

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Cadmium chloride

Product Number : CC1006

CAS-No. : 10108-64-2

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company : Gojira Fine Chemicals
5386 Majestic Parkway,
Suite 7 Bedford Heights,
OH 44146

Telephone : 440-252-5397

Email : docsupport@gojirafc.com

Fax : 888-211-5523

1.4 Emergency telephone number

Emergency Phone # : 800-255-3924 (ChemTel, Contract # MIS7318160)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 2), H330

Germ cell mutagenicity (Category 1B), H340

Carcinogenicity (Category 1B), H350

Reproductive toxicity (Category 1B), H360

Specific target organ toxicity - repeated exposure (Category 1), H372

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H301 : Toxic if swallowed.

H330 : Fatal if inhaled.

H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P391	Collect spillage.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	:	CdCl ₂
Molecular weight	:	183.32 g/mol
CAS-No.	:	10108-64-2
EC-No.	:	233-296-7
Index-No.	:	048-008-00-3

Hazardous components

Component	Classification	Concentration
Cadmium chloride Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)		
	Acute Tox. 3; Acute Tox. 2; Muta. 1B; Carc. 1B; Repr. 1B; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H330, H340, H350, H360, H372, H410	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES**5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas, Cadmium/cadmium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combu formation should be taken into consideration before additional processing
Provide appropriate exhaust ventilation at places where dust is formed.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic Air sensitive. Store under inert gas.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Cadmium chloride	10108-64-2	TWA	0.010000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen varies		
		TWA	0.002000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen varies		
		Potential Occupational Carcinogen See Appendix A		
		Potential Occupational Carcinogen See Appendix A		
		PEL	0.005000 mg/m3	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1027 This standard applies to all occupational exposures to cadmium and cadmium compounds, in all forms, and in all industries covered by the Occupational Safety and Health Act, except the construction-related industries, which are covered under 29 CFR 1926.63. OSHA specifically regulated carcinogen		
		PEL	0.005000 mg/m3	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1027 This standard applies to all occupational exposures to cadmium and cadmium compounds, in all forms, and in all industries covered by the Occupational Safety and Health Act, except the construction-related industries, which are covered under 29 CFR 1926.63. OSHA specifically regulated carcinogen		
		TWA	0.01 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen varies		
		TWA	0.002 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Kidney damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Suspected human carcinogen varies		
		PEL	0.005 mg/m3	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1027 This standard applies to all occupational exposures to cadmium and cadmium compounds, in all forms, and in all industries covered by the Occupational Safety and Health Act, except the construction-related industries, which are covered under 29 CFR 1926.63. OSHA specifically regulated carcinogen		
		Potential Occupational Carcinogen		

See Appendix A

Biological occupational exposure limits

Component	CAS-No.	Parameters	Value	Biological specimen	Basis
Cadmium chloride	10108-64-2	cadmium	5.0000 µg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	Not critical			
		cadmium	0.0050 mg/g	Urine	ACGIH - Biological Exposure Indices (BEI)
		Not critical			
		cadmium	5 µg/l	In blood	ACGIH - Biological Exposure Indices (BEI)
		Not critical			
		cadmium	5µg/g creatinine	Urine	ACGIH - Biological Exposure Indices (BEI)
		Not critical			

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industria situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance	Form: solid Colour: white
b) Odour	odourless
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: 568 °C (1054 °F) - lit.
f) Initial boiling point and boiling range	960 °C (1760 °F) at 1013 hPa
g) Flash point	()No data available
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapour pressure	13 hPa at 656 °C (1213 °F)
l) Vapour density	No data available
m) Relative density	4.050 g/cm ³
n) Water solubility	457 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - soluble
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Air Avoid moisture.

10.5 Incompatible materials

Oxidizing agents, Bromine trifluoride

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Cadmium/cadmium oxides
Other decomposition products - No data available
In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 107 mg/kg(Cadmium chloride)
LC50 Inhalation - Rat - male - 2 h - > 4.5 mg/m³(Cadmium chloride)
Dermal: No data available(Cadmium chloride)
No data available(Cadmium chloride)

Skin corrosion/irritation

No data available(Cadmium chloride)

Serious eye damage/eye irritation

No data available(Cadmium chloride)

Respiratory or skin sensitisation

No data available(Cadmium chloride)

Germ cell mutagenicity

May alter genetic material.(Cadmium chloride)
In vivo tests showed mutagenic effects(Cadmium chloride)
in vitro assay(Cadmium chloride)
S. typhimurium
Result: negative

Carcinogenicity

This is or contains a component that has been reported to be carcinogenic classification. Chronic exposure to cadmium may cause lung and prostate cancer.(Cadmium chloride)
Possible human carcinogen(Cadmium chloride)

IARC: 1 - Group 1: Carcinogenic to humans (Cadmium chloride)

1 - Group 1: Carcinogenic to humans (Cadmium chloride)

NTP: Known to be human carcinogen (Cadmium chloride)

Known to be human carcinogenThe reference note has been added by TD based on the background information of the NTP. (Cadmium chloride)

OSHA: 1910.1027 (Cadmium chloride)

OSHA specifically regulated carcinogen (Cadmium chloride)

Reproductive toxicity

May cause congenital malformation in the fetus.(Cadmium chloride)
Presumed human reproductive toxicant(Cadmium chloride)

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.(Cadmium chloride)

Specific target organ toxicity - single exposure

No data available(Cadmium chloride)

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

No data available(Cadmium chloride)

Additional Information

Repeated dose toxicity - Rat - male - Oral - No observed adverse effect level - 0.2 mg/kg - Lowest observed adverse effect level - 0.5 mg/kg(Cadmium chloride)

RTECS: Not available

Acute inhalation exposure to cadmium fumes may cause "metal fume fever" with chills, nausea, vomiting, dizziness, sweating, muscular pain, cough and d within 24 hours and reaches a maximum by three days. The first chronic effect manifested by excretion of excessive protein in the urine, followed by an is believed to cause pulmonary emphysema and bone disease. (Cadmium chloride)

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence (Cadmium chloride)

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish flow-through test LC50 - Pimephales promelas (fathead minnow) - 1,500 µg/l - 96 h (Cadmium chloride)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 0.036 mg/l - 48 h (Cadmium chloride)

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (algae) - 0.070 mg/l - 72 h (Cadmium chloride) (OECD Test Guideline 201)

Toxicity to bacteria Respiration inhibition NOEC - Sludge Treatment - 0.2 mg/l (Cadmium chloride) (OECD Test Guideline 209)

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Bioaccumulation Salvelinus fontinalis - 266 d - 3.4 µg/l (Cadmium chloride)

Bioconcentration factor (BCF): 882

12.4 Mobility in soil

No data available (Cadmium chloride)

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 2570

Class: 6.1

Packing group: III

Proper shipping name: Cadmium compounds (Cadmium chloride)

Reportable Quantity (RQ) : 10 lbs

Poison Inhalation Hazard: No

IMDG

UN number: 2570 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: CADMIUM COMPOUND (Cadmium chloride)
Marine pollutant : yes

IATA

UN number: 2570 Class: 6.1 Packing group: III
Proper shipping name: Cadmium compound (Cadmium chloride)

15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS-No.	Revision Date
Cadmium chloride	10108-64-2	1993-04-24

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Cadmium chloride	10108-64-2	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Cadmium chloride	10108-64-2	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Cadmium chloride	10108-64-2	1993-04-24

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known to the State of California to cause cancer. Cadmium chloride	10108-64-2	1987-10-01

	CAS-No.	Revision Date
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Cadmium chloride	10108-64-2	1987-10-01

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H301	Toxic if swallowed.
H330	Fatal if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
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.

HMIS Rating

Health hazard:	4
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	4
Fire Hazard:	0
Reactivity Hazard:	0

Further information

The above information is believed to be accurate and represents the best information currently available to Gojira Fine Chemicals. However, we make no warranty or merchantability or any other warranty, express or Implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Gojira Fine Chemicals be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Gojira Fine Chemicals has been advised of the possibility of such damages.

Version: 6.1

Revision Date: 05/28/2017

Print Date: 10/04/2019