

1. Material Identification

Product Name : Cadmium chloride

Catalog Number : io-1898

CAS Number : 10108-64-2

Identified uses : Laboratory chemicals, manufacture of chemical compounds

Company : IonZ

>> R&D Use only

2. Hazards Identification

GHS Classification:

Flammable liquid (category 2)

Acute toxicity, oral (Category 3)

Acute toxicity, dermal (Category 3)

Acute toxicity, inhalation (Category 3)

Specific target organ toxicity, single exposure (Category 1)

Pictogram(s)



GHS Hazard Statements

- >> H301 (100%): Toxic if swallowed [Danger Acute toxicity, oral]
- >> H330 (100%): Fatal if inhaled [Danger Acute toxicity, inhalation]
- >> H340 (100%): May cause genetic defects [Danger Germ cell mutagenicity]
- >> H350 (100%): May cause cancer [Danger Carcinogenicity]
- >> H360 (57.3%): May damage fertility or the unborn child [Danger Reproductive toxicity]
- >> H360FD (43.1%): May damage fertility; May damage the unborn child [Danger Reproductive toxicity]
- >> H372 (100%): Causes damage to organs through prolonged or repeated exposure [Danger Specific target organ toxicity, repeated exposure]
- >> H400 (100%): Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard]
- >> H410 (100%): Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

Precautionary Statement Codes

- >> P203, P260, P264, P270, P271, P273, P280, P284, P301+P316, P304+P340, P316, P318, P319, P320, P321, P330, P391, P403+P233, P405, and P501

Health Hazards:

- >> Ingestion causes gastroenteric distress, pain, and prostration. Sensory disturbances, liver injury, and convulsions have been observed in severe intoxications. (USCG, 1999)
- >> Literature sources indicate that this chemical is nonflammable. (NTP, 1992)
- >> Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

3. Composition/Information On Ingredients

Chemical name : Cadmium chloride
CAS Number : 10108-64-2
Molecular Formula : CdCl₂
Molecular Weight : 183.3200 g/mol

4. First Aid Measures

First Aid:

- >> EYES: First check the victim for contact lenses and remove if present. Flush victim's eyes with water or normal saline solution for 20 to 30 minutes while simultaneously calling a hospital or poison control center. Do not put any ointments, oils, or medication in the victim's eyes without specific instructions from a physician. IMMEDIATELY transport the victim after flushing eyes to a hospital even if no symptoms (such as redness or irritation) develop.
- >> SKIN: IMMEDIATELY flood affected skin with water while removing and isolating all contaminated clothing. Gently wash all affected skin areas thoroughly with soap and water. If symptoms such as redness or irritation develop, IMMEDIATELY call a physician and be prepared to transport the victim to a hospital for treatment.
- >> INHALATION: IMMEDIATELY leave the contaminated area; take deep breaths of fresh air. IMMEDIATELY call a physician and be prepared to transport the victim to a hospital even if no symptoms (such as wheezing, coughing, shortness of breath, or burning in the mouth, throat, or chest) develop. Provide proper respiratory protection to rescuers entering an unknown atmosphere. Whenever possible, Self-Contained Breathing Apparatus (SCBA) should be used; if not available, use a level of protection greater than or equal to that advised under Protective Clothing.
- >> INGESTION: Some heavy metals are VERY TOXIC POISONS, especially if their salts are very soluble in water (e.g., lead, chromium, mercury, bismuth, osmium, and arsenic). IMMEDIATELY call a hospital or poison control center and locate activated charcoal, egg whites, or milk in case the medical advisor recommends administering one of them. Also locate Ipecac syrup or a glass of salt water in case the medical advisor recommends inducing vomiting. Usually, this is NOT RECOMMENDED outside of a physician's care. If advice from a physician is not readily available and the victim is conscious and not convulsing, give the victim a glass of activated charcoal slurry in water or, if this is not available, a glass of milk, or beaten egg whites and IMMEDIATELY transport victim to a hospital. If the victim is convulsing or unconscious, do not give anything by mouth, assure that the victim's airway is open and lay the victim on his/her side with the head lower than the body. DO NOT INDUCE VOMITING. IMMEDIATELY transport the victim to a hospital.
- >> OTHER: Since this chemical is a known or suspected carcinogen you should contact a physician for advice regarding the possible long term health effects and potential recommendation for medical monitoring. Recommendations from the physician will depend upon the specific compound, its chemical, physical and toxicity properties, the exposure level, length of exposure, and the route of exposure. (NTP, 1992)

First Aid Measures

Inhalation First Aid

- >> Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.

Skin First Aid

- >> Remove contaminated clothes. Rinse skin with plenty of water or shower.

Eye First Aid

- >> First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Ingestion First Aid

- >> Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

5. Fire Fighting Measures

- >> Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]:
- >> SMALL FIRE: Dry chemical, CO₂ or water spray.
- >> LARGE FIRE: Dry chemical, CO₂, alcohol-resistant foam or water spray. If it can be done safely, move undamaged containers away from the area around the fire. Dike runoff from fire control for later disposal.

- >> FIRE INVOLVING TANKS, RAIL TANK CARS OR HIGHWAY TANKS: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Do not get water inside containers. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks in direct contact with flames. (ERG, 2024)
- >> In case of fire in the surroundings, use appropriate extinguishing media.

6. Accidental Release Measures

Isolation and Evacuation:

Isolation and evacuation measures to take when a large amount of this chemical is accidentally released in an emergency.

- >> Excerpt from ERG Guide 154 [Substances – Toxic and/or Corrosive (Non-Combustible)]:
- >> IMMEDIATE PRECAUTIONARY MEASURE: Isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids.
- >> SPILL: Increase the immediate precautionary measure distance, in the downwind direction, as necessary.
- >> FIRE: If tank, rail tank car or highway tank is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions. (ERG, 2024)

Spillage Disposal:

Methods for containment and safety measures to protect workers dealing with a spillage of this chemical.

- >> Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

7. Handling And Storage

Safe Storage:

- >> Store in an area without drain or sewer access. Separated from strong oxidants and food and feedstuffs. Dry. Well closed.

8. Exposure Control/ Personal Protection

- >> 0.005 [mg/m³], as Cd, see 29 CFR 1910.1027
- >> 0.01 [mg/m³], as Cd (0.002 mg/m³, as Cd, respirable fraction)
- >> (respirable fraction): 0.002 mg/m

EU-OEL

- >> (inhalable fraction): 0.001 mg/m

MAK (Maximale Arbeitsplatz Konzentration)

- >> (as Cd, inhalable fraction): skin absorption (H); carcinogen category: 1; germ cell mutagen group: 3A.

Inhalation Risk:

- >> A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

Effects of Short Term Exposure:

- >> The substance is severely irritating to the eyes, skin and respiratory tract. The substance is severely irritating to the gastrointestinal tract. Inhalation of the aerosol may cause lung oedema. Exposure far above the OEL could cause death. The effects may be delayed. Medical observation is indicated.

Effects of Long Term Exposure:

- >> The substance may have effects on the kidneys and lungs. This may result in kidney impairment and tissue lesions. This substance is carcinogenic to humans.

Acceptable Daily Intakes:

An estimate of the amount of a chemical in food or drinking water that can be consumed daily over a lifetime without presenting an appreciable risk to health. It is usually expressed as milligrams of the substance per kilogram of body weight per day and applies to chemicals such as food additives, pesticide residues and veterinary drugs.

- >> Suggested No-Adverse-Response Level (SNARL): There are no adequate data from which to calculate the 24-hr SNARL. ... /The/ 7-day SNARL is based on data ... /obtained from feeding/ cadmium chloride to rats in their diets in conc of 1 to 30 ppm for 3 mo without effect. Assuming that the rats consumed 20 g/day of food & that their avg wt was 250 g, their exposure is calculated ... /to be/ 2.4 mg/kg. For a 70-kg human consuming 2 l/day, using a safety factor of 1000 & assuming that 100% of exposure is from water during this period, the 7-day SNARL is calculated ... /to be/ 0.08 mg/l.

Exposure Prevention

- >> PREVENT DISPERSION OF DUST! AVOID ALL CONTACT! IN ALL CASES CONSULT A DOCTOR!

Inhalation Prevention

- >> Use closed system or ventilation.

Skin Prevention

- >> Protective gloves. Protective clothing.

Eye Prevention

- >> Wear safety goggles or eye protection in combination with breathing protection if powder.

Ingestion Prevention

- >> Do not eat, drink, or smoke during work. Wash hands before eating.

Exposure Control and Personal Protection

Exposure Summary

- >> Biological Exposure Indices (BEI) [ACGIH] - Cd in urine = 5 ug/g creatinine; Cd in blood = 5 ug/L; sampling time not critical; Monitoring in blood should be preferred during the initial year of exposure and whenever changes in the degree of exposure are suspected. [ACGIH]
- >> TIH (Toxic Inhalation Hazard) - Term used to describe gases and volatile liquids that are toxic when inhaled. Some are TIH materials themselves, e.g., chlorine, and some release TIH gases when spilled in water, e.g., chlorosilanes. [ERG 2016].

9. Physical And Chemical Properties

Molecular Weight:

- >> 183.32

Exact Mass:

- >> 183.841070

Physical Description:

- >> Cadmium chloride is a white crystalline solid. It is soluble in water. It is noncombustible. The primary hazard of this material is that it poses a threat to the environment. Immediate steps should be taken to limit its spread to the environment. Cadmium chloride is used in photography, in fabric printing, in chemical analysis, and in many other uses.
- >> ODOURLESS COLOURLESS HYGROSCOPIC CRYSTALS.

Color/Form:

- >> Rhombohedral crystals

Odor:

- >> Odorless

Boiling Point:

- >> 1760 °F at 760 mmHg (NTP, 1992)

>> 960 °C

Melting Point:

>> 1054 °F (NTP, 1992)

>> 568 °C

Solubility:

>> greater than or equal to 100 mg/mL at 68 °F (NTP, 1992)

>> Solubility in water: good

Density:

>> 4.05 at 77 °F (USCG, 1999) – Denser than water; will sink

>> 4.1 g/cm³

Vapor Pressure:

>> 10 mmHg at 1213 °F ; 0 mmHg at 68 °F (NTP, 1992)

LogP:

>> log Kow = 0.21

Stability/Shelf Life:

>> Stable during transport.

Autoignition Temperature:

>> Not flammable (USCG, 1999)

Decomposition:

>> When heated to decomposition it emits very toxic fumes of /cadmium and hydrogen chloride/.

Heat of Vaporization:

>> 124.3 kJ/mol at 964 °C

10. Stability And Reactivity

>> Water soluble.

11. Toxicological Information

Toxicity Summary:

>> Cadmium initially binds to metallothionein and is transported to the kidney. Toxic effects are observed once the concentration of cadmium exceeds that of available metallothionein, and it has also been shown that the cadmium-metallothionein complex may be damaging. Accumulation of cadmium in the kidney results in increased excretion of vital low and high weight molecular proteins. Cadmium is a high affinity zinc analog and can interfere in its biological processes. It also binds to and activates the estrogen receptor, likely stimulating the growth of certain types of cancer cells and causing other estrogenic effects, such as reproductive dysfunction. Cadmium causes cell apoptosis by activating mitogen-activated protein kinases. (L8, A18, A19, A28)

Evidence for Carcinogenicity:

Evidence that this chemical does or may cause cancer. The information here is collected from various sources by the Hazardous Substances Data Bank (HSDB).

>> Evaluation: There is sufficient evidence in humans for the carcinogenicity of cadmium and cadmium compounds. There is sufficient evidence in experimental animals for the carcinogenicity of cadmium compounds. There is limited evidence in experimental animals for the carcinogenicity of cadmium metal. In making the overall evaluation, the Working Group took into consideration the evidence that ionic cadmium causes genotoxic effects in a variety of types of eukaryotic cells, including human cells. Overall evaluation: Cadmium and cadmium compounds are carcinogenic to humans (Group 1).

Carcinogen Classification:

This section provides the International Agency for Research on Cancer (IARC) Carcinogenic Classification and related monograph links. In the IARC Carcinogenic classification, chemicals are categorized into four groups: Group 1 (carcinogenic to humans), Group 2A (probably carcinogenic to humans), Group 2B (possibly carcinogenic to humans), and Group 3 (not classifiable as to its carcinogenicity to humans).

>> 1, carcinogenic to humans. (L135)

Health Effects:

>> Chronic exposure to cadmium fumes can cause chemical pneumonitis, pulmonary edema, and lung diseases such as bronchitis and emphysema. Cadmium also accumulates in the kidneys, causing permanent damage. Loss of bone density also occurs. (L6)

Exposure Routes:

>> The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

>> Oral (L6) ; inhalation (L6) ; dermal (L6)

Inhalation Exposure

>> Cough. Laboured breathing. Symptoms may be delayed.

Skin Exposure

>> Redness.

Eye Exposure

>> Redness. Pain.

Ingestion Exposure

>> Abdominal pain. Burning sensation. Diarrhoea. Nausea. Vomiting.

>> Acute inhalation of cadmium fumes results in metal fume fever, which is characterized by chills, fever, headache, weakness, dryness of the nose and throat, chest pain, and coughing. Ingestion of cadmium causes vomiting and diarrhea. (L6)

Adverse Effects:

An adverse effect is an undesired harmful effect resulting from a medical treatment or other intervention.

>> Nephrotoxin – The chemical is potentially toxic to the kidneys in the occupational setting.

>> Reproductive Toxin – A chemical that is toxic to the reproductive system, including defects in the progeny and injury to male or female reproductive function. Reproductive toxicity includes developmental effects. See Guidelines for Reproductive Toxicity Risk Assessment.

Toxicity Data:

>> LC90 (dogs) = 420 mg/m3/30min

Minimum Risk Level:

The minimal risk level (MRL) is an estimate of the amount of a chemical a person can eat, drink, or breathe each day without a detectable risk to health

>> Acute Inhalation: 0.00003 mg/m3 (L134) Chronic Inhalation: 0.00001 mg/m3 (L134) Intermediate Oral: 0.0005 mg/kg/day (L134) Chronic Oral: 0.0001 mg/kg/day (L134)

Treatment:

Treatment when exposed to toxin

>> Cadmium poisoning is treated by removal from exposure and supportive care. If ingested, induced vomiting or gastric lavage may be performed. (L139)

Interactions:

>> THE RELATIVE EFFICACY OF A NUMBER OF CHELATING AGENTS WHEN ACTING AS ANTAGONISTS FOR ORAL CADMIUM CHLORIDE INTOXICATION IN MICE WAS STUDIED. THE CMPD WERE ADMINISTERED ORALLY AFTER THE ORAL ADMINISTRATION OF CADMIUM CHLORIDE AT 1 MMOL/KG. BY FAR THE MOST EFFECTIVE IN BOTH ENHANCING SURVIVAL AND LEAVING MINIMAL RESIDUAL LEVELS OF CADMIUM IN THE LIVER AND THE KIDNEY, WAS MESO-2,3-DIMERCAPTOSUCCINIC ACID. SEVERAL POLYAMINOCARBOXYLIC ACIDS ALSO ENHANCED SURVIVAL. THE MOST EFFECTIVE OF THESE IN REDUCING LIVER AND KIDNEY LEVELS OF CADMIUM WERE DIETHYLENETRIAMINEPENTAACETIC ACID, TRANS-1,2-DIAMINOCYCLOHEXANE-N,N,N',N'-TETRAACETIC ACID, AND TRIETHYLENETETRAMINEHEXAACETIC ACID. D-PENICILLAMINE PROMOTED SURVIVAL BUT ALSO LED TO KIDNEY CADMIUM LEVELS HIGHER THAN THOSE FOUND IN THE CONTROLS. SODIUM 2, 3-DIMERCAPTOPROPANE-1-SULFONATE WAS AS EFFECTIVE IN PROMOTING SURVIVAL AS

MESO-2,3-DIMERCAPTOSUCCINIC ACID BUT LEFT LEVELS OF CADMIUM IN THE KIDNEY AND LIVER THAT WERE APPROXIMATELY 4 TIMES GREATER THAN THOSE FOUND WITH MESO-2,3-DIMERCAPTOSUCCINIC ACID.

Antidote and Emergency Treatment:

>> Exptl Therapy: Quinamic acid, bis-(3-carboxy-5-N-dicarboxymethyl-aminomethyl-6,7-dihydroxy-1,2,3,4-tetrahydroisoquinolinyl-8)-5,8-dimethyl-6,7-dihydroxyl-1,2,3,4-tetrahydroisoquinoline-3-carboxylic acid, is a new chelating agent. Quinamic acid iv 500 mg/kg markedly reduced the mortality of acute ip poisoning of zinc sulfate, nickel chloride, cadmium chloride and uranyl nitrate in mice ($p < 0.01$). ... Within two weeks, treated rats showed less toxic reactions and renal /damage/ than the control rats. The activity of urinary catalase in treated rats was significantly lower than in controls.

Human Toxicity Excerpts:

>> /SIGNS AND SYMPTOMS/ THE DEPOSITION OF CADMIUM IN THE OLFACTORY BULBS MAY BE RELATED TO THE ANOSMIA REPORTED IN WORKERS EXPOSED TO THIS METAL.

Non-Human Toxicity Excerpts:

>> /LABORATORY ANIMALS: Acute Exposure/ Intestinal inflammation is an indispensable protective response of the gut immune system to aggressive injury from pathogens and/or chemicals. Although the major route of exposure to cadmium for most people is via food, causing the gastrointestinal tract to become the first target organ, very little information is available on whether cadmium exposure triggers the intestinal inflammatory response. We investigated in the present study the acute inflammatory response in the intestines of mice orally challenged with a single dose of cadmium chloride (CdCl_2) by determining the gene expression of pro-inflammatory mediators with real-time /polymerase chain reaction/, and by examining the infiltration of inflammatory cells with a myeloperoxidase (MPO) assay and histological analysis of hematoxylin and eosin (H&E)-stained intestinal sections. The results show that CdCl_2 significantly increased the expression of macrophage inflammatory protein-2 mRNA (30-40 times the normal level) 3 hr and the activity of MPO (about 2 times the normal level) 24 hr after the challenge in the duodenal and proximal jejunal tissue. Furthermore, these increases were dose-dependent over a dosage range of 25-100 mg/kg of body weight. The histological analysis confirmed that CdCl_2 induced mild to moderate villus damage and infiltration of inflammatory cells into the lamina propria. All these results demonstrate that oral exposure to CdCl_2 triggered an acute inflammatory response in the proximal intestine of mice, suggesting that the gut immune system was involved in the toxic effects of Cd on the gastrointestinal tract.

Non-Human Toxicity Values:

>> LD50 Rat oral 88 mg/kg

TSCA Test Submissions:

Under the Toxic Substances Control Act (TSCA), EPA has broad authority to issue regulations designed to require manufacturers (including importers) or processors to test chemical substances and mixtures for health and environmental effects. This section provides information on test reports submitted for this chemical under TSCA.

>> Cadmium chloride (CAS # 10108-64-2) was evaluated for effects on male fertility in 6 sexually mature New Zealand White rabbits administered single subcutaneous injections (volume, aqueous dilution unspecified) of 9.1 mg/kg bodyweight (1/2 LC50 in another acute study). Semen was collected twice a week from artificial vaginas into which treated rabbits were trained to ejaculate. Examination of semen volume, density, motility, and morphology following various treatments revealed the particular chemical effects on testicular function and male reproduction, while also indicating the relative sensitivity of this system of reproductive analysis. A 9.1 mg/kg dose of cadmium chloride killed 4/6 male rabbits between Day 2 and approximately 1 month post-injection. Sperm morphology best reflected the toxic effects of cadmium chloride on sperm quality, with abnormal forms appearing within 1 week post-injection. All stages of sperm development were thus effected at this acutely toxic dose. Likewise, both volume and motility decreased significantly by Week 7 in the 2 surviving rabbits, with return to normal measures in both reproductive parameters by the 11th week of study. No effect on sperm volume was noted in the 2 rabbits surviving to the end of 12-week study.

12. Ecological Information

ICSC Environmental Data:

>> The substance is toxic to aquatic organisms. Bioaccumulation of this chemical may occur in plants. It is strongly advised not to let the chemical enter into the environment.

13. Disposal Considerations

Spillage Disposal

- >> Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Disposal Methods

- >> Generators of waste (equal to or greater than 100 kg/mo) containing this contaminant, EPA hazardous waste number D006, must conform with USEPA regulations in storage, transportation, treatment and disposal of waste.
- >> Generators of waste (equal to or greater than 100 kg/mo) containing this contaminant, EPA hazardous waste number D006, must conform with USEPA regulations in storage, transportation, treatment and disposal of waste. /Cadmium/
- >> SRP: At the time of review, criteria for land treatment or burial (sanitary landfill) disposal practices are subject to significant revision. Prior to implementing land disposal of waste residue (including waste sludge), consult with environmental regulatory agencies for guidance on acceptable disposal practices.

14. Transport Information

DOT

Cadmium chloride

6.1

UN Pack Group: III

Reportable Quantity of 10 lb or 4

IATA

Cadmium chloride

6.1,

UN Pack Group: III

15. Regulatory Information

Federal Drinking Water Standards:

Federal drinking water standards (e.g. maximum containment level (MCL)) for this chemical. These standards are legally enforceable.

- >> Maximum contaminant levels for inorganic contaminants: 0.005 mg/L /Cadmium/

Federal Drinking Water Guidelines:

Federal drinking water guidelines (e.g. maximum containment level (MCL)) for this chemical. In general, these guidelines are recommendations and not legally enforceable.

- >> Maximum contaminant level goals for inorganic contaminants: 0.005 mg/L /Cadmium/

State Drinking Water Standards:

State drinking water standards (e.g. maximum containment level (MCL)) for this chemical. These standards are legally enforceable.

- >> (AZ) ARIZONA 10 ug/L /Cadmium/

Clean Water Act Requirements:

The Clean Water Act (CWA) of 1972 establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under CWA, the U.S. Environmental Protection Agency (EPA) developed the Toxic Pollutant List (40 CFR Part 401.15) and the Priority Pollutant List (40 CFR Part 423, Appendix A). These lists are to be used by EPA and States to develop the Effluent Guidelines regulations and ensure water quality criteria and standards.

- >> Cadmium chloride is designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to

discharges of this substance. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing this substance.

Regulatory Information

The Australian Inventory of Industrial Chemicals

>> Chemical: Cadmium chloride (CdCl₂)

REACH Registered Substance

>> Status: Active Update: 28-09-2022 <https://echa.europa.eu/registration-dossier/-/registered-dossier/14430>

REACH Restricted Substance

>> Restricted substance: Cadmium chloride

>> EC: 233-296-7

REACH Substances of Very High Concern (SVHC)

>> Substance: Cadmium chloride

>> EC: 233-296-7

>> Date of inclusion: >16-Jun-2014

>> Reason for inclusion: Carcinogenic (Article 57a); Mutagenic (Article 57b); Toxic for reproduction (Article 57c); Specific target organ toxicity after repeated exposure (Article 57(f) – human health)

New Zealand EPA Inventory of Chemical Status

>> Cadmium chloride: HSNO Approval: HSRO04389 Approved with controls

16. Other Information

Other Safety Information

Chemical Assessment

>> IMAP assessments – Cadmium chlorides and sulfates: Human health tier II assessment

>> IMAP assessments – Water soluble cadmium(2+) salts: Environment tier II assessment

"The information provided is believed to be accurate but is not comprehensive and should be used as a reference. It reflects our current knowledge and is intended for safety guidance related to the product. This document does not constitute a warranty of the product's properties. lonz is not responsible for any damages resulting from handling or contact with the product incorrectly."