

## 1. Identification

<b>Product identifier</b>	<b>CADMIUM CHLORIDE, ANHYDROUS, REAGENT (ACS)</b>	
<b>Other means of identification</b>		
<b>Product code</b>	868	
<b>CAS number</b>	10108-64-2	
<b>Recommended use</b>	professional, scientific and technical activities: other professional, scientific and technical activities	
<b>Recommended restrictions</b>	None known.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	GFS Chemicals, Inc.	
<b>Address</b>	800 Kaderly Drive Columbus, OH 43228 United States	
<b>Telephone</b>	Phone	740-881-5501
	Toll Free	800-858-9682
	Fax	740-881-5989
<b>Website</b>	www.gfschemicals.com	
<b>E-mail</b>	service@gfschemicals.com	
<b>Emergency phone number</b>	Emergency Assistance	Chemtrec 800-424-9300

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Acute toxicity, oral	Category 3
	Acute toxicity, dermal	Category 4
	Acute toxicity, inhalation	Category 1
	Germ cell mutagenicity	Category 1
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 1
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Danger
<b>Hazard statement</b>	Toxic if swallowed. Harmful in contact with skin. Fatal if inhaled. Causes damage to organs through prolonged or repeated exposure. May cause genetic defects. May cause cancer. May damage fertility or the unborn child. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
<b>Precautionary statement</b>	
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

<b>Response</b>	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Rinse mouth. Take off contaminated clothing and wash before reuse. Collect spillage.
<b>Storage</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
<b>Disposal</b>	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.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Substances

Chemical name	Common name and synonyms	CAS number	%
CADMIUM CHLORIDE		10108-64-2	100

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off with soap and water. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. 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. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>Most important symptoms/effects, acute and delayed</b>	Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Use extinguishing agent suitable for type of surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	In the event of fire fumes of cadmium may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do it without risk. Use water spray to cool unopened containers.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Material name: CADMIUM CHLORIDE, ANHYDROUS, REAGENT (ACS)

**Methods and materials for containment and cleaning up**

Refer to attached safety data sheets and/or instructions for use. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Prevent entry into waterways, sewers, basements or confined areas. Stop leak if you can do so without risk. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Large Spills: Wet down with water and dike for later disposal. Should not be released into the environment. Clean up in accordance with all applicable regulations. Sweep up or vacuum up spillage and collect in suitable container for disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Inform appropriate managerial or supervisory personnel of all environmental releases. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid prolonged exposure. Wash hands thoroughly after handling. Should be handled in closed systems, if possible. Observe good industrial hygiene practices. Avoid release to the environment. Wash contaminated clothing before reuse.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Store in tightly closed container. Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store away from incompatible materials (see Section 10 of the SDS). Store in a cool dry place.

**8. Exposure controls/personal protection****Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

**U.S. - OSHA**

Material	Type	Value	Form
CADMIUM CHLORIDE (CAS 10108-64-2)	TWA	0.005 mg/m3	as Cd

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

Material	Type	Value
CADMIUM CHLORIDE (CAS 10108-64-2)	TWA	0.005 mg/m3

**ACGIH**

Material	Type	Value	Form
CADMIUM CHLORIDE (CAS 10108-64-2)	TWA	0.01 mg/m3	total dust as Cd
		0.002 mg/m3	respirable fraction as Cd

**US. ACGIH Threshold Limit Values**

Material	Type	Value	Form
CADMIUM CHLORIDE (CAS 10108-64-2)	TWA	0.01 mg/m3	
		0.002 mg/m3	Respirable fraction.

**Biological limit values****ACGIH Biological Exposure Indices**

Material	Value	Determinant	Specimen	Sampling Time
CADMIUM CHLORIDE (CAS 10108-64-2)	5 µg/g	Cadmium	Creatinine in urine	*
	5 µg/l	Cadmium	Blood	*

\* - For sampling details, please see the source document.

<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
<b>Respiratory protection</b>	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Wear respirator if there is dust formation.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Crystalline.
<b>Color</b>	White.
<b>Odor</b>	Odorless.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	1054.4 °F (568 °C)
<b>Initial boiling point and boiling range</b>	1760 °F (960 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	1400 g/l
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	4.05 g/cm <sup>3</sup>
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	CdCl <sub>2</sub>
<b>Molecular weight</b>	183.32 g/mol
<b>Oxidizing properties</b>	Not oxidizing.

Material name: CADMIUM CHLORIDE, ANHYDROUS, REAGENT (ACS)

Specific gravity 4.05

## 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.  
**Chemical stability** Material is stable under normal conditions.  
**Possibility of hazardous reactions** Hazardous polymerization does not occur.  
**Conditions to avoid** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid high temperatures. Contact with incompatible materials.  
**Incompatible materials** Strong oxidizing agents.  
**Hazardous decomposition products** Chlorine. Decomposition of this product may yield metallic oxides.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Fatal if inhaled.  
**Skin contact** Harmful in contact with skin.  
**Eye contact** Direct contact with eyes may cause temporary irritation.  
**Ingestion** Toxic if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation.

### Information on toxicological effects

**Acute toxicity** Fatal if inhaled. Toxic if swallowed. Harmful in contact with skin.

Product	Species	Test Results
CADMIUM CHLORIDE (CAS 10108-64-2)		
<b>Acute</b>		
<b>Oral</b>		
LD50	Mouse	60 mg/kg
	Rat	88 mg/kg
<b>Other</b>		
LD50	Mouse	3.5 mg/kg

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.  
**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

### IARC Monographs. Overall Evaluation of Carcinogenicity

CADMIUM CHLORIDE (CAS 10108-64-2) 1 Carcinogenic to humans.

### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

CADMIUM CHLORIDE (CAS 10108-64-2) Cancer

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

CADMIUM CHLORIDE (CAS 10108-64-2) Known To Be Human Carcinogen.

**Reproductive toxicity** May damage fertility or the unborn child.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Hazardous by WHMIS criteria. Causes damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

Product	Species		Test Results
CADMIUM CHLORIDE (CAS 10108-64-2)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	0.0093 - 0.0102 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.006 mg/l, 96 hours

<b>Persistence and degradability</b>	No data is available on the degradability of this substance.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D006: Waste Cadmium The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

### 14. Transport information

#### DOT

<b>UN number</b>	UN2570
<b>UN proper shipping name</b>	Cadmium compounds (CADMIUM CHLORIDE RQ = 10 LBS), MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	6.1
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	IB8, IP3, T1, TP33
<b>Packaging exceptions</b>	153
<b>Packaging non bulk</b>	213
<b>Packaging bulk</b>	240

#### IATA

<b>UN number</b>	UN2570
<b>UN proper shipping name</b>	Cadmium compound (CADMIUM CHLORIDE)
<b>Transport hazard class(es)</b>	
<b>Class</b>	6.1(PGIII)
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	6L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed with restrictions.
<b>Cargo aircraft only</b>	Allowed with restrictions.

#### IMDG

<b>UN number</b>	UN2570
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Material name: CADMIUM CHLORIDE, ANHYDROUS, REAGENT (ACS)

**UN proper shipping name** CADMIUM COMPOUND (CADMIUM CHLORIDE), MARINE POLLUTANT  
**Transport hazard class(es)**  
**Class** 6.1(PGIII)  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-A  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

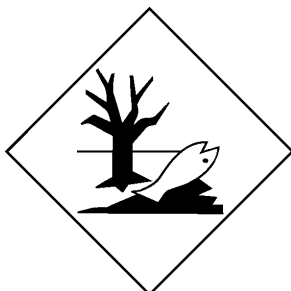
**DOT**



**IATA; IMDG**



**Marine pollutant**



**General information** IMDG Regulated Marine Pollutant. DOT Regulated Severe Marine Pollutant.

**15. Regulatory information**

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

CADMIUM CHLORIDE (CAS 10108-64-2) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

CADMIUM CHLORIDE (CAS 10108-64-2) Cancer  
 Lung  
 Kidney  
 Acute toxicity

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

### SARA 302 Extremely hazardous substance

Not listed.

### SARA 311/312

Yes

#### Hazardous chemical

##### Classified hazard categories

Acute toxicity (any route of exposure)  
Germ cell mutagenicity  
Carcinogenicity  
Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

### SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
CADMIUM CHLORIDE	10108-64-2	100

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

CADMIUM CHLORIDE (CAS 10108-64-2)

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

#### Clean Water Act (CWA) Section 112(r) (40 CFR 68.130)

Hazardous substance  
Priority pollutant  
Toxic pollutant

#### Safe Drinking Water Act (SDWA)

0.005 mg/l

### US state regulations

#### California Proposition 65



**WARNING:** This product can expose you to CADMIUM CHLORIDE, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

#### California Proposition 65 - CRT: Listed date/Carcinogenic substance

CADMIUM CHLORIDE (CAS 10108-64-2) Listed: October 1, 1987

#### California Proposition 65 - CRT: Listed date/Developmental toxin

CADMIUM CHLORIDE (CAS 10108-64-2) Listed: May 1, 1997

#### California Proposition 65 - CRT: Listed date/Male reproductive toxin

CADMIUM CHLORIDE (CAS 10108-64-2) Listed: May 1, 1997

#### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

CADMIUM CHLORIDE (CAS 10108-64-2)

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

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

Issue date October-03-2014

Material name: CADMIUM CHLORIDE, ANHYDROUS, REAGENT (ACS)

868

Version #: 03

Revision date: November-20-2018

Issue date: October-03-2014

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<b>Revision date</b>	November-20-2018
<b>Version #</b>	03
<b>Disclaimer</b>	GFS Chemicals, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
<b>Revision information</b>	This document has undergone significant changes and should be reviewed in its entirety.