

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

Product Description:	<u>Cadmium powder</u>
Cat No. :	<b>11353</b>
Index No	048-002-00-0
CAS No	7440-43-9

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

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available

### 1.3. Details of the supplier of the safety data sheet

#### Company

Thermo Fisher (Kandel) GmbH  
Erlenbachweg 2, 76870 Kandel, Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300

**Swiss distributor - Fisher Scientific AG**  
Neuhofstrasse 11, CH 4153 Reinach  
Tel: +41 (0) 56 618 41 11  
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

#### E-mail address

begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:  
Tox Info Suisse Emergency Number: **145 (24hr)**  
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)  
Chemtrec (24h) Toll-Free: 0800 564 402  
Chemtrec Local: +41-43 508 20 11 (Zurich)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

## Physical hazards

Flammable solids

Category 2 (H228)

## Health hazards

Acute Inhalation Toxicity - Dusts and Mists

Category 2 (H330)

Germ Cell Mutagenicity

Category 2 (H341)

Carcinogenicity

Category 1B (H350)

Reproductive Toxicity

Category 2 (H361fd)

Specific target organ toxicity - (repeated exposure)

Category 1 (H372)

## Environmental hazards

Acute aquatic toxicity

Category 1 (H400)

Chronic aquatic toxicity

Category 1 (H410)

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

**Danger**

## Hazard Statements

H228 - Flammable solid

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

P201 - Obtain special instructions before use

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P310 - Immediately call a POISON CENTER or doctor/physician

P370 + P378 - In case of fire: Use fire-fighting equipment on basis class D for extinction

## Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment

Toxicity to Soil Dwelling Organisms

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Cadmium	7440-43-9	EEC No. 231-152-8	<=100	Flam. Sol. 2 (H228) Acute Tox. 2 (H330) Muta. 2 (H341) Carc. 1B (H350) Repr. 2 (H361fd) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Component	Specific concentration limits (SCL's)	M-Factor	Component notes
Cadmium	-	10	-

Full text of Hazard Statements: see section 16

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

None reasonably foreseeable.

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

Notes to Physician	Treat symptomatically.
--------------------	------------------------

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media

#### Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray, carbon

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

## Extinguishing media which must not be used for safety reasons

No information available.

## 5.2. Special hazards arising from the substance or mixture

Do not allow run-off from fire-fighting to enter drains or water courses.

## Hazardous Combustion Products

Cadmium oxide.

## 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

### 6.3. Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid dust formation. Use only under a chemical fume hood. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance.

## Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### 7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

**Technical Rules for Hazardous Substances (TRGS) 510**  
**Storage Class (LGK) (Germany)**

Storage Class/LGK 4.1B

**Switzerland - Storage of hazardous substances**

Storage class - SC 4.1  
<https://www.kvu.ch/de/themen/stoffe-und-produkte>  
<https://www.kvu.ch/fr/themes/substances-et-produits>

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

## 7.3. Specific end use(s)

Use in laboratories

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

#### Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund). **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

Component	European Union	The United Kingdom	France	Belgium	Spain
Cadmium	TWA: 0.001 mg/m <sup>3</sup> (8h)	STEL: 0.075 mg/m <sup>3</sup> 15 min TWA: 0.025 mg/m <sup>3</sup> 8 hr Carc. metal	TWA / VME: 0.004 mg/m <sup>3</sup> (8 heures). restrictive limit	TWA: 0.01 mg/m <sup>3</sup> 8 uren TWA: 0.004 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 0.01 mg/m <sup>3</sup> (8 horas) TWA / VLA-ED: 0.002 mg/m <sup>3</sup> (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Cadmium	TWA: 0.001 mg/m <sup>3</sup> 8 ore. Time Weighted Average TWA: 0.004 mg/m <sup>3</sup> 8 ore. Time Weighted Average until July 11, 2027	TWA: 0.002 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 8 TWA: 0.002 mg/m <sup>3</sup> (8 Stunden). AGW - Haut	TWA: 0.001 mg/m <sup>3</sup> 8 horas TWA: 0.004 mg/m <sup>3</sup> 8 horas	TWA: 0.004 mg/m <sup>3</sup> 8 uren	TWA: 0.004 mg/m <sup>3</sup> 8 tunteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Cadmium	TRK-KZGW: 0.016 mg/m <sup>3</sup> 15 Minuten TRK-KZGW: 0.004 mg/m <sup>3</sup> 15 Minuten TRK-TMW: 0.004 mg/m <sup>3</sup> TRK-TMW: 0.001 mg/m <sup>3</sup>	TWA: 0.001 mg/m <sup>3</sup> 8 timer STEL: 0.002 mg/m <sup>3</sup> 15 minutter	Haut/Peau TWA: 0.001 mg/m <sup>3</sup> 8 Stunden	TWA: 0.004 mg/m <sup>3</sup> 8 godzinach	TWA: 0.001 mg/m <sup>3</sup> 8 timer STEL: 0.003 mg/m <sup>3</sup> 15 minutter. value calculated inhalable fraction

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Cadmium	TWA: 0.004 mg/m <sup>3</sup>	TWA-GVI: 0.004 mg/m <sup>3</sup> 8 satima. applies during the transition period until July 11, 2027 inhalable fraction	TWA: 0.001 mg/m <sup>3</sup> 8 hr. inhalable fraction TWA: 0.004 mg/m <sup>3</sup> 8 hr. limit value 0.004 mg/m <sup>3</sup> until 11 July 2027 inhalable fraction STEL: 0.003 mg/m <sup>3</sup> 15 min STEL: 0.012 mg/m <sup>3</sup> 15 min	TWA: 0.001 mg/m <sup>3</sup>	TWA: 0.004 mg/m <sup>3</sup> 8 hodinách. 0.002 mg Cd/g Creatinine in urine inhalable fraction of aerosol Potential for cutaneous absorption Ceiling: 0.008 mg/m <sup>3</sup>

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Cadmium	TWA: 0.004 mg/m <sup>3</sup> 8 tundides. valid until July 10, 2027		TWA: 0.001 mg/m <sup>3</sup>	TWA: 0.004 mg/m <sup>3</sup> 8 órában. AK	TWA: 0.001 mg/m <sup>3</sup> 8 klukkustundum. inhalable fraction TWA: 0.004 mg/m <sup>3</sup> 8 klukkustundum. valid until July 11, 2027 inhalable fraction Ceiling: 0.002 mg/m <sup>3</sup> inhalable fraction Ceiling: 0.008 mg/m <sup>3</sup> valid until July 11, 2027 inhalable fraction

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Cadmium	TWA: 0.001 mg/m <sup>3</sup>	TWA: 0.004 mg/m <sup>3</sup> inhalable fraction IPRD			TWA: 0.05 mg/m <sup>3</sup> 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Cadmium	TWA: 0.01 mg/m <sup>3</sup> 1051 MAC: 0.05 mg/m <sup>3</sup>	TWA: 0.03 mg/m <sup>3</sup> 8 hodinách manufactured TWA: 0.15 mg/m <sup>3</sup> 8 hodinách others STEL: 0.15 mg/m <sup>3</sup> 15 minútach manufactured STEL: 0.75 mg/m <sup>3</sup> 15 minútach others	TWA: 0.004 mg/m <sup>3</sup> 8 urah applies until July 11, 2027 inhalable fraction	TLV: 0.001 mg/m <sup>3</sup> 8 timmar. NGV TLV: 0.004 mg/m <sup>3</sup> 8 timmar. NGV	

## Biological limit values

List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Cadmium			Cadmium: 0.005 mg/g creatinine urine not critical Cadmium: 0.004 mg/L blood not critical	Cadmium: 2 µg/g Creatinine urine not critical Cadmium: 5 µg/L blood not critical	

Component	Italy	Finland	Denmark	Bulgaria	Romania
Cadmium		Cadmium: 20 nmol/L urine at the end of a working week; time of day does not matter.			Cadmium: 2 µg/g Creatinine urine end of shift Cadmium: 5 µg/L blood end of shift Protein: 2 mg/L urine end of shift

Component	Gibraltar	Latvia	Slovak Republic	Luxembourg	Turkey
Cadmium		Cadmium: 2 µg/L urine	Cadmium: 3.1 µg/L urine not critical carcinogen, category 2		

## Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust

MDHS10/2 Cadmium and inorganic compounds of cadmium in air Laboratory method using flame atomic absorption spectrometry or electrothermal atomic absorption spectrometry

## Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Cadmium 7440-43-9 ( <=100 )			DNEL = 4µg/m <sup>3</sup>	

## Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Cadmium 7440-43-9 ( <=100 )	PNEC = 0.19µg/L	PNEC = 1.8mg/kg sediment dw		PNEC = 20µg/L	PNEC = 0.9mg/kg soil dw

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Cadmium 7440-43-9 ( ≤100 )	PNEC = 1.14µg/L	PNEC = 0.64mg/kg sediment dw		PNEC = 0.16mg/kg food	

## 8.2. Exposure controls

### Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Wear safety glasses with side shields (or goggles) (European standard - EN 166)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Nitrile rubber	480 minutes	0.11 mm	EN 374	(minimum requirement)

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

#### Large scale/emergency use

In case of insufficient ventilation, wear suitable respiratory equipment

**Recommended Filter type:** Particulates filter conforming to EN 143

#### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

When RPE is used a face piece Fit Test should be conducted

#### Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical State	Solid	
Appearance		
Odor	No information available	
Odor Threshold	No data available	
Melting Point/Range	321.1 °C / 610 °F	
Softening Point	No data available	
Boiling Point/Range	765 °C / 1409 °F	
Flammability (liquid)	Not applicable	Solid
Flammability (solid,gas)	No information available	
Explosion Limits	No data available	
Flash Point	No information available	<b>Method -</b> No information available
Autoignition Temperature	No data available	
Decomposition Temperature	No data available	
pH	No information available	
Viscosity	Not applicable	Solid

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Water Solubility	No information available	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Vapor Pressure	0.00013 hPa @ 180 °C	
Density / Specific Gravity	8.65 g/cm <sup>3</sup>	@ 20 °C
Bulk Density	2700 kg/m <sup>3</sup>	
Vapor Density	Not applicable	Solid
Particle characteristics	No data available	

## 9.2. Other information

Flammable solids	Burning rate or burning time = > 5 minutes and <= 10 minutes
Evaporation Rate	Not applicable - Solid

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None known, based on information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous Polymerization	No information available.
Hazardous Reactions	None under normal processing.

### 10.4. Conditions to avoid

Incompatible products. Excess heat.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

Cadmium oxide.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

#### (a) acute toxicity;

Oral	Based on available data, the classification criteria are not met
Dermal	No data available
Inhalation	Category 2

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cadmium	LD50 = 1140 mg/kg ( Rat )	-	LC50 = 25 mg/m <sup>3</sup> ( Rat ) 30 min

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;  
Respiratory No data available



# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Skin

No data available

(e) germ cell mutagenicity;

Category 2

(f) carcinogenicity;

Category 1B

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Cadmium	Carc Cat. 1B		Cat. 1	Group 1

(g) reproductive toxicity;

Category 2

(h) STOT-single exposure;

No data available

(i) STOT-repeated exposure;

Category 1

Target Organs

Lungs, Kidney.

(j) aspiration hazard;

Not applicable

Solid

Symptoms / effects,both acute and delayed

No information available.

## 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

#### Ecotoxicity effects

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Cadmium	LC50: 0.0004 - 0.003 mg/L, 96h (Pimephales promelas) LC50: = 0.016 mg/L, 96h (Oryzias latipes) LC50: = 21.1 mg/L, 96h flow-through (Lepomis macrochirus) LC50: = 0.24 mg/L, 96h static (Cyprinus carpio) LC50: = 4.26 mg/L, 96h semi-static (Cyprinus carpio) LC50: = 0.002 mg/L, 96h (Cyprinus carpio) LC50: = 0.006 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 0.003 mg/L, 96h flow-through (Oncorhynchus mykiss)	EC50: = 0.0244 mg/L, 48h Static (Daphnia magna)	

Component	Microtox	M-Factor
-----------	----------	----------

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Cadmium		10
---------	--	----

<b>12.2. Persistence and degradability</b>	Product contains heavy metals. Discharge into the environment must be avoided. Special pre-treatment is necessary
<b>Persistence</b>	May persist.
<b>Degradation in sewage treatment plant</b>	Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.
<b>12.3. Bioaccumulative potential</b>	Product has a high potential to bioconcentrate
<b>12.4. Mobility in soil</b>	No information available
<b>12.5. Results of PBT and vPvB assessment</b>	In accordance with Annex XIII of the REACH Regulation, inorganic substances do not require assessment.
<b>12.6. Endocrine disrupting properties</b>	
<b>Endocrine Disruptor Information</b>	This product does not contain any known or suspected endocrine disruptors
<b>12.7. Other adverse effects</b>	
<b>Persistent Organic Pollutant</b>	This product does not contain any known or suspected substance
<b>Ozone Depletion Potential</b>	This product does not contain any known or suspected substance

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

<b>Waste from Residues/Unused Products</b>	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
<b>Contaminated Packaging</b>	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
<b>European Waste Catalogue (EWC)</b>	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.
<b>Other Information</b>	Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be landfilled or incinerated, when in compliance with local regulations. Do not let this chemical enter the environment. Do not empty into drains.
<b>Switzerland - Waste Ordinance</b>	Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600 <a href="https://www.fedlex.admin.ch/eli/cc/2015/891/en">https://www.fedlex.admin.ch/eli/cc/2015/891/en</a>

## SECTION 14: TRANSPORT INFORMATION

### IMDG/IMO

<b>14.1. UN number</b>	UN3179
<b>14.2. UN proper shipping name</b>	Flammable solid, toxic, inorganic, n.o.s.
<b>Technical Shipping Name</b>	(Cadmium powder)
<b>14.3. Transport hazard class(es)</b>	4.1
<b>Subsidiary Hazard Class</b>	6.1
<b>14.4. Packing group</b>	II

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

## ADR

<b>14.1. UN number</b>	UN3179
<b>14.2. UN proper shipping name</b> Technical Shipping Name	Flammable solid, toxic, inorganic, n.o.s. (Cadmium powder)
<b>14.3. Transport hazard class(es)</b> Subsidiary Hazard Class	4.1 6.1
<b>14.4. Packing group</b>	II

## IATA

<b>14.1. UN number</b>	UN3179
<b>14.2. UN proper shipping name</b> Technical Shipping Name	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.* (Cadmium powder)
<b>14.3. Transport hazard class(es)</b> Subsidiary Hazard Class	4.1 6.1
<b>14.4. Packing group</b>	II

<b>14.5. Environmental hazards</b>	Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO
------------------------------------	--

<b>14.6. Special precautions for user</b>	No special precautions required.
---	----------------------------------

<b>14.7. Maritime transport in bulk according to IMO instruments</b>	Not applicable, packaged goods
--	--------------------------------

## SECTION 15: REGULATORY INFORMATION

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Cadmium	7440-43-9	231-152-8	-	-	X	X	KE-04397	X	-

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Cadmium	7440-43-9	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Cadmium	7440-43-9	-	Use restricted. See item 72. (see link for restriction details) Use restricted. See item 23. (see link for restriction details) Use restricted. See item 28.	SVHC Candidate list - 231-152-8 - Carcinogenic, Article 57a; Specific target organ toxicity after repeated exposure, Article 57(f) - human health

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

			(see link for restriction details) Use restricted. See item 75. (see link for restriction details)	
--	--	--	--	--

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## REACH links

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

## Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Cadmium	7440-43-9	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Component	ANNEX I - PART 1 List of chemicals subject to export notification procedure (referred to in Article 8)	ANNEX I - PART 2 List of chemicals qualifying for PIC notification (referred to in Article 11)	ANNEX I - PART 3 List of chemicals subject to the PIC procedure (referred to in Articles 13 and 14)
Cadmium 7440-43-9 ( ≤100 )	i(1) — industrial chemical for professional use sr — severe restriction  i(2) — industrial chemical for public sr — severe restriction	i — industrial chemical sr — severe restriction	-

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0649&qid=1604065742303>.

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

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

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Cadmium	WGK3	Krebserzeugende Stoffe - Class I : 0.05 mg/m <sup>3</sup> (Massenkonzentration)

Component	France - INRS (Tables of occupational diseases)
Cadmium	Tableaux des maladies professionnelles (TMP) - RG 61,RG 61bis

## Swiss Regulations

# SAFETY DATA SHEET

Cadmium powder

Revision Date 24-Feb-2024

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Cadmium 7440-43-9 ( <=100 )	Prohibited and Restricted Substances		Annex I - industrial chemical

## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## SECTION 16: OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3

H228 - Flammable solid

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

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (volatile organic compound)

### Training Advice

Chemical incident response training.

Prepared By

Revision Date

Revision Summary

Health, Safety and Environmental Department

24-Feb-2024

New emergency telephone response service provider.

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

# **SAFETY DATA SHEET**

Cadmium powder

Revision Date 24-Feb-2024

---

## **COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006**

**For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, Chemo (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).**

### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**