

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name

Cadmium metal

Product no.

090643

REACH registration number

01-2119489023-40-0001

Other means of identification

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

Relevant identified uses of the substance or mixture

Corrosion inhibitors and anti-scaling agents, stabilizers, Plating agents and metal surface treatment agent, Component in batteries / alloy metal, Plating agents ESD agent.

Cadmium metal production, RLE, pyro metallurgy; Storage of ingots; Production of chemicals (pyro and hydro); Addition in the production of inorganic catalysts; Smelting, alloying and casting; Cadmium casting and rolling; Production of wire and rods; Component in brass products; Component of solder products; Downstream use of cadmium-based brass products; Downstream use of cadmium based capelin products; Production of cadmium (alloy) powder; Powder for contact materials; Use of active powder in batteries; Use of fine powder for mechanical plating; Production of alloys containing cadmium; Use of cadmium alloys with silver content; Electroplating; PVD / coating

The product can be used in industry in the manufacture of various products, either in powder form or metal form.

Uses advised against

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1.3. Details of the supplier of the safety data sheet

Company and address

Boliden Odda AS
Eitrheim
5750 Odda
Norway

Tel +47 53 64 91 00

Fax +47 53 64 33 77

Contact person**E-mail**

post.odda@boliden.com

SDS date

01-06-2015

SDS Version

1.0

1.4. Emergency telephone number

999 (or 111 for non-emergency medical advice). Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service). See section 16.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

According to EC-Regulation 1907/2006 (REACH)

This product is a solid metal and not classified as dangerous.

2.2. Label elements

Hazard pictogram(s)

-

Signal word

-

Hazard statement(s)

-

Safety statement(s)	General	-
	Prevention	-
	Response	-
	Storage	-
	Disposal	-

Identity of the substances primarily responsible for the major health hazards

-

2.3. Other hazards

-

Additional labelling

-

Additional warnings

-

VOC

-

SECTION 3: Composition/information on ingredients

3.1/3.2. Substances/Mixtures

NAME:	cadmium
IDENTIFICATION NOS.:	CAS-no: 7440-43-9 EC-no: 231-152-8 REACH-no: 01-2119489023-40-0001 Index-no: 048-002-00-0
CONTENT:	99,995%
CLP CLASSIFICATION:	Acute Tox. 3, STOT RE 1, Muta. 2, Carc. 1B, Repr. 2, Aquatic Acute 1, Aquatic Chronic 1 H331, H341, H350, H361fd, H372, H400, H410

(*) See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other informations

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Move the injured person as soon as possible to fresh air, keep warm and at rest. If unconscious, loosen tight clothing and place patient in recovery position. If breathing is difficult; oxygen supply, or if necessary, artificial respiration. If heart stops; chest compressions. Consult a doctor / hospital immediately. By cadmium fever; consult your doctor or hospital.

Inhalation

Rinse nose, mouth and throat with water. Consult a physician.

Skin contact

Remove contaminated clothing and shoes at once. Skin that has come in contact with the material must be washed thoroughly with water and soap.

Eye contact

Remove contact lenses. Flush eyes immediately with plenty of water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. If irritation continues, contact a doctor.

Ingestion

Give the person plenty to drink and stay with the person. If the person feels unwell, contact a doctor

According to EC-Regulation 1907/2006 (REACH)

immediately and take this safety data sheet or the label from the product with you.

4.2. Most important symptoms and effects, both acute and delayed

Reproductive toxicity: This product contains teratogenic substances which can do long-term damage to fetus and human child. The effects on the child can be: death, deformity, delayed development, and functional disorders.

Carcinogenic effects: This product contains substances which are considered or proven to be carcinogenic. The danger may lie in inhalation, skin contact or ingestion.

Reproductive toxicity: This product contains substances which can do damage to reproductive capacity, e.g. damage to germ cells or hormonal regulation. The effects can be: sterility, reduced fertility, menstruation disorders, etc.

4.3. Indication of any immediate medical attention and special treatment needed

Consider the patient's general health when exposed to the substance.

Information to medics

Bring this safety data sheet.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Cast cadmium is not flammable. Extinguishing media is to be selected from surrounding fire.

Do not use water, foam or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Non-flammable. When heated, toxic gases are formed. Cadmium dust may cause dust explosion.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep people and animals away from contaminated area.

It must be ensured that each workstation has adequate ventilation, that workspace, construction and equipment comply with all legal requirements and that personnel use personal protective equipment in accordance with approved instructions for protection. See section 8.

6.2. Environmental precautions

Heavy metal in the product is hazardous.

Limit the spread of the product to prevent discharges to the soil, waterways and drainage.

6.3. Methods and material for containment and cleaning up

Collect in marked and sealed containers. Waste management, see point 13.

6.4. Reference to other sections

See section 13 with regard to the handling of waste. See section 8 for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

See section 8 for information on personal protection.

Particular care must be taken by pregnant women.

Avoid breathing dust and eye contact.

Measures to prevent aerosol and dust formation: If it is technically possible, use local exhaust ventilation.

Eating and smoking are not permitted in cadmium infested area.

Before repair work of cadmium contaminated material made thorough cleaning.

Uncovered skin must be washed with soap and water. Nails held cropped.

7.2. Conditions for safe storage, including any incompatibilities

Generally, cadmium metal is to be stored in a dry area. Storerooms should be locked.

Storage Class: Not flammable metal

Storage temperature

No data available.

7.3. Specific end use(s)

This product should only be used for applications described in Section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

OEL

Cadmium & cadmium compounds as total dust except CdO fume & CdS pigments (as Cd)
Limit value - Eight hours: 0,025 mg/m³

DNEL / PNEC

No data available.

8.2. Exposure controls

Compliance with limit values should be checked regularly.
Ensure good ventilation. Exercise good industrial hygiene.

General recommendations

Observe general occupational hygiene.

Exposure scenarios

If there is an appendix to this safety data sheet, the indicated exposure scenarios must be complied.

Exposure limits

Trade users are covered by the rules of the working environment legislation on maximum concentrations for exposure. See work hygiene threshold values.

Appropriate technical measures

Take ordinary precautions when using the product. Avoid inhalation of gas or dust.

Hygiene measures

Wash hands after work and before eating, smoking and using the toilet.

In addition to exposure control of cadmium in air, biological controls (cadmium in urine) are recommended.

Measures to avoid environmental exposure

No specific requirements.

Individual protection measures, such as personal protective equipment

Generally

Only CE-marked personal protection equipment should be used.

Respiratory Equipment

If dust is generated, use respirator with particle filter P3. By welding or other hot work must full fresh air mask be used.

Skin protection

Wear suitable protective clothing. Heat-resistant protective clothing when hot work.

Hand protection

Use protective gloves made of nitrile rubber or neoprene. Heat resistant gloves during hot work.

Breakthrough time of the glove material may vary with the glove thickness, operations and exposure.

Ensure that the glove is complete, without holes or tears.

Eye protection

Wear safety glasses with side shields.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form	Colour	Odour	pH	Viscosity	Density (g/cm ³)
Solid	Silver	None	Not relevant	-	8,6

Phase changes

Melting point (°C)

313

Boiling point (°C)

765

Vapour pressure (mm Hg)

Negligible vapor pressure at 20 °C

Data on fire and explosion hazards

Flashpoint (°C)

Not relevant

Ignition (°C)

-

Self ignition (°C)

Not relevant

Explosion limits (Vol %)

Not relevant

Oxidizing properties

Oxidizes in air at 470 °C

Solubility

Solubility in water

2,3 mg/l at 20 °C

n-octanol/water coefficient

-

9.2. Other information

Solubility in fat

Additional information

According to EC-Regulation 1907/2006 (REACH)

- N/A

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with nitric acid and oxidants.

10.2. Chemical stability

The product is stable under the conditions noted in section 7.

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

No special

10.5. Incompatible materials

No incompatible compounds are known.

10.6. Hazardous decomposition products

When heated, toxic gases are formed.

The smoke can cause temporary cadmium fever.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Acute toxicity: After inhalation and ingestion

Substance

Species

Test

Route of exposure

Result

No data available.

General

Fumes released upon heating (eg welding) on surfaces coated with cadmium may cause acute metal fume fever. Repeated exposure may cause permanent kidney and liver damage, anemia and loss of sense of smell, fatigue and yellow spots on teeth.

Skin corrosion/irritation

Contact with moist gas or liquid irritates skin and may cause burns. Liquids can cause skin irritation and frostbite.

Serious eye damage/irritation

May irritate the eyes.

Respiratory or skin sensitisation

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

No data available.

Reproductive toxicity

No data available.

STOT-single exposure

No data available.

STOT-repeated exposure

No data available.

Aspiration hazard

Harmful by inhalation of dust, steam and smoke. Cough, vomiting, headaches, chest pains, extreme restlessness and irritability.

Ingestion

Harmful if swallowed. May cause vomiting, diarrhea, choking.

Long term effects

Reproductive toxicity: This product contains teratogenic substances which can do long-term damage to human offspring. The effects on the child can be: death, deformity, delayed development, and functional disorders.

Reproductive toxicity: This product contains substances which can do damage to reproductive capacity, e.g. damage to germ cells or hormonal regulation. The effects can be: sterility, reduced fertility, menstruation disorders, etc.

Carcinogenic effects: This product contains substances which are considered or proven to be carcinogenic. The danger may lie in inhalation, skin contact or ingestion.

SECTION 12: Ecological information

12.1. Toxicity

Substance	Species	Test	Test duration	Result
Cadmium	Fish, <i>L. macrochirus</i>	LDLo	96h	1,94 mg/l
Cadmium	Fish, <i>C. Auratus</i>	-	8,5h	Toxic from 0,0165 mg/l
Cadmium	Bacteria, <i>E. coli</i>	-	-	Toxic from 0,15 mg/l
Cadmium	Arthropods, <i>Daphnia</i>	-	-	Toxic from 0,1 mg/l
Cadmium	Arthropods, <i>Daphnia magna</i>	-	-	Toxic from 0,0026 mg/l
Cadmium	Unicellular	-	-	Toxic from 0,2 mg/l
Cadmium	Algae, <i>Sc. Quadricauda</i>	-	-	Toxic from 0,1 mg/l

12.2. Persistence and degradability

Substance	Biodegradability	Test	Result
-	Cadmium does not biodegrade in nature		

12.3. Bioaccumulative potential

Substance	Potential bioaccumulation	LogPow	BFC
-	Cadmium is bioaccumulating in fish and mammals and has a long biological half-life in mammals.	No data available	28

12.4. Mobility in soil

Small solubility

12.5. Results of PBT and vPvB assessment

PBT and vPvB criteria do not apply to inorganic substances.

12.6. Other adverse effects

Most cadmium compounds are highly acutely toxic to aquatic organisms, especially in freshwater, and acutely toxic for mammals. Cadmium also give chronic toxic effects in many organisms, even in very small concentrations.

Under certain conditions, the environment is particularly vulnerable to cadmium. This applies, for example at low pH and low hardness in waterways, which may occur in the Nordic countries.

Most cadmium compounds are also carcinogenic.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The product is covered by the regulations on dangerous waste.

Waste should be recycled. If recycling is not possible, the waste is classified as hazardous waste.

Waste

EWC code

06 04 05*

Specific labelling

-

Contaminated packing

Packaging which contains leftovers from the product must be disposed of in the same way as the product.

SECTION 14: Transport information

Not listed as dangerous goods under ADR and IMDG regulations.

14.1 – 14.4

ADR/RID

14.1. UN number

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

Notes

Tunnel restriction code

IMDG

UN-no.

Proper Shipping Name

According to EC-Regulation 1907/2006 (REACH)

Class
PG*
EmS
MP**
Hazardous constituent

IATA/ICAO
UN-no.
Proper Shipping Name
Class
PG*

14.5. Environmental hazards

-

14.6. Special precautions for user

-

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

No data available

(*) Packing group

(**) Marine pollutant

SECTION 15: Regulatory information

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

Restrictions for application

-

Demands for specific education

-

Additional information

-

Sources

EC regulation 1907/2006 (REACH)

Directive 2000/532/EC

EC Regulation 1272/2008 (CLP)

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H331 - Toxic if inhaled.

H341 - Suspected of causing genetic defects.

H350 - May cause cancer.

H361 - Suspected of damaging fertility or the unborn child.

H372 - Causes damage to organs through prolonged or repeated exposure.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

The full text of identified uses as mentioned in section 1

-

Other symbols mentioned in section 2

-

Other

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

According to EC-Regulation 1907/2006 (REACH)

A change (in proportion to the last essential change (first cipher in SDS version)) is marked with a blue triangle.

Emergency telephone number

Belgium: 070 - 245 245

Austria: Poison Control Centre Emergency helpline +43 1 406 43 43, 112

Portugal: Em caso de intoxicacao, ligue 808 250 143

Czech Republic: Toxikologické informační středisko Telefon: +420 224 919 293, +420 224 915 402

Estonia: 112, 16662, ((+372) 626 93 90)

Lithuania: Visuomenės sveikatos centrams +370 5 236 20 52 arba +370 687 53378

Italy: Centro antiveneni di Roma - Policlinico Umberto I tel. 06-49978000

Spain: Servicio de Información Toxicológica Teléfono: + 34 91 562 04 20 (solo emergencias toxicológicas)
Información en español (24h/365 días)

Sweden: 112, 08-331231 (vardagar kl 9-17)

United Kingdom: 999 (or 111 for non-emergency medical advice). Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident and emergency department or the NHS enquiry service)

Denmark: Kontakt Gifflinien på tlf.nr.: 82 12 12 12 (åbent 24 timer i døgnet).

Germany: Giftnotruf Berlin, Emergency telephone: +49 30 19240 (Tag und Nacht)

Finland: 09-4711/Myrkytystietokeskus tai suora numero 09-471977 Myrkytystietokeskus/HUS, Tukholmankatu 17, 00029 HUS (Helsinki) 112

Norway: Giftinformasjonssentralen på tlf.nr.: 22 59 13 00, 113

France: ORFILA (INRS) : + 33 (0)1 45 42 59 59. 24 heures sur 24 et 7 jours sur 7

Hungary: Telefon: 06-80-20-11-99

Iceland: Neyðarlínan: Sími 112. Eitrunarmiðstöð Landsspítalans. Sími: 543 2222.

Netherlands: 30-2748888

Bulgaria: +359 2 9154 409

Greece: +30 10 779 3777

Ireland: +353 1 8379964

Latvia: +371 704 2468

Malta: 2425 0000

Poland: +48 58301 65 16 / +48 58 349 2831

Romania: +40 21 3183606

Slovakia: +421 2 54 77 4166

Slovenia: + 386 41 650500

**Date of last essential change
(First cipher in SDS version)**

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**Date of last minor change
(Last cipher in SDS version)**

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