRST AID MEASURES

Description of first aid measures

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. Immediate medical attention is required.

Ingestion

Do NOT induce vomiting. Immediate medical attention is required.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. 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.

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Most important symptoms and effects, both acute and delayed

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.

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

Corrosive material. Reacts violently with water. Contact with metals may evolve flammable hydrogen gas. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

antimony, Hydrogen chloride gas, Antimony oxide.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing.

Environmental precautions

Do not flush into surface water or sanitary sewer system. Should not be released into the environment. Do not allow material to contaminate ground water system.

Methods and Material for Containment and Cleaning Up

Do not expose spill to water. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid

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dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance. Do not allow contact with water because of violent reaction.

Conditions for Safe Storage, Including any Incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Corrosives area. Keep under nitrogen.

Specific End Uses

Use in laboratories.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

| Component | Malaysia | ACGIH TLV | OSHA PEL |
|----------------------|----------|----------------------------|--------------------------------------|
| Antimony trichloride | | TWA: 0.5 mg/m ³ | (Vacated) TWA: 0.5 mg/m ³ |

| Component | European Union | The United Kingdom | Germany |
|----------------------|----------------|---|---------|
| Antimony trichloride | | STEL: 1.5 mg/m ³ 15 min TWA: 0.5 mg/m ³ 8 hr | |

Exposure Controls

Engineering Measures

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. 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

Wear appropriate protective gloves and clothing to prevent skin exposure

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:

Particulates filter conforming to EN 143

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

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

Prevent product from entering drains Do not allow material to contaminate ground water system

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | |
|---|--------------------------|--|
| Appearance | White | |
| Physical State | Solid | |
| Odor | pungent | |
| Odor Threshold | No data available | |
| pH | Strongly acidic | |
| Melting Point/Range | 73 °C / 163.4 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 223 °C / 433.4 °F | @ 760 mmHg |
| Flash Point | No information available | Method - No information available |
| Evaporation Rate | Not applicable | Solid |
| Flammability (solid,gas) | No information available | |
| Explosion Limits | No data available | |
| Vapor Pressure | No data available | |
| Vapor Density | Not applicable | Solid |
| Specific Gravity / Density | No data available | |
| Bulk Density | No data available | |
| Water Solubility | 100 g/l (25°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Autoignition Temperature | No data available | |
| Decomposition Temperature | No data available | |
| Viscosity | Not applicable | Solid |
| Explosive Properties | No information available | |
| Oxidizing Properties | No information available | |
| Molecular Formula | Cl ₃ Sb | |
| Molecular Weight | 228.11 | |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Yes.

Chemical Stability

Reacts violently with water. May react with metals and lead to the formation of flammable hydrogen gas. Hygroscopic.

Possibility of Hazardous Reactions

| | |
|--------------------------|---|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | Contact with water liberates toxic gas. Contact with metals may evolve flammable hydrogen |

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gas.

Conditions to Avoid

Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents. Strong acids. Strong bases. Fluorine. Metals.

Hazardous Decomposition Products

antimony. Hydrogen chloride gas. Antimony oxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Product Information

(a) acute toxicity;

Oral

Based on available data, the classification criteria are not met

Dermal

No data available

Inhalation

No data available

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------------|--------------------------|-------------|-----------------|
| Antimony trichloride | LD50 = 525 mg/kg (Rat) | - | - |

(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;

Category 3

Results / Target organs

Respiratory system.

(i) STOT-repeated exposure;

No data available

Target Organs

No information available.

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(j) aspiration hazard; Not applicable
Solid

Other Adverse Effects See actual entry in RTECS for complete information

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 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Persistence and degradability Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary
Persistence May persist, based on information available.
Degradation in sewage treatment plant Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

Bioaccumulative potential May have some potential to bioaccumulate

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.

Endocrine Disruptor Information This product does not contain any known or suspected endocrine disruptors

Other adverse effects No information available

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods
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.

Contaminated Packaging Dispose of this container to hazardous or special waste collection point.

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. Large amounts will affect pH and harm aquatic organisms. Do not let this chemical enter the environment.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

FSUA8200

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UN-No UN1733
Hazard Class 8
Packing Group II
Proper Shipping Name ANTIMONY TRICHLORIDE

Road and Rail Transport

UN-No UN1733
Hazard Class 8
Packing Group II
Proper Shipping Name ANTIMONY TRICHLORIDE

IATA

UN-No UN1733
Hazard Class 8
Packing Group II
Proper Shipping Name ANTIMONY TRICHLORIDE

Special Precautions for User No special precautions required

SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

| Component | EINECS | TSCA | DSL | PICCS | ENCS | ISHL | IECSC | AICS | KECL |
|----------------------|-----------|------|-----|-------|------|------|-------|------|----------|
| Antimony trichloride | 233-047-2 | X | X | X | X | X | X | X | KE-01889 |

Note Note 1: The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture

| Component | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------|---|--|----------------------------|------------------------------------|
| Antimony trichloride | | | | Annex I - Y27 |

National Regulations

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 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

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

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KECL - Korean Existing and Evaluated 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

Revision Date

23-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

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End of Safety Data Sheet