



Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Cadmium Granules	
NCL Catalog Number	C-1	
Product Description	Laboratory chemical	
Manufacturer	EMD Chemicals Inc.	PO Box 70, 480 Democrat Road Gibbstown, NJ 08027
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Acute Toxicity	Oral Category 3
Acute Toxicity	Inhalation Category 2
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity	Repeated Exposure Category 1
Aquatic Acute	Category 1
Aquatic Chronic	Category 1



Signal Word

Danger

Hazard Statements

H301	Toxic if swallowed.
H330	Fatal if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H361	Suspected of damaging 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 Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust.
P264	Wash exposed 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	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P330	Rinse mouth.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or 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 comply with local, state and federal regulations.
Other Hazards Not Contributing to the Classification	None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Formula	Cd
Common Name	Not applicable
<u>Substance</u>	

Name	CAS #	Approximate %
Cadmium	7440-43-9	100

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures	Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.
If Inhaled	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
In Case of Skin Contact	Remove contaminated clothing and shower/wash exposed skin with mild soap and water. Rinse with warm water. Do not apply chemical neutralizing agents. Take victim immediately to a hospital. Consult a physician.
In Case of Eye Contact	Immediately flush eyes with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER or doctor/physician if irritation persists.
If Swallowed	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most Important Symptoms/Effects Acute and Delayed

No additional information.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical advice if you feel unwell.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	None known

Special Hazards Arising from the Chemical

Cadmium/cadmium oxides

Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray. Dilute toxic gases with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions	Use personal protective equipment (see section 8). Safety glasses, gloves, gas/dust mask. Avoid dust formation. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation and evacuate personnel to safe areas.
Environmental Precautions	Prevent entry to surface and ground waters.
Methods and Materials for Containment and Cleaning Up	Prevent formation of dust. Pick up and arrange disposal. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

**Conditions for Safe Storage
Including any Incompatibilities**

Keep in original container, tightly closed and stored in a cool, dry, ventilated area. Store away from sunlight, which can contribute to instability. Store away from strong acids, strong oxidizers, and heat sources.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Cadmium (7440-43-9)		
USA ACGIH	ACGIH TWA	0.01 mg/m ³
USA ACGIH	ACGIH TWA TLV	0.002 mg/m ³
USA OSHA	OSHA TWA Occupational Exposure Limits (fume)	0.1 mg/m ³
USA OSHA	OSHA TWA Occupational Exposure Limits (dust)	0.2 mg/m ³
USA OSHA	OSHA Ceiling Occupational Exposure Limits	0.3 mg/m ³
USA OSHA	OSHA Ceiling Occupational Exposure Limits	0.6 mg/m ³
USA OSHA	OSHA PEL Specifically Regulated Chemicals/Carcinogens	0.005 mg/m ³
USA ACGIH	ACGIH – Biological Exposure Indices (BEI) (Urine)	0.005 mg/m ³
USA ACGIH	ACGIH – Biological Exposure Indices (In Blood)	5 ug/l

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures

Avoid all unnecessary exposure.

Eye/Face Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.

Skin Protection

Protective gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection

Wear appropriate mask.

Other Information

Do not eat, drink or smoke when using this product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid, granular
Color	Light grey
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	320.9°C/Not determined
Initial Boiling Point and Boiling Range	765°C
Flash Point	Not applicable
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	<0.1 hPa
Vapor Density	Not determined
Relative Density	8.65 g/cm ³ at 25°C
Solubility	Not determined
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	Not determined
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	Incompatible materials and moisture.
Incompatible Materials	Oxidizing agents and acids.
Hazardous Decomposition Products	Keep container tightly closed, stored in a cool, dry, ventilated area.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity Toxic if swallowed. Fatal if inhaled.

Cadmium (7440-43-9)	
LD50 oral rat	225 mg/kg
LD50 inhalation rat	25 mg/m ³

Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Not classified
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	In vitro tests showed mutagenic effects.
Carcinogenicity	Possible human carcinogen. IARC: Group 1 Carcinogenic to humans. NTP: Known to be a human carcinogen. OSHA: OSHA specifically regulated carcinogen.
Reproductive Toxicity	Suspected human reproductive toxicant.
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 classified
Potential Adverse Human Health Effects and Symptoms	No data available
Other Information	Damage to the lungs, kidney injury may occur. Prolonged or repeated exposure can cause vomiting, diarrhea, and lung irritation. Causes stomach irregularities.

SECTION 12: ECOLOGICAL INFORMATION

Ecology – Water Toxicity

Cadmium (7440-43-9)	
Toxicity to fish	Mortality LOEC – Oncorhynchus mykiss: 0.0015 mg/l -96h LC50-Pimephales promelas: 1.0 ug/l – 96h
Toxicity to daphnia and other aquatic invert.	Mortality NOEC – Daphnia: 0.019 mg/l Mortality LOEC – Daphnia: 0.039 mg/l – 24h
Toxicity to algae	Growth inhibition IC50 – Chaetoceros sp.: 0.028 mg/l – 48 h

Persistence and Degradability	Not established.
Bioaccumulative Potential	Oncorhynchus mykiss: 72 d-1.27 ug/l Bioconcentration factor (BCF): 55
Mobility in Soil	Not established
Other Adverse Effects	Avoid release to the environment. Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations Dispose of contents/containers in accordance with local, state and federal regulations. Hazardous waste shall not be mixed together with other waste.

Other Information Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number 3288

UN Shipping Name Toxic solid, inorganic, n.o.s. (Cadmium)

Transport Hazard Class(es) 6.1 – Poisonous materials

Packing Group II

Environmental Hazards Not applicable

Transport in Bulk Not applicable

Other Precautions Not applicable

SECTION 15: REGULATORY INFORMATION

Cadmium (7440-43-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: OTHER INFORMATION

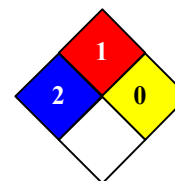
Revision Date: 04/06/2015

NFPA Hazards

Health Hazard 2: Intense or prolonged exposure may cause incapacitation; residual injury may occur if not treated.

Fire Hazard 1: Must be preheated for ignition; flashpoint above 200°F (93°C).

Reactivity/Instability 0: Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health 2: Temporary or minor injury may occur.

Flammability 1: Materials that must be preheated before ignition will occur. Includes liquids, solids and semisolids having a flashpoint above 200°F (93°C) (e.g., Canola oil).

Physical Hazard 0: Materials that are normally stable.

Personal Protection C

A-10C	
Health	2
Flammability	1
Physical Hazard	0
Personal Protection	C

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END OF SAFETY DATA SHEET