

mg/m3/30M.

**Carcinogenicity:**

CAS# 7790-78-5:

- **ACGIH:** A2 - Suspected Human Carcinogen (listed as 'Cadmium compounds').
- **California:** carcinogen, initial date 10/1/87 (listed as Cadmium compounds).
- **NTP:** Known carcinogen (listed as Cadmium compounds).
- **IARC:** Group 1 carcinogen (listed as Cadmium compounds).

CAS# 10108-64-2:

- **ACGIH:** A2 - Suspected Human Carcinogen (listed as 'Cadmium compounds').
- **California:** carcinogen, initial date 10/1/87 (listed as Cadmium compounds).
- **NTP:** Known carcinogen (listed as Cadmium compounds).
- **IARC:** Group 1 carcinogen

**Epidemiology:** Studies suggest that occupational inhalation of cadmium is correlated with an increased lung cancer risk. Please refer to Patty's Industrial Hygiene and Toxicology and IARC volume 11 for a more detailed discussion.

**Teratogenicity:** Cadmium has been shown to be teratogenic or embryotoxic in several animal species, causing a variety of major malformations, including defects of the brain, face, lungs, limbs, and abdominal viscera. In some models (such as the rat), cadmium shows prominent toxicity for the placenta, and cadmium has been associated with fetal growth retardation in this animal. In vitro studies suggest that cadmium is likely to be toxic to the human placenta.

**Reproductive Effects:** A number of animal experiments have investigated the toxicity of cadmium on male reproductive function. In high doses and after chronic administration, Cd produces vascular changes and ischemic (affected with deficiency of blood) necrosis in the testes. Single low dose studies have indicated that Cd can have selective effects on sperm formation, impairing the release of sperm from the seminiferous epithelium in the rat. Also, at low doses that don't interfere with testicular function, Cd exposure in rats has been associated with an increased incidence of prostate tumors. Reports on testicular & endocrine function in men occupationally exposed to Cd are quite limited, & no clearly identified testicular toxicity has been demonstrated in these workers.

**Mutagenicity:** DNA Damage: hamster embryo 2 umol/L, mammal lymphocyte 350 umol/L. DNA Inhibition: hamster lung and mammal kidney 2 umol/L. Unscheduled DNA Synthesis: hamster embryo 10 umol/L. Gene Mutation in Mammal Cells: hamster lung 1 umol/L.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Bluegill/Sunfish: 1.94ppm; 96H; Japanese quail, oral LC50=2584 ppm/5D Ring-necked pheasant, oral LC50=767 ppm/5D

**Environmental:** Substance is mobile in water (movement as hydrated cations or as complexes). Absorption (soil) is dependent on pH with increasing values for alkaline conditions. Cadmium chloride is expected to significantly bioaccumulate. CdCl2 bioconcentrates in fish and aquatic organisms.

**Physical:** No information available.

**Other:** No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	CADMIUM COMPOUNDS	Cadmium Compounds
<b>Hazard Class:</b>	6.1	6.1
<b>UN Number:</b>	UN2570	UN2570
<b>Packing Group:</b>	III	III

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7790-78-5 is not listed on the TSCA inventory. It is for research and development use only.

CAS# 10108-64-2 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

#### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

#### **CERCLA Hazardous Substances and corresponding RQs**

CAS# 10108-64-2: 10 lb final RQ; 4.54 kg final RQ

#### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

#### **SARA Codes**

CAS # 7790-78-5: immediate, delayed.

CAS # 10108-64-2: immediate, delayed.

#### **Section 313**

This material contains Cadmium chloride hemipentahydrate (listed as Cadmium compounds), 100%, (CAS# 7790-78-5) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Cadmium chloride anhydrous (listed as Cadmium compounds), -%, (CAS# 10108-64-2) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

#### **Clean Air Act:**

CAS# 7790-78-5 (listed as Cadmium compounds) is listed as a hazardous air pollutant (HAP).

CAS# 10108-64-2 (listed as Cadmium compounds) is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### **Clean Water Act:**

CAS# 10108-64-2 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA. CAS# 7790-78-5 is listed as a Toxic Pollutant under the Clean Water Act. CAS# 10108-64-2 is listed as a Toxic Pollutant under the Clean Water Act.

#### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

#### **STATE**

CAS# 7790-78-5 can be found on the following state right to know lists: California, (listed as Cadmium compounds), New Jersey, (listed as Cadmium compounds), Pennsylvania, (listed as Cadmium compounds), Minnesota, (listed as Cadmium compounds).

CAS# 10108-64-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Cadmium compounds), Massachusetts.

#### **California Prop 65**

##### **The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:**

WARNING: This product contains Cadmium chloride hemipentahydrate, listed as 'Cadmium compounds', a chemical known to the state of California to cause cancer. WARNING: This product contains Cadmium chloride anhydrous, listed as 'Cadmium compounds', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

#### **European/International Regulations**

##### **European Labeling in Accordance with EC Directives**

##### **Hazard Symbols:**

T+ N

##### **Risk Phrases:**

R 25 Toxic if swallowed.

R 26 Very toxic by inhalation.

R 45 May cause cancer.

R 46 May cause heritable genetic damage.

R 48/23/25 Toxic : danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R 60 May impair fertility.

R 61 May cause harm to the unborn child.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

##### **Safety Phrases:**

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S 53 Avoid exposure - obtain special instructions before use.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

##### **WGK (Water Danger/Protection)**

CAS# 7790-78-5: No information available.

CAS# 10108-64-2: No information available.

##### **Canada - DSL/NDSL**

CAS# 10108-64-2 is listed on Canada's DSL List.

##### **Canada - WHMIS**

This product has a WHMIS classification of D1A, D2A.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

##### **Canadian Ingredient Disclosure List**

CAS# 7790-78-5 (listed as Cadmium compounds) is listed on the Canadian Ingredient Disclosure List.

CAS# 10108-64-2 is listed on the Canadian Ingredient Disclosure List.

## **Section 16 - Additional Information**

**MSDS Creation Date:** 9/02/1997

**Revision #6 Date:** 6/06/2006

Revision to Page 9, 10, 2000

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of 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 Fisher 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 Fisher has been advised of the possibility of such damages.*