

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 2 of 11

Pictograms:



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

- P201 Obtain special instructions before use.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P405 Store locked up.

Special labelling of certain mixtures

Restricted to professional users.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: Cd
Molecular weight: 112,41 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No Index No REACH No	
	Classification (Regulation (EC) No 1272/2008)	
7440-43-9	cadmium	100 %
	231-152-8 048-002-00-0	
	Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 2, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H350 H341 H361fd H330 H372 H400 H410	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7440-43-9	231-152-8	cadmium	100 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists)	

Further Information

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

SECTION 4: First aid measures

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 3 of 11

4.1. Description of first aid measures

General information

Self-protection of the first aider

After inhalation

Provide fresh air.

If breathing is irregular or stopped, administer artificial respiration.

Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

Dyspnoea

Cough

Vomiting

Gastrointestinal complaints

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use extinguishing powder or sand to extinguish.

Cement

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire may be liberated:

Metal oxide smoke, toxic

5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 4 of 11

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- Provide adequate ventilation.
- Use personal protection equipment.
- Avoid contact with skin, eyes and clothes.
- Remove persons to safety.
- Emergency procedures
- Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

- Cover drains.
- Prevent spread over a wide area (e.g. by containment or oil barriers).
- Collect in closed and suitable containers for disposal.
- Take up carefully when dry. Take up dust-free and set down dust-free.

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

- Read label before use. Handle and open container with care.
- Avoid dust formation. Do not breathe dust.
- When using do not eat, drink, smoke, sniff. Keep container tightly closed.
- Use personal protection equipment. Use extractor hood (laboratory).
- Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

- Keep away from food, drink and animal feedingstuffs. Make available sufficient washing facilities
- Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

Further information on handling

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.
- If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 5 of 11

Requirements for storage rooms and vessels

Store in a well-ventilated place. Keep container tightly closed.
Store in a place accessible by authorized persons only.

Further information on storage conditions

Store in a dry place.
Keep cool. Protect from sunlight.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
7440-43-9	Cadmium (Inhalable Fraction)	-	0.004		TWA (8 h)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
7440-43-9	Cadmium	Cd	2 µg/g	Creatinine	Not critical

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.
If handled uncovered, arrangements with local exhaust ventilation have to be used.
Avoid dust formation. Do not breathe dust.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles
Wear eye/face protection.

Hand protection

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact
Trade name/designation: KCL 741 Dermatril® L
Suitable material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 6 of 11

Skin protection

Wear suitable protective clothing. Chemical protection clothing
Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Filtering device with filter or ventilator filtering device of type: P3

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	metallic	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		321 °C
Boiling point or initial boiling point and boiling range:		767 °C
Flammability		
Solid/liquid:	No data available	
Gas:	No data available	
Lower explosion limits:	No data available	
Upper explosion limits:	No data available	
Flash point:	No data available	
Auto-ignition temperature:	No data available	
Decomposition temperature:	No data available	
pH-Value:	No data available	
Viscosity / kinematic:	No data available	
Water solubility: (at 20 °C)		0,0082 g/L
Solubility in other solvents		
No data available		
Partition coefficient n-octanol/water:	No data available	
Vapour pressure: (at 394 °C)		1,3 hPa
Vapour pressure:	No data available	
Density (at 22 °C):		8,6 g/cm ³
Bulk density:	No data available	
Relative vapour density:	No data available	

9.2. Other information

Information with regard to physical hazard classes

Explosive properties	
No data available	
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

Other safety characteristics

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 7 of 11

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	0
Solid content:	0
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	
Viscosity / dynamic:	No data available
Flow time:	No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Air
Ammonia
Ammonium nitrate
Acid
Chlorates
Zinc
Alkali metals
Oxidising agent, strong

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Fatal if inhaled.
Avoid exposure - obtain special instructions before use.
Pulmonary oedema

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 8 of 11

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-43-9	cadmium				
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (cadmium)

May cause cancer. (cadmium)

Suspected of damaging fertility. Suspected of damaging the unborn child. (cadmium)

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (cadmium)

lung

kidneys

Knochen

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Other information

No data available

Further information

Irritant

Dyspnoea

Cough

Vomiting

Gastrointestinal complaints

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 9 of 11

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Discharge into the environment must be avoided.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Dispose of waste according to applicable legislation.

Do not allow to enter into surface water or drains.

Send to a hazardous waste incinerator facility under observation of official regulations. Special monitoring requiring wastes.

Contaminated packaging

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S. (cadmium)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S. (cadmium)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1
Classification code:	T5
Special Provisions:	274 802
Limited quantity:	5 kg
Excepted quantity:	E1

Marine transport (IMDG)

14.1. UN number or ID number:	UN 3288
14.2. UN proper shipping name:	TOXIC SOLID, INORGANIC, N.O.S. (cadmium)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 10 of 11

Hazard label: 6.1
Special Provisions: 223, 274
Limited quantity: 5 kg
Excepted quantity: E1
EmS: F-A, S-A

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 3288
14.2. UN proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (cadmium)
14.3. Transport hazard class(es): 6.1
14.4. Packing group: III
Hazard label: 6.1
Special Provisions: A3 A5
Limited quantity Passenger: 10 kg
Passenger LQ: Y645
Excepted quantity: E1
IATA-packing instructions - Passenger: 670
IATA-max. quantity - Passenger: 100 kg
IATA-packing instructions - Cargo: 677
IATA-max. quantity - Cargo: 200 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
Danger releasing substance: Cadmium nitrate-4-hydrate

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

Restrictions on use (REACH, annex XVII):

Entry 23, Entry 75

Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC

Additional information: E1

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.

Water hazard class (D): 3 - highly hazardous to water

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,4,5,8,9,10,11,12,15.

Relevant H and EUH statements (number and full text)

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Cadmium reduction column (INDIVIDUALLY FILLED UNDER INERT GAS)

Revision date: 21.11.2022

Product code: 17733

Page 11 of 11

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.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.