

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**Trade name **Cadmium acetate dihydrate**

Stock number: 41581
 CAS Number: 5743-04-4
 EC number: 208-853-2
 Index number: 048-001-00-5


1.2 Relevant identified uses of the substance or mixture and uses advised against.
 Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com
 Product safety Tel + +049 (0) 7275 988687-0
Informing department: Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
1.4 Emergency telephone number: Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008


 GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
 Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.


 GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Acute Tox. 4 H312 Harmful in contact with skin.
 Acute Tox. 4 H332 Harmful if inhaled.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

 N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Information concerning particular hazards for human and environment:

Other hazards that do not result in classification

Not applicable

No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The substance is classified and labelled according to the CLP regulation.

GHS07 GHS09

Signal word**Hazard statements**

Warning

H302 Harmful if swallowed.
 H312 Harmful in contact with skin.
 H332 Harmful if inhaled.

Precautionary statements

H410 Very toxic to aquatic life with long lasting effects.
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P273 Avoid release to the environment.
 P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P363 Wash contaminated clothing before reuse.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.
 vPvB: Not applicable.

SECTION 3: Composition/information on ingredients**3.1 Substances**

CAS# Designation: 5743-04-4 Cadmium acetate dihydrate
 Identification number(s):
 EC number: 208-853-2
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SECTION 4: First aid measures**4.1 Description of first aid measures****After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
 Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.
 Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

Trade name **Cadmium acetate dihydrate**

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SECTION 5: Firefighting measures

- 5.1 Extinguishing media**
Suitable extinguishing agents
5.2 Special hazards arising from the substance or mixture
- CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Cadmium oxide
- 5.3 Advice for firefighters**
Protective equipment:
- Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures**
- Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
- 6.2 Environmental precautions:**
- Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.
- 6.3 Methods and material for containment and cleaning up:**
- Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.
- Prevention of secondary hazards:**
6.4 Reference to other sections
- No special measures required.
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling**
- Handle under dry protective gas.
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires:**
- No information known.
- 7.2 Conditions for safe storage, including any incompatibilities**
Storage
Requirements to be met by storerooms and containers:
Information about storage in one common storage facility:
- No special requirements.
Store away from water.
Store away from oxidising agents.
- Further information about storage conditions:**
- Store under dry inert gas.
This product is hygroscopic.
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Protect from humidity and keep away from water.
No further relevant information available.
- 7.3 Specific end use(s)**

SECTION 8: Exposure controls/personal protection

- Additional information about design of technical systems:**
- Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters**Components with critical values that require monitoring at the workplace:**

5743-04-4 Cadmium acetate dihydrate (100,0%)	
TRK (TRGS 900) (Germany)	Long-term value: 0,015 G mg/m ³
PEL (USA)	Long-term value: 0,005 mg/m ³ as Cd; see 29 CFR 1910,1027
REL (USA)	See Pocket Guide App. A
TLV (USA)	Long-term value: 0,01 0,002* mg/m ³ as Cd; *respirable fraction; BEI

Additional information: No data**8.2 Exposure controls**

- Personal protective equipment**
General protective and hygienic measures
- The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.
Use breathing protection with high concentrations.
- Breathing equipment:**
Protection of hands:
- Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- Material of gloves**
Penetration time of glove material
Eye protection:
Body protection:
- Impervious gloves
Not determined
Safety glasses
Protective work clothing.

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

- General Information**
Appearance:
- Form:** Powder
Colour: White
Smell: Not determined
Odour threshold: Not determined.
- pH-value:** Not applicable.
- Change in condition**
Melting point/Melting range: Not determined
Boiling point/Boiling range: Not determined

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Sublimation temperature / start:	Not determined
Inflammability (solid, gaseous)	Not determined.
Ignition temperature:	Not determined
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.

Danger of explosion:	Not determined.
Critical values for explosion:	
Lower:	Not determined
Upper:	Not determined
Steam pressure:	Not applicable.
Density at 20 °C	2,01 g/cm ³
Relative density	Not determined.
Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Soluble
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity	No information known.
10.2 Chemical stability	Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided:	No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions	Reacts with strong oxidizing agents
10.5 Incompatible materials:	Water/moisture Oxidising agents
10.6 Hazardous decomposition products:	Carbon monoxide and carbon dioxide Cadmium oxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects	
Acute toxicity:	Harmful if inhaled. Harmful in contact with skin. Harmful if swallowed. Danger by skin resorption. The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:

Oral LD50 360 mg/kg (rat)

Skin irritation or corrosion:	May cause irritation
Eye irritation or corrosion:	May cause irritation
Sensitization:	No sensitizing effect known.
Germ cell mutagenicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.
Carcinogenicity:	IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity. EPA-B1: Probable human carcinogen, limited evidence of carcinogenicity from epidemiologic studies. Carcinogen as defined by OSHA. ACGIH A2: Suspected human carcinogen: Agent is carcinogenic in experimental animals at dose levels, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) considered relevant to worker exposure. Available epidemiologic studies are conflicting or insufficient to confirm an increased risk of cancer in exposed humans. NTP-K: Known to be carcinogenic: sufficient evidence from human studies. The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Reproductive toxicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.
Specific target organ system toxicity - repeated exposure:	No effects known.
Specific target organ system toxicity - single exposure:	No effects known.
Aspiration hazard:	No effects known.
Subacute to chronic toxicity:	The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for this substance.
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity	
Aquatic toxicity:	No further relevant information available.
12.2 Persistence and degradability	No further relevant information available.
12.3 Bioaccumulative potential	No further relevant information available.
12.4 Mobility in soil	No further relevant information available.
Ecotoxicological effects:	
Remark:	Very toxic for fish
Additional ecological information:	
General notes:	Water danger class 3 (Self-assessment): extremely hazardous for water. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into soil. Also poisonous for fish and plankton in water bodies. May cause long lasting harmful effects to aquatic life. Avoid transfer into the environment. Very toxic for aquatic organisms
12.5 Results of PBT and vPvB assessment	
PBT:	Not applicable.
vPvB:	Not applicable.
12.6 Other adverse effects	No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods	
Recommendation	Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations. Consult state, local or national regulations for proper disposal.
Uncleaned packagings:	
Recommendation:	Disposal must be made according to official regulations.

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Safety data sheet
according to 1907/2006/EC, Article 31

Revision: 14.03.2014



Printing date 17.03.2014

Trade name **Cadmium acetate dihydrate**

Recommended cleaning agent: Water, if necessary with cleaning agent.

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SECTION 14: Transport information

UN-Number ADR, IMDG, IATA	UN2570
14.2 UN proper shipping name ADR IMDG, IATA	2570 CADMIUM COMPOUND (Cadmium acetate dihydrate) CADMIUM COMPOUND (Cadmium acetate dihydrate)
14.3 Transport hazard class(es) ADR	
	
Class Label IMDG, IATA	6.1 (T5) Toxic substances. 6.1
	
Class Label	6.1 Toxic substances. 6.1
Packing group ADR, IMDG, IATA	III
14.5 Environmental hazards:	Environmentally hazardous substance, solid
14.6 Special precautions for user Kemler Number: EMS Number:	Warning: Toxic substances. 60 F-A,S-A
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
ADR Excepted quantities (EQ): Limited quantities (LQ) Transport category Tunnel restriction code	E1 5 kg 2 E
UN "Model Regulation":	UN2570, CADMIUM COMPOUND (Cadmium acetate dihydrate), 6.1, III

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

Australian Inventory of Chemical Substances	Substance is listed.
Standard for the Uniform Scheduling of Medicines and Poisons	Substance is not listed.
National regulations	
Information about limitation of use:	Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.
Water hazard class:	Water danger class 3 (Self-assessment): extremely hazardous for water.
Other regulations, limitations and prohibitive regulations	
ELINCS (European List of Notified Chemical Substances)	Substance is not listed.
Substances of very high concern (SVHC) according to REACH, Article 57	Substance is not listed.
REACH - Pre-registered substances	Substance is listed.
15.2 Chemical safety assessment:	A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS:	Health, Safety and Environmental Department.
Abbreviations and acronyms:	ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent vPvB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA) Acute Tox. 4: Acute toxicity, Hazard Category 4 Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1

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