1 Identification

Product identifier

Product name: Copper(II) bromide

Stock number: 14258
CAS Number:
7789-45-9
EC number:
232-167-2

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)

GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

GHS05 GHS07

Signal word Danger

Hazard statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

Precautionary statements

P260 Do not breathe dust/fume/aerosol/vapours/spray.
P303+P361+P330+P331+P353 If on skin (or hair). Take off immediately all contaminated clothing. Rinse skin with water and soap. If on eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331+P353 If swallowed: rinse mouth. Do NOT induce vomiting.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

WHMIS classification
D2B - Toxic material causing other toxic effects
E - Corrosive material

Classification system

HMIS ratings (scale 0-4) (Hazardous Materials Identification System)

Health (acute effects) = 3
Flammability = 0
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:
7789-45-9 Copper(II) bromide

Identification number(s):
EC number: 232-167-2

4 First-aid measures

Description of first aid measures
General information Immediately remove any clothing soiled by the product.

(Contd. on page 2)
**Product name:** Copper(II) bromide

(Contd. of page 1)

**38.0.2**

**After inhalation**
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**
Seek medical treatment.

**Information for doctor**
Most important symptoms and effects, both acute and delayed
Causes severe skin burns.
Causes serious eye damage.

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

**5 Fire-fighting measures**

**Extinguishing media**
Suitable extinguishing agents: Product is not flammable. Use fire-fighting measures that suit the surrounding fire.

**Special hazards arising from the substance or mixture**
If this product is involved in a fire, the following can be released:
- Hydrogen bromide (HBr)
- Copper oxides

**Advice for firefighters**
- Protective equipment:
  - Wear self-contained respirator.
  - Wear fully protective impervious suit.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation.

**Environmental precautions:**
- Do not allow product to reach sewage system or any water course.
- Ensure adequate ventilation.
- Use neutralizing agent.
- Dispose of contaminated material as waste according to section 13.

**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
Handle under dry protective gas.
Keep container tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation at the workplace.

**Information about protection against explosions and fires:**
The product is not flammable

**Conditions for safe storage, including any incompatibilities**

**Storage**
Requirements to be met by storerooms and receptacles:
- No special requirements.

**Information about storage in one common storage facility:**
- Store away from water/moisture.
- Store away from strong bases.
- Store away from oxidizing agents.

**Further information about storage conditions:**
- Store under dry inert gas.
- This product is hygroscopic.
- Keep container tightly sealed.
- Store in cool, dry conditions in well sealed containers.
- Protect from humidity and water.

**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:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

**Additional information:**
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.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

**Breathing equipment:**
Use suitable respirator when high concentrations are present.

**Recommended filter device for short term use:**
Use a respirator with type P100 (USA) or F3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

**Protection of hands:**
Impervious 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.

**Material of gloves**
- Nitrile rubber, NBR

**Penetration time of glove material (in minutes)**
Not determined
9 Physical and chemical properties

Information on basic physical and chemical properties

General information

Appearance:
- Form: Crystalline
- Color: Dark grey to black
- Odor: Odorless
- Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition
- Melting point/Melting range: 498 °C (928 °F)
- Boiling point/Boiling range: 900 °C (1652 °F)
- Sublimation temperature/start: Not determined
- Flammability (solid, gaseous): Not determined
- Ignition temperature: Not determined
- Decomposition temperature: Not determined
- Auto igniting: Not determined.

Danger of explosion: Not determined.

Explosion limits:
- Lower: Not determined
- Upper: Not determined

Vapor pressure: Not applicable.

Density at 20 °C (68 °F): 4.71 g/cm³ (39.305 lbs/gal)

Relative density: Not determined.

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: Decomposition will not occur if used and stored according to specifications.

Possibility of hazardous reactions: Reacts with strong oxidizing agents

Conditions to avoid: No further relevant information available.

Incompatible materials:
- Water/moisture
- Bases
- Oxidizing agents

Hazardous decomposition products:
- Hydrogen bromide
- Copper oxides

11 Toxicological information

Information on toxicological effects

Acute toxicity:
- Harmful if swallowed.
- Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- LD/LC50 values that are relevant for classification: No data

Skin irritation or corrosion: Causes severe skin burns.

Eye irritation or corrosion: Causes serious eye damage.

Sensitization: No sensitizing effects known.

Carcinogenicity: EPA-D: Not classifiable as to human carcinogenicity: inadequate human and animal evidence of carcinogenicity or no data are available.

Reproductive toxicity: No effects known.

Specific target organ system toxicity - repeated exposure: No effects known.

Specific target organ system toxicity - single exposure: No effects known.

Aspiration hazard: No effects known.

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.

Ecotoxic effects:

Remark: Very toxic for aquatic organisms

Additional ecological information:
- General notes:
  - 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.
### 13 Disposal considerations

**Waste treatment methods**

**Recommendation:** Consult state, local or national regulations to ensure proper disposal.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

**UN-Number**

DOT, IMDG, IATA  
UN3260

**UN proper shipping name**

DOT  
IMDG, IATA  
Corrosive solid, acidic, inorganic, n.o.s. (Copper(II) bromide)

**Transport hazard class(es)**

**DOT**

<table>
<thead>
<tr>
<th>Class</th>
<th>Label</th>
<th>Description</th>
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<td>8</td>
<td>(C2)</td>
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**IMDG, IATA**

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<tr>
<td>8</td>
<td></td>
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</tr>
</tbody>
</table>

**Packing group**

DOT, IMDG, IATA  
III

**Environmental hazards:**

Environmentally hazardous substance, solid

**Special precautions for user**

**EMS Number:**  
F-A,S-B

**Segregation groups**

Acids

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

**Transport/Additional information:**

**DOT**

Marine Pollutant (DOT):  
No

**UN "Model Regulation":**  
UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Copper(II) bromide), 8, III

### 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)

**Signal word**

Danger

**Hazard statements**

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**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).

**SARA Section 313 (specific toxic chemical listings)**

7789-45-9 Copper(II) bromide

**California Proposition 65**

Prop 65 - Chemicals known to cause cancer  
Substance is not listed.  
Prop 65 - Developmental toxicity  
Substance is not listed.  
Prop 65 - Developmental toxicity, female  
Substance is not listed.  
Prop 65 - Developmental toxicity, male  
Substance is not listed.

**Information about limitation of use:**

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

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

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

Abbreviations and acronyms:
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- vPvB: very Persistent and very Bioaccumulative
- ACGIH: American Conference of Governmental Industrial Hygienists (USA)
- OSHA: Occupational Safety and Health Administration (USA)
- NTP: National Toxicology Program (USA)
- IARC: International Agency for Research on Cancer
- EPA: Environmental Protection Agency (USA)