

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Audenta Cobalt SLM powder 15-45 µm

Revision date: 16.01.2024

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Audental Cobalt Slm powder 15-45 µm

Further trade names

UFI: FEMR-6003-U004-7XCE

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

Health services.

1.3. Details of the supplier of the safety data sheet

Company name:	Audental Bio-Material Co., Ltd	
Street:	2-2 88, Jingche Road,	
Place:	Songjiang District, 201661 Shanghai, P.R. China	
Telephone:	+86 21 37727922	Telefax:+86 21 37727922
e-mail:	wangxi@audental-asia.com	
Contact person:	Wangxi	
Internet:	audental-asia.com	

1.4. Emergency telephone number:+86 21 37727922
7:00-16:15**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

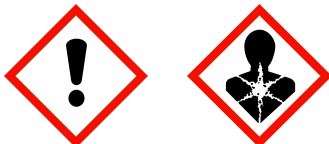
Acute Tox. 4; H302
Eye Irrit. 2; H319
Resp. Sens. 1; H334
Skin Sens. 1; H317
Muta. 2; H341
Carc. 1B; H350i
Repr. 2; H361f
Aquatic Chronic 4; H413

Full text of hazard statements: see SECTION 16.

Do not breathe dust.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

Cobalt

Signal word: Danger**Pictograms:****Hazard statements**

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H361f	Suspected of damaging fertility.
H413	May cause long lasting harmful effects to aquatic life.

Precautionary statements

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Hazardous components**

CAS No	Chemical name	Quantity
	EC No Index No REACH No	
	Classification (Regulation (EC) No 1272/2008)	
7440-48-4	Cobalt 231-158-0	61.5 %
	Carc. 1B, Muta. 2, Repr. 2, Acute Tox. 4, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, Aquatic Chronic 4; H350i H341 H361f H302 H319 H334 H317 H413	
7440-47-3	Chromium	28.1 %
7439-98-7	Molybdenum	5.3%
7440-33-7	Tungsten	5.0%
7440-21-3	Silicon	0.03%
7439-96-5	Manganese	0.04%
7439-89-6	Iron	0.03%

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	
7440-48-4	231-158-0	Cobalt	61.5 %
		oral: LD50 = 6171 mg/kg	

SECTION 4: First aid measures**4.1. Description of first aid measures****After inhalation**

Provide fresh air. In case of respiratory tract irritation, consult a physician.

After contact with skin

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

After contact with eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion

Rinse mouth immediately and drink 1 glass of water. Call a doctor.

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

No data available

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

Fire class D

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

Unsuitable extinguishing media

Water. Carbon dioxide (CO₂)

5.2. Special hazards arising from the substance or mixture

Contains: Sensitizer. May cause sensitization by inhalation and skin contact.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Avoid breathing dust/mist. Avoid contact with skin, eyes and clothes. Avoid dust formation.

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 cleaning up

Avoid dust formation. Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid dust formation. Avoid breathing dust/mist. Avoid contact with skin, eyes and clothes. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Advice on protection against fire and explosion

Dust can form an explosive mixture with air.

Advice on general occupational hygiene

Do not breathe dust.

Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.

Hints on joint storage

TRGS 510

Further information on storage conditions

Keep container tightly closed. Store in a cool dry place.

7.3. Specific end use(s)

No data available

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SECTION 8: Exposure controls/personal protection**8.1. Control parameters****8.2. Exposure controls****Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe dust.

Individual protection measures, such as personal protective equipment**Hand protection**

Recommendation: z. B. Dermatril 740 (Fa. KCL)

Suitable material: Nitriles

Thickness of glove material: 0,11 mm

penetration time (maximum wearing period): > 480 min

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Skin protection

Personal protection equipment

Respiratory protection

Particle filter device (EN 143): FFP3

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Powder
Colour:	grey
Odour:	odourless
Melting point/freezing point:	1200-1450 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	negative
Lower explosion limits:	No data available
Upper explosion limits:	No data available
Flash point:	not applicable
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
pH-Value:	No data available
Viscosity / kinematic:	not applicable
Water solubility:	No data available
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	not applicable
Vapour pressure:	not applicable
Vapour pressure:	not applicable
Density:	8,6 g/cm ³
Bulk density:	3800-4200 kg/m ³
Relative vapour density:	not applicable

9.2. Other information

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Explosive properties

The product is not: Explosive

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Other safety characteristics

Viscosity / dynamic:

not applicable

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No risks worthy of mention.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

The product is stable under storage at normal ambient temperatures. Avoid dust formation.

10.5. Incompatible materials

Acids, Base

10.6. Hazardous decomposition products

Release of: metalloids and metals and their compounds (cobalt, chromium)

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Harmful if swallowed.

ATEmix calculated

ATE (oral) 826,4 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7440-48-4	Cobalt				
	oral	LD50 mg/kg	6171	Rat	

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Cobalt)

May cause an allergic skin reaction. (Cobalt)

May cause sensitization by inhalation and skin contact.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of causing genetic defects. (Cobalt)

May cause cancer by inhalation. (Cobalt)

Suspected of damaging fertility. (Cobalt)

STOT-single exposure

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

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STOT-repeated exposure

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

Aspiration hazard

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

Practical experience

Irritating to eyes. Irritating to skin.

11.2. Information on other hazards**Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No data available

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

No data available

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation. For recycling, contact recycling exchanges.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)**14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

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Marine transport (IMDG)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Danger releasing substance:	No dangerous good in sense of this transport regulation.

14.6. Special precautions for user

Personal protection equipment: see section 8

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 75

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

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

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 1,2,5,9,11.

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Eye Irrit. 2; H319	Calculation method
Resp. Sens. 1; H334	Calculation method
Skin Sens. 1; H317	Calculation method
Muta. 2; H341	Calculation method
Carc. 1B; H350i	Calculation method
Repr. 2; H361f	Calculation method
Aquatic Chronic 4; H413	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
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H350i	May cause cancer by inhalation.
H361f	Suspected of damaging fertility.
H413	May cause long lasting harmful effects to aquatic life.

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 data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)