

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Cadmium carbonate
Form	White powder
CAS No.	513-78-0
EC No.	208-168-9
Index No.	048-001-00-5
Chemical Formula	CCdO ₃
Molecular Weight	172.42 g/mol
Supplier Address*	ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053 *May include subsidiaries or affiliate companies/divisions
Email	iusa@isoflex.com
Website	www.isoflex.com
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 2), H330
Acute toxicity, Dermal (Category 4), H312
Germ cell mutagenicity (Category 18), H340
Reproductive toxicity (Category 2), H361
Specific organ toxicity – repeated exposure (Category 1), Lungs, Kidney, Bone, H372
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

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

GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H302 + H312 Harmful if swallowed or in contact with skin.
H330 Fatal if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs (Lungs, Kidney, Bone) 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/vapors/spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke while 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 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
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.
P363 Wash contaminated clothing before reuse.
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.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Cadmium carbonate
CAS No.: 513-78-0
Chemical Formula: CCdO₃
Molecular Weight: 172.42 g/mol
EC No. 208-168-9
Index No. 048-001-00-5

Component	Classification	Concentration
Cadmium Carbonate	Acute Tox. 4; Acute Tox. 2; Acute Tox. 4; Muta. 1B; Carc. 1B; Repr. 2; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H302, H330, H312, H340, H350, H361, H372, H400, H410. M-Factor – Aquatic Acute: 10	<= 100%

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

4. FIRST AID MEASURES

<i>General Advice</i>	First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.
<i>Inhalation</i>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
<i>Ingestion</i>	Immediately make victim drink water (two glasses at most). Get medical attention immediately.
<i>Skin Contact</i>	Wipe off excess material from skin then immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
<i>Eye Contact</i>	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Remove contact lenses. Get medical attention immediately.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

<i>Suitable Extinguishing Media</i>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<i>Unsuitable Extinguishing Media</i>	For this substance/mixture, no limitations of extinguishing media are given.
<i>Special Hazards Arising from the Substance or Mixture</i>	Nature of decomposition products not known. Not combustible. Ambient fire may liberate hazardous vapors.
<i>Advice for Firefighters</i>	Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.
<i>Further Information</i>	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Cover drains. Collect, bind and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

<i>Handling</i>	Work under hood. Do not inhale substance/mixture. Hygiene measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.
<i>Storage</i>	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Keep locked up or in an area accessible only to qualified or authorized persons. Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Ingredients with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Cadmium carbonate	513-78-0	TWA	0.01 mg/m ³	USA, ACGIH Threshold Limit Values (TLV)
	Remarks	Suspected human carcinogen		
		TWA	0.002 mg/m ³	USA, ACGIH Threshold Limit Values (TLV)
	Remarks	Suspected human carcinogen		
		PEL	0.005 mg/m ³	OSHA Specifically Regulated Chemicals/ Carcinogens
	Remarks	OSHA specifically regulated carcinogen Potential Occupational Carcinogen		

Biological occupational exposure limits

Component	CAS No.	Parameters	Value	Biological Specimen	Basis
Cadmium carbonate	513-78-0	cadmium	5 µg/l	In blood	ACGIH – Biological Exposure Indices (BEI)
	Remarks	Not critical			
		Cadmium	5 µg/g creatinine	Urine	ACGIH – Biological Exposure Indices (BEI)
	Remarks	Not critical			

Exposure Controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Ventilation system

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion into the general work area. Please refer to the ACGIH document *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Respiratory protection

If the exposure limit is exceeded and engineering controls are not feasible, a half-face high-efficiency particulate respirator (NIOSH type N100 filter) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece high-efficiency particulate respirator (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. See OSHA 1910.1027 for additional respirator information. Where respirators are required, you must have a written program covering the basic requirements in the OSHA respirator standard. These include training, fit-testing, medical approval, cleaning, maintenance, cartridge change schedules, etc. See 29 CFR 1910.134 for details.

Skin protection

Wear protective gloves and clean body-covering clothing.

Eye protection

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Other control measures

Eating, drinking and smoking should not be permitted in areas where solids or liquids containing cadmium compounds are handled, processed, or stored. See OSHA substance-specific standard for more information on personal protective equipment, engineering and work practice controls, medical surveillance, record-keeping and reporting requirements. (29 CFR 1910.1027).

9. PHYSICAL AND CHEMICAL PROPERTIES

<i>Appearance:</i>	White powder
<i>Odor:</i>	Odorless
<i>Odor Threshold:</i>	No data available
<i>Density:</i>	4.258 g/cm ³ at 25 °C (77 °F) – lit.
<i>Relative Density:</i>	No data available
<i>Boiling Point:</i>	No data available
<i>Melting/Freezing Point:</i>	356-409 °C (673-768 °F) at 1,013 hPa – OECD Test Guideline 102 - Decomposition
<i>Flash Point:</i>	Not applicable
<i>Flammability:</i>	Not flammable
<i>Explosive Limits:</i>	No data available
<i>Autoignition Temperature:</i>	No data available
<i>Decomposition Temperature:</i>	No data available
<i>Vapor Density:</i>	No data available
<i>Vapor Pressure:</i>	No data available
<i>Evaporation Rate:</i>	No data available

<i>Water Solubility:</i>	3.2 g/l at 25 °C (77 °F) – (calculated) – slightly soluble
<i>Partition coefficient (n-octanol/water):</i>	Not applicable for inorganic substances
<i>pH:</i>	No data available
<i>Viscosity:</i>	No data available
<i>Explosive Properties:</i>	No data available
<i>Oxidizing Properties:</i>	No data available

10. STABILITY AND REACTIVITY

<i>Reactivity</i>	No data available
<i>Chemical Stability</i>	Stable under standard ambient conditions (room temperature)
<i>Possibility of Hazardous Reactions</i>	Violent reactions possible with oxidizing agents, potassium, acids
<i>Hazardous Decomposition Products</i>	In the event of fire: see section 5
<i>Conditions to Avoid</i>	No data available
<i>Incompatible Materials</i>	No data available

11. TOXICOLOGICAL INFORMATION

<i>Oral - Rat - LD50</i>	438 mg/kg; Remarks: (RTECS)
<i>Inhalation – Rat – LC50</i>	Male and Female – 4 h – 0.06 mg/l Inhalation: Absorption Acute toxicity estimate Dermal – 1,100.1 mg/kg (Expert judgment) No data available
<i>Reproductive Toxicity</i>	Suspected human reproductive toxicant
<i>Carcinogenicity</i>	Presumed to have carcinogenic potential for humans
<i>IARC</i>	1 – Group 1: Carcinogenic to humans (cadmium carbonate)
<i>NTP</i>	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<i>OSHA</i>	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
<i>Skin Corrosion/Irritation</i>	No data available
<i>Serious Eye Damage/Irritation</i>	No data available
<i>Respiratory/Skin Sensitization</i>	No data available
<i>Germ Cell Mutagenicity</i>	May cause genetic defects
<i>Specific Target Organ Toxicity (Single Exposure)</i>	No data available
<i>Specific Target Organ Toxicity (Repeated Exposure)</i>	Causes damage to organs through prolonged or repeated exposure – Lungs, Kidney, Bone.
Additional Information	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. The following applies to cadmium compounds in general: mucosal irritations, coughing, and dyspnea after inhalation. Inhalation may lead to the formation of oedemas in the respiratory tract. Toxic effect on gastrointestinal tract. Long-term exposure to the chemical results in toxic effect on kidneys, lungs, bones.

Further data: Handle in accordance with good industrial hygiene and safety practice. Stomach – Irregularities – based on human evidence.

12. ECOLOGICAL INFORMATION

<i>Toxicity</i>	Toxicity to algae. Static test EbC50 – <i>Pseudokirchneriella subcapitata</i> (green algae) – 0.023 mg/l – 72 h
<i>Persistence and degradability</i>	The methods for determining the biological degradability are not applicable to inorganic substances.
<i>Bioaccumulative potential</i>	No data available
<i>Mobility in soil</i>	No data available
<i>Results of PBT and vPvB assessment</i>	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
<i>Other adverse effects</i>	No data available

13. DISPOSAL CONSIDERATIONS

Product	Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us if you have further questions.
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14. TRANSPORT INFORMATION

DOT (US)

<i>UN Number</i>	2570
<i>Class</i>	6.1
<i>Packing Group</i>	II
<i>Proper Shipping Name</i>	Cadmium compounds (Cadmium carbonate)
<i>Reportable Quantity (RQ)</i>	
<i>Poison Inhalation Hazard</i>	No

IMDG

<i>UN Number</i>	2570
<i>Class</i>	6.1
<i>Packing Group</i>	II
<i>EMS Number</i>	F-A, S-A
<i>Proper Shipping Name</i>	CADMIUM COMPOUND (Cadmium carbonate)
<i>Marine Pollutant</i>	Yes

IATA

<i>UN Number</i>	2570
<i>Class</i>	6.1
<i>Packing Group</i>	II
<i>Proper Shipping Name</i>	Cadmium compound (Cadmium carbonate)

15. REGULATORY INFORMATION

SARA 302 Components	This material does not contain any components with a section 302 EHS TPQ.
SARA 313 Components	The following components are subject to reporting levels established by SARA Title III, Section 313: Cadmium carbonate / CAS No. 513-78-0 / Revision Date 2007-03-01.
SARA 311/312 Hazards	Acute Health Hazard, Chronic Health Hazard
Massachusetts Right to Know Components	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components	Cadmium carbonate / CAS No. 513-78-0 / Revision Date 2007-03-01
New Jersey Right to Know Components	Cadmium carbonate / CAS No. 513-78-0 / Revision Date 2007-03-01

16. OTHER INFORMATION

<i>Prepared By</i>	ISOFLEX USA PO Box 472615 San Francisco CA 94147 United States
<i>Issuing Date</i>	February 10, 2022
<i>Revision Date</i>	April 22, 2024
<i>Revision Number</i>	2
<i>Revision Note</i>	Update Supplier Address

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
BOD5	Biochemical Oxygen Demand
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
COD	Chemical Oxygen Demand
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)

EC50	Half Maximal Effective Concentration
ECL	Korean Existing Chemicals List
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
IMDG	International Maritime Code for Dangerous Goods
IMO	International Maritime Organization
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PICCS	Philippines Inventory of Chemicals and Chemical Substances
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
RTK	Right to Know
SARA	Superfund Amendments and Reauthorization Act (USA)
SNUR	Significant New Use Rule (TSCA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

*One or more of the above-listed items may not appear in this document.

Full text of Hazard statement(s) used in section 2:

H302 + H312	Harmful if swallowed or in contact with skin.
H330	Fatal if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H372	Causes damage to organs (Lungs, Kidney, Bone) through prolonged or repeated exposure.
H410	Very toxic to aquatic life, with long-lasting effects.

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between ISOFLEX USA (or any of its affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. ISOFLEX shall not be held liable for any damage resulting from handling or from contact with the above product.

The logo for ISO FLEX features the word "ISO" in a light blue, sans-serif font, followed by "FLEX" in a larger, bold, red, italicized sans-serif font. A large, light blue, curved swoosh or underline element arches over the text, starting from the left and ending on the right.