

SAFETY DATA SHEET

1. Identification

Product identifier: CADMIUM CHLORIDE

Other means of identification

Product No.: 1208

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard classification

Health hazards

Acute toxicity (Oral)	Category 3
Acute toxicity (Inhalation - dust and mist)	Category 2
Carcinogenicity	Category 1B
Toxic to reproduction	Category 1B
Specific target organ toxicity - repeated exposure	Category 1
Germ cell mutagenicity	Category 1B

Environmental hazards

Chronic hazards to the aquatic environment	Category 1
Acute hazards to the aquatic environment	Category 1

Label elements

Hazard symbol:



Signal word: Danger

Hazard statement: Toxic if swallowed.
 Fatal if inhaled.
 May cause cancer.
 May damage fertility or the unborn child.
 Causes damage to organs through prolonged or repeated exposure.
 Very toxic to aquatic life with long lasting effects.
 May cause genetic defects.

Precautionary statement

Prevention: Wash thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment.

Response: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Collect spillage.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical identity	Common name and synonyms	CAS number	Content in percent (%)*
CADMIUM CHLORIDE (HYDRATED FORM)		7790-78-5	99 - 100%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

General information: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Ingestion: Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Inhalation: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration.

Skin contact: Flush skin thoroughly with water. Get medical attention if symptoms occur.

Eye contact: Flush thoroughly with water. If irritation occurs, get medical assistance.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin irritation. Toxic if swallowed. Fatal if inhaled.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General fire hazards: In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Contact with metals may evolve flammable hydrogen gas. Fire may produce irritating, corrosive and/or toxic gases.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Keep unauthorized personnel away. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Avoid dust formation. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination.

Notification Procedures: Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: Use personal protective equipment as required. Do not breathe mist or vapor. Do not taste or swallow. Do not eat, drink or smoke when using the product. Use only with adequate ventilation. Wash hands thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment. Avoid contact with skin. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed. Store in a well-ventilated place. Store in a dry place. Store locked up.

8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Chemical identity	Type	Exposure Limit values	Source
CADMIUM CHLORIDE (HYDRATED FORM) - Respirable fraction. - as Cd	TWA	0.002 mg/m3	US. ACGIH Threshold Limit Values (2011)
CADMIUM CHLORIDE (HYDRATED FORM) - as Cd	TWA	0.01 mg/m3	US. ACGIH Threshold Limit Values (2011)
CADMIUM CHLORIDE (HYDRATED FORM)	TWA	0.005 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)
	OSHA_ACT	0.0025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) (02 2006)

Biological limit values

Chemical identity	Exposure Limit values	Source
CADMIUM CHLORIDE (HYDRATED FORM) (Cadmium: Sampling time: Not critical.)	5 µg/l (Blood)	ACGIH BEL (03 2013)
	5 µg/g (Creatinine in urine)	ACGIH BEL (03 2013)

Appropriate engineering controls

No data available.

Individual protection measures, such as personal protective equipment

General information:	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.
Eye/face protection:	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection:	Chemical resistant gloves
Other:	Wear suitable protective clothing.
Respiratory protection:	In case of inadequate ventilation use suitable respirator. Air-purifying respirator with a high efficiency particulate filter.
Hygiene measures:	Provide eyewash station and safety shower. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using the product. Avoid contact with eyes, skin, and clothing.

9. Physical and chemical properties

Appearance

Physical state:	Solid
Form:	Crystals or powder.
Color:	Colorless
Odor:	Odorless

Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	No data available.
Solubility(ies)	
Solubility in water:	Freely Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous polymerization does not occur.
Conditions to avoid:	Heat, sparks, flames. Avoid conditions which create dust. Contact with incompatible materials.
Incompatible materials:	Oxidizing agents. Metals.
Hazardous decomposition products:	May decompose upon heating to produce corrosive and/or toxic fumes.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	Toxic if swallowed.
Inhalation:	Fatal if inhaled. May cause irritation to the respiratory system.
Skin contact:	May cause irritation.
Eye contact:	May irritate eyes.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral	
Product:	ATEmix (Rat): 88 mg/kg

Dermal
Product:

No data available.

Inhalation
Product:

No data available.

Repeated dose toxicity
Product:

No data available.

Skin corrosion/irritation
Product:

May cause skin irritation.

Serious eye damage/eye irritation
Product:

May irritate eyes.

Respiratory or skin sensitization
Product:

Not a skin nor a respiratory sensitizer.

Carcinogenicity
Product:

May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

CADMIUM
CHLORIDE
(HYDRATED
FORM)

Overall evaluation: 1. Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

CADMIUM
CHLORIDE
(HYDRATED
FORM)

Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ cell mutagenicity
In vitro
Product:

May cause genetic defects.

In vivo
Product:

May cause genetic defects.

Reproductive toxicity
Product:

May damage fertility or the unborn child.

Specific target organ toxicity - single exposure
Product:

None known.

Specific target organ toxicity - repeated exposure
Product:

Blood, Liver, Lungs, Kidney, Bones

Aspiration hazard
Product:

Not classified

Other effects:

None known.

12. Ecological information**Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and degradability****Biodegradation****Product:** There are no data on the degradability of this product.**BOD/COD ratio****Product:** No data available.**Bioaccumulative potential****Bioconcentration factor (BCF)****Product:** Has the potential to bioaccumulate.**Partition coefficient n-octanol / water (log Kow)****Product:** No data available.**Mobility in soil:** The product is water soluble and may spread in water systems.**Other adverse effects:** Very toxic to aquatic life with long lasting effects.**13. Disposal considerations****Disposal instructions:**

Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated packaging:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number:	UN 2570
UN proper shipping name:	Cadmium compounds(CADMIUM CHLORIDE)
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
Packing group:	III
Marine Pollutant:	Yes

IMDG

UN number:	UN 2570
UN proper shipping name:	CADMIUM COMPOUND(CADMIUM CHLORIDE)
Transport hazard class(es)	
Class(es):	6.1
Label(s):	6.1
EmS No.:	F-A, S-A
Packing group:	III
Marine Pollutant:	No

IATA

UN number:	UN 2570
Proper Shipping Name:	Cadmium compound(CADMIUM CHLORIDE)
Transport hazard class(es):	
Class(es):	6.1
Label(s):	6.1
Marine Pollutant:	No
Packing group:	III

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

CADMIUM CHLORIDE	Reportable quantity: 10 lbs.
(HYDRATED FORM)	

Superfund amendments and reauthorization act of 1986 (SARA)

Hazard categories

<input checked="" type="checkbox"/> Acute (Immediate)	<input checked="" type="checkbox"/> Chronic (Delayed)	<input type="checkbox"/> Fire	<input type="checkbox"/> Reactive	<input type="checkbox"/> Pressure Generating
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SARA 302 Extremely hazardous substance

None present or none present in regulated quantities.

SARA 304 Emergency release notification

Chemical identity	RQ
CADMIUM CHLORIDE	10 lbs.
(HYDRATED FORM)	

SARA 311/312 Hazardous chemical

Chemical identity	Threshold Planning Quantity
CADMIUM CHLORIDE (HYDRATED FORM)	500 lbs

SARA 313 (TRI reporting)

Chemical identity	Reporting threshold for other users	Reporting threshold for manufacturing and processing
CADMIUM CHLORIDE (HYDRATED FORM)	10000 lbs	25000 lbs.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

CADMIUM CHLORIDE (HYDRATED FORM)	Reportable quantity: 10 lbs.
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Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US state regulations
US. California Proposition 65

CADMIUM CHLORIDE (HYDRATED FORM)	Carcinogenic.
CADMIUM CHLORIDE (HYDRATED FORM)	Developmental toxin.
CADMIUM CHLORIDE (HYDRATED FORM)	Male reproductive toxin.

US. New Jersey Worker and Community Right-to-Know Act

CADMIUM CHLORIDE (HYDRATED FORM)	Listed
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US. Massachusetts RTK - Substance List

CADMIUM CHLORIDE (HYDRATED FORM)	Listed
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US. Pennsylvania RTK - Hazardous Substances

CADMIUM CHLORIDE (HYDRATED FORM)	Listed
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US. Rhode Island RTK

CADMIUM CHLORIDE (HYDRATED FORM)	Listed
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Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
EU EINECS List:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue date:	08-20-2014
Revision date:	No data available.
Version #:	2.1
Further information:	No data available.

Disclaimer:

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