

1 Identification

Product identifier

Product name: Chloranilic acid mercury(II) salt

Stock number: L12173

CAS Number:
33770-60-4

EC number:
251-672-9

Index number:
080-004-00-7

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

Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)



GHS06 Skull and crossbones

Acute Tox. 2 H300 Fatal if swallowed.

Acute Tox. 1 H310 Fatal in contact with skin.

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

STOT RE 2 H373 May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative.

Hazards not otherwise classified No information known.

Label elements

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS06 GHS08

Signal word

Danger

Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.
H373 May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
P320 Specific treatment is urgent (see on this label).
P361 Take off immediately all contaminated clothing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification

D1A - Very toxic material causing immediate and serious toxic effects



Classification system

HMIS ratings (scale 0-4)

(Hazardous Materials Identification System)

HEALTH 3 Health (acute effects) = 3

FIRE 1 Flammability = 1

REACTIVITY 1 Physical Hazard = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances

CAS# Description:

33770-60-4 Chloranilic acid mercury(II) salt

Identification number(s):

EC number: 251-672-9

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4 First-aid measures

Description of first aid measures

General information

Immediately remove any clothing soiled by the product.
Remove breathing apparatus only after contaminated clothing has been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.

After inhalation

Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.

After skin contact

Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing

Drink lots of water.
Administer activated carbon and sodium sulfate.
Induce vomiting if patient is conscious.
Call a doctor immediately.
Do not induce vomiting; immediately call for medical help.

Information for doctor

Most important symptoms and effects, both acute and delayed No further relevant information available.

Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:

Hydrogen chloride (HCl)
Carbon monoxide (CO)
Toxic metal compounds

Advice for firefighters

Protective equipment:

Wear self-contained respirator.
Wear fully protective impervious suit.

Additional information Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Prevent formation of dust.
Dispose of contaminated material as waste according to section 13.
Ensure adequate ventilation.

Prevention of secondary hazards: No special measures required.

Reference to other sections

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling

Precautions for safe handling

Work only in fume cabinet.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.
Open and handle container with care.
Information about protection against explosions and fires: Keep respiratory protective device available.

Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and receptacles:

Jointless, smooth floor and walls.
Prevent any seepage into the ground.
Information about storage in one common storage facility: Store away from oxidizing agents.
Further information about storage conditions:

Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters

Components with limit values that require monitoring at the workplace:

Mercury, inorganic compounds (as Hg)
mg/m³

ACGIH TLV 0.025 (skin)
Not classifiable as a human carcinogen

Austria MAK 0.05
Belgium TWA 0.05 (skin)
Denmark TWA 0.05 (skin)

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Finland TWA 1
France VME 0.1 (skin)
Germany MAK 0.01
Hungary TWA 0.02; 0.04-STEL
Japan OEL 0.05
Korea TLV 0.025 (skin)
Not classifiable as a human carcinogen
Netherlands MAC-TGG 0.05; 0.15-MAC-K (skin)
Norway TWA 0.05
Poland TWA 0.05; 0.15-STEL
Russia TWA 0.05; 0.01-STEL
Sweden NGV 0.05
Switzerland MAK-W 0.01 (skin)
United Kingdom TWA 0.025
USA TWA 0.05

33770-60-4 Chloranilic acid mercury(II) salt (100.0%)

PEL (USA) Long-term value: 0.1 mg/m³
as Hg; see OSHA standard interpretation memo
REL (USA) Ceiling limit value: 0.1 mg/m³
as Hg; Skin
TLV (USA) Long-term value: 0.1 mg/m³
as Hg; Skin

Additional information:

The exposure limits that were valid when the MSDS was created were used.
No data

Exposure controls

Personal protective equipment

General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

Avoid contact with the eyes and skin.

Maintain an ergonomically appropriate working environment.

Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Use self-contained respiratory protective device in emergency situations.

Recommended filter device for short term use: Filter P3

Protection of hands:

Impervious gloves

Rubber gloves

Check protective gloves prior to each use for their proper condition.

The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.

Eye protection: Safety glasses

Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Powder
Color: Dark green
Odor: Odorless
Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range: >300 °C (>572 °F)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined

Flash point: Not applicable
Flammability (solid, gaseous): Not determined.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Auto igniting: Not determined.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:

Lower: Not determined
Upper: Not determined
Vapor pressure: Not applicable.
Density: Not determined
Relative density: Not determined.
Vapor density: Not applicable.
Evaporation rate: Not applicable.

Solubility in / Miscibility with

Water: Not determined
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not applicable.
kinematic: Not applicable.
Other information No further relevant information available.

10 Stability and reactivity

Reactivity No information known.

Chemical stability Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat.

Possibility of hazardous reactions Reacts with strong oxidizing agents

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USA

Product name: **Chloranilic acid mercury(II) salt**

Conditions to avoid No further relevant information available.
Incompatible materials: No information known.
Hazardous decomposition products:
Mercury and organic compounds containing mercury
Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide

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11 Toxicological information

Information on toxicological effects
Acute toxicity:
Fatal if inhaled.
Fatal in contact with skin.
Fatal if swallowed.
Danger through skin absorption.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: Irritant to skin and mucous membranes.
Eye irritation or corrosion: Irritating effect.
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity:
EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.
IARC-3: Not classifiable as to carcinogenicity to humans.
ACGIH A4: Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure:
May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure. Route of exposure:
Oral, Inhalative.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity:
Acute and chronic exposure to inorganic mercury can cause salivation with metallic taste, pain on chewing, gingivitis, colitis, stomatitis, kidney damage, and central nervous system damage. The latter can cause tremors, convulsive or shaking movements and psychic disturbances such as memory loss, insomnia, loss of confidence, irritability and depression. Excessive exposure may result in death.
Subacute to chronic toxicity: No effects known.
Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.


12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Ecotoxicological effects:
Remark: Very toxic for aquatic organisms
Additional ecological information:
General notes:
Do not allow material to be released to the environment without proper governmental permits.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Very toxic for aquatic organisms
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods
Recommendation Consult state, local or national regulations to ensure proper disposal.
Waste disposal key number according to the European Waste Catalogue: 06 04 04 Wastes containing mercury
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number DOT, IMDG, IATA	UN2025
UN proper shipping name DOT IMDG IATA	Mercury compounds, solid, n.o.s. (Chloranilic acid mercury(II) salt) MERCURY COMPOUND, SOLID, N.O.S. (Chloranilic acid mercury(II) salt), MARINE POLLUTANT MERCURY COMPOUND, SOLID, N.O.S. (Chloranilic acid mercury(II) salt)
Transport hazard class(es) DOT	
	
Class Label Class Label	6.1 Toxic substances. 6.1 6.1 (T5) Toxic substances 6.1

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IMDG



**Class
Label
IATA**

6.1 Toxic substances.
6.1



**Class
Label**

6.1 Toxic substances.
6.1

**Packing group
DOT, IMDG, IATA**

II

**Environmental hazards:
Marine pollutant (IMDG):**

Environmentally hazardous substance, solid; Marine Pollutant
Symbol (fish and tree)

**Special precautions for user
EMS Number:
Segregation groups**

Warning: Toxic substances
F-A,S-A
Heavy metals and their salts (including their organometallic compounds), mercury
and mercury compounds

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

**DOT
Marine Pollutant (DOT):
Remarks:**

No
Special marking with the symbol (fish and tree).

UN "Model Regulation":

UN2025, Mercury compounds, solid, n.o.s. (Chloranilic acid mercury(II) salt), 6.1, II

15 Regulatory information

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

GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)

Hazard pictograms



GHS06 GHS08

Signal word Danger

Hazard statements

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

H373 May cause damage to the central nervous system, the kidneys, the reproductive system and the brain through prolonged or repeated exposure.
Route of exposure: Oral, Inhalative.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/...
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National regulations

All components of this product are listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical substance Inventory.

All components of this product are listed on the Canadian Domestic Substances List (DSL).

This product contains a chemical known to the state of California to cause cancer and/or reproductive toxicity.

SARA Section 313 (specific toxic chemical listings)

33770-60-4 Chloranilic acid mercury(II) salt

California Proposition 65

Prop 65 - Chemicals known to cause cancer Substance is not listed.

Prop 65 - Developmental toxicity

33770-60-4 Chloranilic acid mercury(II) salt

Prop 65 - Developmental toxicity, female Substance is not listed.

Prop 65 - Developmental toxicity, male Substance is not listed.

Information about limitation of use:

Employment restrictions concerning pregnant and lactating women must be observed.

For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Reference Sources:

National Institute for Occupational Safety and Health

Registry of Toxic Effects of Chemical Substances

U. S. Government Printing Office, Washington D. C.

Date of preparation / last revision 11/24/2015 / -

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USA

Product name: Chloranilic acid mercury(II) salt	
<div>Abbreviations and acronyms:</div> <div>RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)</div> <div>IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)</div> <div>ICAO: International Civil Aviation Organization</div> <div>ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)</div> <div>ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)</div> <div>IMDG: International Maritime Code for Dangerous Goods</div> <div>DOT: US Department of Transportation</div> <div>IATA: International Air Transport Association</div> <div>EINECS: European Inventory of Existing Commercial Chemical Substances</div> <div>CAS: Chemical Abstracts Service (division of the American Chemical Society)</div> <div>HMIS: Hazardous Materials Identification System (USA)</div> <div>WHMIS: Workplace Hazardous Materials Information System (Canada)</div> <div>LC50: Lethal concentration, 50 percent</div> <div>LD50: Lethal dose, 50 percent</div> <div>vPvB: very Persistent and very Bioaccumulative</div> <div>ACGIH: American Conference of Governmental Industrial Hygienists (USA)</div> <div>OSHA: Occupational Safety and Health Administration (USA)</div> <div>NTP: National Toxicology Program (USA)</div> <div>IARC: International Agency for Research on Cancer</div> <div>EPA: Environmental Protection Agency (USA)</div>	
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USA	