

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Creation Date 20-Jun-2005

Revision Date 25-Jan-2024

**Revision Number** 4

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

#### 1.1. Product identifier

Product Description: Cat No. : Synonyms Index No CAS No Molecular Formula REACH registration number	Cadmium acetate dihydrate 41581 Acetic acid cadmium salt dihydrate; Cadmium diacetate dihydrate. 048-001-00-5 5743-04-4 C4 H6 Cd O4 . 2 H2 O -
1.2. Relevant identified uses of the	substance or mixture and uses advised against
Recommended Use Uses advised against	Laboratory chemicals. No Information available
1.3. Details of the supplier of the sa	fety data sheet
Company	Avocado Research Chemicals Ltd. (Part of Thermo Fisher Scientific) Shore Road, Heysham Lancashire, LA3 2XY, United Kingdom Office Tel: +44 (0) 1524 850506 Office Fax: +44 (0) 1524 850608
E-mail address	begel.sdsdesk@thermofisher.com
1.4. Emergency telephone number	For information <b>US</b> call: 001-800-227-6701 / <b>Europe</b> call: +32 14 57 52 11 Emergency Number <b>US</b> :001-201-796-7100 / <b>Europe:</b> +32 14 57 52 99 <b>CHEMTREC</b> Tel. No. <b>US</b> :001-800-424-9300 / <b>Europe:</b> 001-703-527-3887

### **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### Physical hazards

Based on available data, the classification criteria are not met

#### Health hazards

#### Cadmium acetate dihydrate

Acute oral toxicity Acute dermal toxicity Acute Inhalation Toxicity - Dusts and Mists Carcinogenicity

#### **Environmental hazards**

Acute aquatic toxicity Chronic aquatic toxicity Category 4 (H302) Category 4 (H312) Category 4 (H332) Category 1A (H350)

Category 1 (H400) Category 1 (H410)

#### Full text of Hazard Statements: see section 16



Signal Word

Danger

#### **Hazard Statements**

H350 - May cause cancer H410 - Very toxic to aquatic life with long lasting effects H302 + H312 + H332 - Harmful if swallowed, in contact with skin or if inhaled

#### **Precautionary Statements**

P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P312 - Call a POISON CENTER or doctor if you feel unwell
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

#### Additional EU labelling

Restricted to professional users

#### 2.3. Other hazards

Toxic to terrestrial vertebrates This product does not contain any known or suspected endocrine disruptors

#### **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Cadmium acetate dihydrate	5743-04-4		<=100	Carc. 1A (H350) Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Cadmium acetate	543-90-8	EEC No. 208-853-2	-	Carc. 1A (H350) Acute Tox. 4 (H302)

#### Cadmium acetate dihydrate

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	Acute Tox. 4 (H312)
	Acute Tox. 4 (H332)
	Aquatic Acute 1 (H400)
	Aquatic Chronic 1 (H410)

#### Note

Note 1: The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture

DEACH registration number	
REACH registration number	-

Full text of Hazard Statements: see section 16

#### **SECTION 4: FIRST AID MEASURES**

#### 4.1. Description of first aid measures

General Advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.	
Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.	
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.	
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately.	
Inhalation	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.	
Self-Protection of the First Aider	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

Water spray, carbon dioxide (CO2), 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.

#### Cadmium acetate dihydrate

#### Hazardous Combustion Products Toxic fumes.

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

#### 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.

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

Keep containers tightly closed in a dry, cool and well-ventilated place.

Technical Rules for Hazardous Substances (TRGS) 510Class 6.1DStorage Class (LGK) (Germany)

#### 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, Fourth edition. Published 2020.

#### Cadmium acetate dihydrate

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Component	The United Kingdom	European Union	Ireland
Cadmium acetate dihydrate	STEL: 0.075 mg/m <sup>3</sup> 15 min		
	TWA: 0.025 mg/m <sup>3</sup> 8 hr		
Cadmium acetate	STEL: 0.075 mg/m <sup>3</sup> 15 min		
	TWA: 0.025 mg/m <sup>3</sup> 8 hr		

#### **Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

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

No information available

#### Predicted No Effect Concentration (PNEC)

No information available.

#### 8.2. Exposure controls

#### **Engineering Measures**

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. 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 ProtectionGoggles (European standard - EN 166)

Hand Protection

Protective gloves

	Breakthrough time See manufacturers recommendations	Glove thickness -	EU standard EN 374	Glove comments (minimum requirement)
Skin and body protec	tion Long sle	eved clothing.		

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure 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.

Remove 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	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced <b>Recommended Filter type:</b> 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. <b>Recommended half mask:-</b> Particle filtering: EN149:2001 When RPE is used a face piece Fit Test should be conducted

**Molecular Weight** 

**Evaporation Rate** 

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 Odor Threshold Melting Point/Range Softening Point Boiling Point/Range Flammability (liquid) Flammability (solid,gas) Explosion Limits	White vinegar-like No data available No data available No data available No information available No information available No data available	Solid
Flash Point Autoignition Temperature Decomposition Temperature pH	No information available No data available No data available Not applicable	Method - No information available
Viscosity Water Solubility Solubility in other solvents	Not applicable Soluble No information available	Solid
Partition Coefficient (n-octanol/wat	,	
Component Cadmium acetate Vapor Pressure Density / Specific Gravity Bulk Density	log Pow 4.0 No data available No data available No data available	
Vapor Density Particle characteristics	Not applicable No data available	Solid
9.2. Other information		
Molecular Formula	C4 H6 Cd O4 . 2 H2 O	

### **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 react	ions
Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. None under normal processing.
10.4. Conditions to avoid	Incompatible products. Excess heat.
10.5. Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.

266.52

Not applicable - Solid

#### 10.6. Hazardous decomposition products

Toxic fumes.

#### **SECTION 11: TOXICOLOGICAL INFORMATION**

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

#### Product Information

(a) acute toxicity;	
Oral	Category 4
Dermal	Category 4
Inhalation	Category 4

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cadmium acetate dihydrate	360 mg/kg(Rat)	-	-
Cadmium acetate	LD50 = 333 mg/kg (Rat)	-	-

(b) skin corrosion/irritation;	No data available
(c) serious eye damage/irritation;	No data available
(d) respiratory or skin sensitization Respiratory Skin	, No data available No data available
(e) germ cell mutagenicity;	No data available
(f) carcinogenicity;	Category 1A
	The table below indicates whether each agency has listed any ingredient as a carcinogen May cause cancer

Component	EU	UK	Germany	IARC
Cadmium acetate				Group 1

- (g) reproductive toxicity; No data available
- (h) STOT-single exposure; No data available
- (i) STOT-repeated exposure; No data available
- Target Organs None known.
- (j) aspiration hazard; Not applicable
- Solid
- Other Adverse Effects The toxicological properties have not been fully investigated.

Symptoms / effects,both acute and No information available. delayed

<sup>11.2.</sup> 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

Persistence

Degradability

treatment plant

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.

Component	Microtox	M-Factor
Cadmium acetate dihydrate	EC50 = 14.9 mg/L 30 min	
	EC50 = 154 mg/L 5 min	
	EC50 = 27.2 mg/L 20 min	
	EC50 = 41.4 mg/L 15 min	
	EC50 = 70.8 mg/L 10 min	

#### 12.2. Persistence and degradability

Degradation in sewage

Soluble in water, Persistence is unlikely, based on information available.
 Not relevant for inorganic substances.
 Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

#### 12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Cadmium acetate	4.0	No data available

<u>12.4. Mobility in soil</u>	The product is water soluble, and may spread in water systems Will likely be mobile in the environment due to its water solubility. Highly mobile in soils
12.5. Results of PBT and vPvB assessment	No data available for assessment.
12.6. Endocrine disrupting properties Endocrine Disruptor Information	This product does not contain any known or suspected endocrine disruptors
12.7. Other adverse effects	

## Persistent Organic PollutantThis product does not contain any known or suspected substanceOzone Depletion PotentialThis product does not contain any known or suspected substance

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

#### 13.1. Waste treatment methods

Waste from Residues/Unused Products	Should not be released into the environment. 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.				
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point.				
European Waste Catalogue (EWC)	According to the European Waste Catalog, Waste Codes are not product specific, but application specific.				

Cadmium acetate dihydrate

Other Information

Do not flush to sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not let this chemical enter the environment.

### **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u>	UN2570 CADMIUM COMPOUND Cadmium acetate 6.1 III
ADR	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> 14.4. Packing group	UN2570 CADMIUM COMPOUND Cadmium acetate 6.1 III
IATA	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> Technical Shipping Name <u>14.3. Transport hazard class(es)</u> 14.4. Packing group	UN2570 CADMIUM COMPOUND Cadmium acetate 6.1 III
14.5. Environmental hazards	Dangerous for the environment Product is a marine pollutant according to the criteria set by IMDG/IMO
14.6. Special precautions for user	No special precautions required.
14.7. Maritime transport in bulk according to IMO instruments	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 acetate dihydrate	5743-04-4	-	-	-	Х	Х	-	-	-
Cadmium acetate	543-90-8	208-853-2	-	-	Х	Х	KE-04398	Х	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Cadmium acetate dihydrate	5743-04-4	-	-	-	-	Х	Х	Х
Cadmium acetate	543-90-8	Х	ACTIVE	Х	-	Х	Х	Х

#### 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 acetate dihydrate	5743-04-4	-	Use restricted. See item 23. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-
Cadmium acetate	543-90-8	-	Use restricted. See item 23. (see link for restriction details) Use restricted. See item 75. (see link for restriction details)	-

#### **REACH links**

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

#### 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 acetate dihydrate	5743-04-4	Not applicable	Not applicable
Cadmium acetate	543-90-8	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 acetate dihydrate 5743-04-4 ( <=100 )	sr — severe restriction i(1) — industrial chemical for professional use sr — severe restriction i(2) — industrial chemical for public	i — industrial chemical sr — severe restriction	-
Cadmium acetate 543-90-8 ( - )	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 .

#### Cadmium acetate dihydrate

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 acetate	WGK3	

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 acetate dihydrate 5743-04-4 ( <=100 )	Prohibited and Restricted Substances		Annex I - industrial chemical
Cadmium acetate 543-90-8 ( - )	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

H312 - Harmful in contact with skin

H350 - May cause cancer

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

#### Legend

CAS - Chemical Abstracts Service	<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory
<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances <b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances <b>IECSC</b> - Chinese Inventory of Existing Chemical Substances <b>KECL</b> - Korean Existing and Evaluated Chemical Substances	5
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	<ul> <li>TWA - Time Weighted Average</li> <li>IARC - International Agency for Research on Cancer</li> <li>Predicted No Effect Concentration (PNEC)</li> <li>LD50 - Lethal Dose 50%</li> <li>EC50 - Effective Concentration 50%</li> <li>POW - Partition coefficient Octanol:Water</li> <li>vPvB - very Persistent, very Bioaccumulative</li> </ul>

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

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)

#### Cadmium acetate dihydrate

#### Key literature references and sources for data https://echa.europa.eu/information-on-chemicals

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

#### Training Advice

Chemical incident response training.

Prepared By	Health, Safety and Environmental Department
Creation Date	20-Jun-2005
Revision Date	25-Jan-2024
Revision Summary	New emergency telephone response service provider.

# This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

. 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