

# Safety Data Sheet

According to OSHA and ANSI

Printing date 11/27/2012

Reviewed on 11/26/2012

## 1 Identification of the substance/mixture and of the company/undertaking

**Product identifier**
**Product name:** Cadmium shot

**Stock number:** 35483

**CAS Number:**

7440-43-9

**EC number:**

231-152-8

**Index number:**

048-002-00-0

**Relevant identified uses of the substance or mixture and uses advised against.**
**Sector of Use** SU24 Scientific research and development

**Details of the supplier of the safety data sheet**
**Manufacturer/Supplier:**

Alfa Aesar, A Johnson Matthey Company

Johnson Matthey Catalog Company, 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 hours the Health, Safety and Environmental Department at (800) 343-0660. After normal hours call Carechem 24 at (866) 928-0789.

## 2 Hazards identification

**Classification of the substance or mixture**
**Classification according to Regulation (EC) No 1272/2008**


GHS06 Skull and crossbones

 Acute Tox. 2            H330      Fatal if inhaled.
 

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GHS08 Health hazard

 Muta. 2                    H341      Suspected of causing genetic defects.  
 Carc. 1B                  H350      May cause cancer.  
 Repr. 2                    H361fd    Suspected of damaging fertility. Suspected of damaging the unborn child.  
 STOT RE 1                H372      Causes damage to organs through prolonged or repeated exposure.
 

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GHS09 Environment

 Aquatic Acute 1        H400      Very toxic to aquatic life.  
 Aquatic Chronic 1    H410      Very toxic to aquatic life with long lasting effects.
 

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**Classification according to Directive 67/548/EEC or Directive 1999/45/EC**


T+; Very toxic

 R26:                            Very toxic by inhalation.
 

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T; Toxic

Carc. Cat. 2

 R45-48/23/25:            May cause cancer. Toxic: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
 

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Xn; Harmful

 R62-68-63:                Possible risk of impaired fertility. Possible risk of irreversible effects. Possible risk of harm to the unborn child.
 

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N; Dangerous for the environment

 R50/53:                    Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 

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 Muta. Cat. 3, Repr. Cat. 3
 

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Information concerning particular hazards for human and environment: Not applicable

**Label elements****Labelling according to Regulation (EC) No 1272/2008**

The substance is classified and labelled according to the CLP regulation.

**Hazard pictograms**

GHS06



GHS08



GHS09

**Signal word** Danger**Hazard statements**

H330 Fatal if inhaled.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P284 Wear respiratory protection.

P281 Use personal protective equipment as required.

P320 Specific treatment is urgent (see on this label).

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard description:****WHMIS classification**

D1A - Very toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects

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

(Hazardous Materials Identification System)

HEALTH	1
FIRE	0
REACTIVITY	0

Health (acute effects) = 1

Flammability = 0

Reactivity = 0

**Other hazards****Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization: Substances****CAS# Description:**

7440-43-9 Cadmium

**Identification number(s):**

EC number: 231-152-8

Index number: 048-002-00-0

### 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. If required, provide artificial respiration. Keep patient warm.

Seek immediate medical advice.

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**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**

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**5 Firefighting measures****Extinguishing media**

**Suitable extinguishing agents** Special powder for metal fires. Do not use water.

**For safety reasons unsuitable extinguishing agents** Water

**Special hazards arising from the substance or mixture**

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

Toxic metal oxide fume

**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 material to be released to the environment without proper governmental permits.

**Methods and material for containment and cleaning up:**

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**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**

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:** No information known.

**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:** No information known.

**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.

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**Control parameters****Components with limit values that require monitoring at the workplace:****7440-43-9 Cadmium (100.0%)**

PEL (USA)	0.005 mg/m <sup>3</sup> Table Z-2 for exclusions in 29 CFR 1910.1027
REL (USA)	See Pocket Guide App. A
TLV (USA)	0.01 mg/m <sup>3</sup> 0.002 R; as Cd; BEI
EL (Canada)	0.01 mg/m <sup>3</sup> as Cd; ACIGH A1, IARC 1
EV (Canada)	0.01 0.002* mg/m <sup>3</sup> *respirable

**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.

Store protective clothing separately.

Maintain an ergonomically appropriate working environment.

**Breathing equipment:**

Use self-contained respiratory protective device in emergency situations.

**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.

**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:	Solid in various forms
Color:	Colorless to pale green
Odor:	Not determined
Odor threshold:	Not determined.

**pH-value:** Not applicable.**Change in condition**

Melting point/Melting range:	321°C (610 °F)
Boiling point/Boiling range:	765°C (1409 °F)
Sublimation temperature / start:	Not determined
Flammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Auto igniting:	Not determined.
Explosion limits:	
Lower:	Not determined
Upper:	Not determined
Vapor pressure at 180°C (356 °F):	0.00013 hPa
Density at 20°C (68 °F):	8.65 g/cm <sup>3</sup> (72.184 lbs/gal)

Bulk density at 20°C (68 °F):	2700 kg/m <sup>3</sup>
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Segregation coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
Other information	No further relevant information available.

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### 10 Stability and reactivity

**Reactivity**
**Chemical stability**
**Thermal decomposition / conditions to be avoided:**

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

**Possibility of hazardous reactions** No dangerous reactions known

**Incompatible materials:** No information known.

**Hazardous decomposition products:** Toxic metal oxide fume

### 11 Toxicological information

**Information on toxicological effects**
**Acute toxicity:**
**Primary irritant effect:**

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

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

**Sensitization:** No sensitizing effects known.

**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.

EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies.

IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity.

NTP-K: Known to be carcinogenic: sufficient evidence from human studies.

Carcinogen as defined by OSHA.

Possible risk of harm to the unborn child.

ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and/or other multiple dose toxicity data for components in this product.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive and/or mutation data for components in this product.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for components in this product.

### 12 Ecological information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**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 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.

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

May cause long lasting harmful effects to aquatic life.

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.

**Uncleaned packagings:**

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

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### 14 Transport information

<b>UN-Number</b> DOT, ADR, ADN, IMDG, IATA	Not applicable
<b>UN proper shipping name</b> DOT, ADR, ADN, IMDG, IATA	Not applicable
<b>Transport hazard class(es)</b> DOT, ADR, ADN, IMDG, IATA Class	Not applicable
<b>Packing group</b> DOT, ADR, IMDG, IATA	Not applicable
<b>Environmental hazards:</b>	Environmentally hazardous substance, solid; Marine Pollutant
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	-

### 15 Regulatory information

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

**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.

**Information about limitation of use:**

For use only by technically qualified individuals.

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

**Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

Substance is not listed.

**REACH - Pre-registered substances** Substance is 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 MSDS:** Health, Safety and Environmental Department.

**Contact:**

Zachariah C. Holt

Global EHS Manager

**Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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)