

# Material Safety Data Sheet

acc. to OSHA and ANSI

Printing date 07/25/2007

Reviewed on 05/31/2007

## 1 Identification of substance:

### Product details:

**Product name:** Copper shot

**Stock number:** 10953

### Manufacturer/Supplier:

Alfa Aesar, A Johnson Matthey Company  
 Johnson Matthey Catalog Company, Inc.  
 30 Bond Street  
 Ward Hill, MA 01835-8099  
 Emergency Phone: (978) 521-6300  
 CHEMTREC: (800) 424-9300  
 Web Site: www.alfa.com

**Information Department:** Health, Safety and Environmental Department

### Emergency information:

During normal hours the Health, Safety and Environmental Department.  
 After normal hours call Chemtrec at (800) 424-9300.

## 2 Composition/Data on components:

### Chemical characterization:

#### Description: (CAS#)

Copper (CAS# 7440-50-8): 100%

#### Identification number(s):

**EINECS Number:** 231-159-6

## 3 Hazards identification

**Hazard description:** Not applicable

**Information pertaining to particular dangers for man and environment**

Not applicable

### Classification system

**HMIS ratings (scale 0-4)**

(Hazardous Materials Identification System)

HEALTH	0
FIRE	0
REACTIVITY	0

Health (acute effects) = 0

Flammability = 0

Reactivity = 0

## 4 First aid measures

**General information** No special measures required.

**After inhalation** Seek medical treatment in case of complaints.

**After skin contact** Generally the product does not irritate the skin.

**After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing** Seek immediate medical advice.

## 5 Fire fighting measures

### Suitable extinguishing agents

Special powder for metal fires. Do not use water.

**For safety reasons unsuitable extinguishing agents** Water

(Contd. on page 2)

**Material Safety Data Sheet**

acc. to OSHA and ANSI

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**Product name: Copper shot**

(Contd. of page 1)

**Special hazards caused by the material, its products of combustion or resulting gases:**

In case of fire, the following can be released:

Metal oxide fume

**Protective equipment:** No special measures required.**6 Accidental release measures****Person-related safety precautions:** Not required.**Measures for environmental protection:**

Do not allow material to be released to the environment without proper governmental permits.

**Measures for cleaning/collecting:**

Dispose contaminated material as waste according to item 13.

**Additional information:**

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****Information for safe handling:**

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:**

No special measures required.

**Storage****Requirements to be met by storerooms and receptacles:**

No special requirements.

**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** None.**8 Exposure controls and personal protection****Additional information about design of technical systems:**

No further data; see item 7.

(Contd. on page 3)

**Material Safety Data Sheet**

acc. to OSHA and ANSI

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**Product name: Copper shot**

(Contd. of page 2)

**Components with limit values that require monitoring at the workplace:****Copper**

	mg/m3
ACGIH TLV	1 (dust, mist); 0.2 (fume)
Austria MAK	1
	0.1 (fume)
Belgium TWA	0.2 (fume); 1 (dust)
Denmark TWA	0.1
Finland TWA	0.2 (fume); 1 (dust)
France VME	0.2 (fume); 1 (dust)
	1; 2-STEL (dust)
Germany MAK	0.1 (fume); 1 (dust)
Hungary TWA	0.2; 0.4-STEL (dust)
Netherlands MAC-TGG	1 (dust)
Norway TWA	0.05
	0.1 (fume)
Poland TWA	0.1; 0.3-STEL (fume)
	1; 2-STEL (dust)
Russia	1-STEL (dust)
Sweden NGV	0.2 (resp. dust); 1 (total dust)
Switzerland MAK-W	0.1; 0.2-KZG-W (fume)
	1; 1-KZG-W
United Kingdom TWA	0.2 (fume)
	1; 2-STEL (dusts and mists as Cu)
	1; 3-STEL
USA PEL	0.1 (fume, dusts & mists)

**Additional information:** No data**Personal protective equipment****General protective and hygienic measures**

The usual precautionary measures for handling chemicals should be followed.

**Breathing equipment:** Not required.**Protection of hands:** Not required.**Eye protection:** Safety glasses**Body protection:** Protective work clothing.**9 Physical and chemical properties:**

<b>General Information</b>	
<b>Form:</b>	Shot
<b>Color:</b>	Copper colored
<b>Odor:</b>	Odorless
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	1083°C (1981°F)
<b>Boiling point/Boiling range:</b>	2595°C (4703°F)
<b>Sublimation temperature / start:</b>	Not determined
<b>Flash point:</b>	Not applicable
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined

(Contd. on page 4)

**Material Safety Data Sheet**

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Reviewed on 05/31/2007

**Product name: Copper shot**

(Contd. of page 3)

<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Density at 20°C (68°F):</b>	8.94 g/cm <sup>3</sup>
<b>Solubility in / Miscibility with Water:</b>	Insoluble

**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

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

**Materials to be avoided:**

**Dangerous reactions** No dangerous reactions known

**Dangerous products of decomposition:** Metal oxide fume

**11 Toxicological information****Acute toxicity:****Primary irritant effect:**

**on the skin:** Powder: irritant effect

**on the eye:** Powder: irritant effect

**Sensitization:** No sensitizing effects known.

**Other information (about experimental toxicology):**

Tumorigenic effects have been observed on tests with laboratory animals.

Reproductive effects have been observed on tests with laboratory animals.

**Subacute to chronic toxicity:**

Copper compounds may be irritating to the skin, eyes and respiratory tract. They may cause metal fume fever, hemolysis of the red blood cells and injury to the liver, lungs, kidneys and pancreas. Ingestion may also cause vomiting, gastric pain, dizziness, anemia, cramps, convulsions, shock, coma and death.

**Subacute to chronic toxicity:**

The Registry of Toxic Effects of Chemical Substances (RTECS) reports the following effects in laboratory animals:

Gastrointestinal - nausea or vomiting.

Gastrointestinal - hypermotility, diarrhea.

Liver - hepatitis (hepatocellular necrosis), zonal

Liver - other changes.

Kidney, Ureter, Bladder - other changes.

Cardiac - other changes.

Related to Chronic Data - death.

Lungs, Thorax, or Respiration - fibrosis, focal (pneumoconiosis).

Lungs, Thorax, or Respiration - tumors.

Lungs, Thorax, or Respiration - other changes.

Reproductive - Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).

Reproductive - Specific Developmental Abnormalities - Central Nervous System.

(Contd. on page 5)

**Material Safety Data Sheet**

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Reviewed on 05/31/2007

**Product name: Copper shot**

(Contd. of page 4)

Reproductive - Specific Developmental Abnormalities - musculoskeletal system.

Reproductive - Fertility - pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea)

Reproductive - Fertility - post-implantation mortality (e.g. dead/or resorbed implants per total number of implants).

Reproductive - Maternal Effects - uterus, cervix, vagina.

Reproductive - Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated)

Tumorigenic - equivocal tumorigenic agent by RTECS criteria.

Tumorigenic - carcinogenic by RTECS criteria.

**Additional toxicological information:**

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

Possible risk of impaired fertility.

Possible risk of harm to the unborn child.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****General notes:**

Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:****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**

Not a hazardous material for transportation.

**DOT regulations:**

**Hazard class:** None

**Land transport ADR/RID (cross-border)**

**ADR/RID class:** None

**Maritime transport IMDG:**

**IMDG Class:** None

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** None

**Transport/Additional information:**

Not dangerous according to the above specifications.

USA

(Contd. on page 6)

**Material Safety Data Sheet**

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**Product name: Copper shot**

(Contd. of page 5)

**15 Regulations****Product related hazard informations:**

Observe the general safety regulations when handling chemicals

**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).

**Information about limitation of use:**

For use only by technically qualified individuals.

This product contains copper and is subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and 40CFR372.

**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 MSDS:** Health, Safety and Environmental Department.

**Contact:** Paul V. Connolly