

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name : Thallium(III) perchlorate hydrate

CAS-No. : 207738-09-8

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

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Oxidizing solids (Category 2)

Acute toxicity, Inhalation (Category 2)

Acute toxicity, Oral (Category 2)

Specific target organ toxicity - repeated exposure (Category 2)

Chronic aquatic toxicity (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Contact with combustible material may cause fire. Very toxic by inhalation and if swallowed. Danger of cumulative effects. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]



Signal word : Danger

Hazard statement(s)

H272 May intensify fire; oxidiser.
H300 Fatal if swallowed.
H330 Fatal if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P220 Keep/Store away from clothing/ combustible materials.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P284 Wear respiratory protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

Supplemental Hazard

Statements : none

According to European Directive 67/548/EEC as amended.



R-phrase(s)

R8 Contact with combustible material may cause fire.
R26/28 Very toxic by inhalation and if swallowed.
R33 Danger of cumulative effects.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S13 Keep away from food, drink and animal feedingstuffs.
S28 After contact with skin, wash immediately with plenty of soap and water.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula : CBO12TI · xH2O

Molecular Weight : 502,74 g/mol

Component : Concentration

Thallium(III) perchlorate hydrate

CAS-No. : 207738-09-8

EC-No. : 239-677-4

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.

If inhaled

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

In case of skin contact

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

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. The most characteristic symptom of thallium exposure is alopecia (loss of hair). Cutaneous effects may include dry, scaly skin and impairment of nail growth often resulting in the appearance of crescent-shaped strips across fingernails and toenails (Mees' line). Other symptoms in acute poisoning relate chiefly to the gastrointestinal tract, nervous system, skin, eyes, and cardiovascular system. Acute poisoning results in swelling of the feet and legs, arthralgia, vomiting, insomnia, hyperesthesia and paresthesia of the hands and feet, mental confusion, polyneuritis with severe pain in the legs and loins, partial paralysis of the legs, angina-like pains, nephritis, wasting and weakness, and lymphocytosis and eosinophilia. In chronic poisoning, central and peripheral nervous system abnormalities may persist including ataxia, tremor, incoordination, paralysis of extremities, endocrine disorders, memory loss, and psychoses may develop.

4.3 Indication of immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, thallium oxides

5.3 Precautions for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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 materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

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).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting/freezing point no data available

f) Initial boiling point and flash point not applicable

g) Evaporation rate not applicable

h) Flammability (solid, gas) no data available

i) Upper/lower explosive limits no data available

j) Vapour pressure no data available

k) Vapour density no data available

l) Relative density no data available

m) Water solubility no data available

n) Partition coefficient: n-octanol/water no data available

o) Autoignition temperature no data available

p) Decomposition temperature no data available

q) Viscosity no data available

r) Explosive properties no data available

s) Oxidizing properties no data available

t) Oxidizing properties The substance or mixture is classified as oxidizing with the subcategory 2.

9.2 Other safety information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

may affect product quality.

10.5 Incompatibility with other materials

Strong reducing agents, Organic materials, Powdered metals

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity