An ISO 9001: 2015 & GMP Certified Company Office: No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

MATERIAL SAFETY DATA SHEET (MSDS)

SECTION 1: Product identifiers

Product Name: Cadmium, coarse powder, GR 99.9%

Product Code: C 1236 CAS No: 7440-43-9

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

Use: Industrial. For professional use only.

1.3. Details of the supplier of the safety data sheet

Company identification OTTO CHEMIE PVT LTD

No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

1.4. Emergency telephone number

Phone no.: + 91 98200 41841 (10:00 am - 06:00 pm)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, (Category 2)

Germ cell mutagenicity,

(Category 2).

Carcinogenicity, (Category 1B) Reproductive toxicity, (Category

Suspected of damaging the unborn child.

Specific target organ toxicity -

repeated exposure, (Category 1)

Short-term (acute) aquatic

hazard, (Category 1)

Long-term (chronic) aquatic

hazard, (Category 1)

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal Word

Hazard Statements

H330

H341

H350

H361fd

H372

H410

Precautionary Statements P202

P260

P264

P270 P273

P304 + P340 + P310

Supplemental Hazard

H330: Fatal if inhaled.

H341: Suspected of causing genetic

defects

H350: May cause cancer.

H361fd: Suspected of damaging fertility.

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.

Danger

Fatal if inhaled.

Suspected of causing genetic defects.

May cause cancer.

Suspected of damaging fertility. Suspected of damaging the

unborn child.

Causes damage to organs through prolonged or repeated

exposure.

Very toxic to aquatic life with long lasting effects.

Do not handle until all safety precautions have been read and

understood

Do not breathe dust.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

IF INHALED: Remove person to fresh air and keep comfortable

for breathing. Immediately call a POISON CENTER/ doctor.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001: 2015 & GMP Certified Company Office: No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

Suspected of causing genetic defects.

Wash skin thoroughly after handling.

Causes damage to organs through prolonged or repeated

Suspected of damaging fertility. Suspected of damaging the

Do not handle until all safety precautions have been read and

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

Do not eat, drink or smoke when using this product.

Statements

none

Restricted to professional users. Reduced Labeling (<= 125 ml)

Pictogram

Signal Word

Hazard Statements

H330 H341

H350

H372

H361fd

Precautionary Statements

P202

P260

P264

P270

P304 + P340 + P310

Supplemental Hazard

Statements

2.3 Other hazards

Danger

Fatal if inhaled.

unborn child.

understood.

May cause cancer.

Do not breathe dust.

This substance/mixture contains no components considered to be either persistent,

bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation

(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula

Molecular weight

CAS-No. EC-No.

: 112,41 g/mol

: 7440-43-9 : 231-152-8

Component		Classification	Concentration
Cadmium Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)			
CAS-No. EC-No.	7440-43-9 231-152-8	Acute Tox. 2; Muta. 2; Carc. 1B; Repr. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H330, H341, H350, H361fd, H372, H400, H410 M-Factor - Aquatic Acute:	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

DISCI AIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.



An ISO 9001 : 2015 & GMP Certified Company Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suita ble extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Cadmium/cadmium oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: + 91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Air sensitive.

Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic

hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses 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 Regulation (EU)

2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use

customers. It should not be construed as offering an approval for scenario.

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P3

The entrepeneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001: 2015 & GMP Certified Company Office: No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

The product is not flammable.

Control of environmental exposure Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties granular a) Physical state b) Color metallic c) Odor odorless

d) Melting Melting point/range: 320,9 °C - lit.

point/freezing point e) Initial boiling point 765 °C - lit.

and boiling range

f) Flammability (solid,

gas)

g) Úpper/lower No data available

flammability or explosive limits h) Flash point

Not applicable i) Autoignition No data available temperature j) Decomposition No data available

temperature k) pH

I) Viscosity Viscosity, kinematic: No data available Viscosity, dynamic: No data available

2,3 g/l at 20 °C - OECD Test Guideline 105- slightly soluble m) Water solubility

No data available

No data available

n) Partition coefficient: Not applicable for inorganic substances

n-octanol/water o) Vapor pressure 1,3 hPa at 394 °C 8,65 g/cm3 at 25 °C - lit. p) Density

8,6 at 22 °C - Regulation (EC) No. 440/2008, Annex, A.3 Relative density q) Relative vapor No data available

density r) Particle characteristics

s) Explosive properties No data available none

t) Oxidizing properties 9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

Strong oxidizing agents, acids

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Toxicity to Animals:

Oral LD50 Rat: 1500 mg/kg; Dermal LD50 Rabbit: 2000mg/kg

Inhalation LC50 Rat: > 50mg/L

Chronic Effects on Humans: CARCINOGENIC EFFECTS: Classified None. by NTP, None. by OSHA, None. by NIOSH.

Other Toxic Effects on Humans: Hazardous in case of skin contact (irritant), of inhalation (lung irritant).

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.

An ISO 9001 : 2015 & GMP Certified Company Office : No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available. Special Remarks on other Toxic Effects on Humans: Not available.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) -

1,5 mg/l - 96 h Remarks: (ECHA) Toxicity to daphnia and other aquatic invertebrates

static test LC50 - Daphnia magna (Water flea) - 0,11 mg/l - 48 h

(OECD Test Guideline 202)

Toxicity to bacteria static test NOEC - activated sludge - 0,0002 mg/l - 3 h

(OECD Test Guideline 209)

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 72 d

- 1,27 µg/l(Cadmium)

Bioconcentration factor (BCF): 55

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 3288 IMDG: 3288 IATA: 3288

14.2 UN proper shipping name

ADR/RID: TOXIC SOLID, INORGANIC, N.O.S. (Cadmium) (Cadmium) IMDG: TOXIC SOLID, INORGANIC, N.O.S. (Cadmium) (Cadmium) IATA: TOXIC SOLID, INORGANIC, N.O.S. (Cadmium) (Cadmium)

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: II IATA: II

14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes IATA: no

14.6 Special precautions for user Tunnel restriction code : (D/E) Further information : No data available

DISCLAIMER

Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.



An ISO 9001: 2015 & GMP Certified Company Office: No 603, 6th Floor, Tardeo AC Market, 87, Tardeo Road, Tardeo, Mumbai, Maharashtra 400034, India (BHARAT)

Tel: +91 98200 41841 Email: info@ottokemi.com Web: www.ottokemi.com

SECTION 15: Regulatory information

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Authorisations and/or restrictions on use REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Cadmium

REACH - Restrictions on the manufacture. placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

Cadmium

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. **H2 ACUTE TOXIC**

E1 ENVIRONMENTAL HAZARDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.



Otto Chemie Pvt Ltd - products are only for laboratory use only. Not for drug, medicinal, household or any other use. No liability accepted for mishandling in use - please test before use

Otto Chemie Pvt Ltd - shall not be responsible for any damage resulting from handling or from contact with the above product.