



SAFETY DATA SHEET

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SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Cadmium Nitrate tetrahydrate**

PRODUCT NUMBER: 1351

CAS NUMBER: 10022-68-1

SYNONYMS: Cadmium dinitrate tetrahydrate

MANUFACTURER:

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

Danger

Hazard Statements

H272	May intensify fire, oxidizer.
H301	Toxic if swallowed.
H302 + H312 + H332	Harmful if swallowed, in contact with skin, or if inhaled.
H312	Harmful in contact with skin.
H330	Fatal if inhaled.
H350	May cause cancer.
H360	May damage 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 Phrases

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220	Keep/Store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash 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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

SECTION 2 HAZARDS IDENTIFICATION (Cont.)

P281	Use personal protective equipment as required.
P284	Wear respiratory protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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 victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor.

HMIS CLASSIFICATION:

Health: 3 Chronic: * Fire: 2 Reactivity Hazard: 2

NFPA RATING:

Health: 4 Flammability: 3 Reactivity Hazard: 1 Special: OX

EYE CONTACT: May cause slight to mild irritation of the eyes.

SKIN CONTACT: May cause slight to mild irritation of the skin.

INHALATION: Inhalation of dust and fumes can lead to a cough, headache, shortness of breath, chest pains, pulmonary edema, and death.

INGESTION: Ingestion may lead to sudden nausea, vomiting, bloody diarrhea, weakness, convulsions, and death.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: $Cd(NO_3)_2 \cdot 4H_2O$

Molecular Weight: 308.48

CHEMICAL NAME	CAS#	%
Cadmium Nitrate Tetrahydrate	10022-68-1	100

SECTION 4 FIRST AID MEASURES

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 FIREFIGHTING MEASURES

FLASH POINT: Product is not flammable

AUTO IGNITION TEMPERATURE: Not available

EXPLOSION LIMITS: Not available

EXTINGUISHING MEDIUM: Use fire fighting measures that suit the surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: Nitrogen oxides and cadmium oxides.

SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust.

ENVIRONMENTAL PRECAUTIONS: Prevent spillage from entering drains or allowing to be released into the environment.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: Pick up and arrange disposal without creating dust. Sweep up and keep in suitable, closed containers for disposal.

SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Wear appropriate personal protective equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust. Handle under inert gas.

CONDITIONS FOR SAFE STORAGE: Store in cool, dry, and well-ventilated area. Hygroscopic. Store away from flammable substances, reducing agents, metal powders, oxidizing agents, and organic materials.

SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity
Cadmium Nitrate	0.01 mg/m ³	TWA	ACGIH
	0.0020 mg/m ³	TWA	ACGIH
	0.005 mg/m ³	PEL	OSHA

TWA: Time Weighted Average over 8 hours of work.

PEL: Permissible Exposure Limit

EYE PROTECTION: Wear chemical safety glasses or goggles and face shield.

SKIN PROTECTION: Wear nitrile or rubber gloves, apron, or lab coat.

VENTILATION: Provide local exhaust, preferably mechanical.

RESPIRATOR: Use an approved respirator.

ADDITIONAL PROTECTION: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

COLOR AND FORM: White solid

ODOR: Weakly of nitric acid

MOLECULAR WEIGHT: 308.46

BOILING POINT: 132° C

MELTING POINT: 59° C

SPECIFIC GRAVITY: 2.45

SOLUBILITY IN WATER: Soluble

SECTION 10 STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Will not occur

CONDITIONS TO AVOID: Avoid moisture and air. Combustible material. Excess heat.

INCOMPATIBILITY: Oxidizing agents, water, and moisture. Organic materials, metals, copper, reducing agent, strong reducing agents, combustible material.

DECOMPOSITION PRODUCTS: Nitrogen oxides and cadmium oxide

SECTION 11 TOXICOLOGICAL DATA

ACUTE TOXICITY: LD50 Oral – rat – 300 mg/kg.

CARCINOGENIC EFFECTS: Considered a human carcinogen

MUTAGENIC EFFECTS: Not available

TETRAOGENIC EFFECTS: Not available

RTECS: Not available

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 ECOLOGICAL DATA

TOXICITY TO FISH: LC50-Ictalurus punctatus-4.48 mg/l – 96 h. LC50-Pimephales promelas (fathead minnow) – 0.0132 mg/l – 96 h

TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES: Static test EC50- Daphnia pulex (Water flea) – 0.048 mg/l – 48h. LC50-Daphnia magna (Water flea) – 0.023 mg/l – 48 h

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

SECTION 14 TRANSPORTATION DATA

UN3087

Oxidizing solid, toxic, n.o.s.

(Cadmium Nitrate Tetrahydrate)

Class 5.1 (6.1)

PG II

Marine Pollutant: No

SECTION 15 REGULATORY INFORMATION

TSCA: Not listed in the TSCA inventory

SARA 302/304: Not listed

SARA 311/312: Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

SARA (TITLE 313): Cadmium nitrate tetrahydrate

MASSACHUSETTS RIGHT TO KNOW: Not listed

PENNSYLVANIA RIGHT TO KNOW: Cadmium nitrate tetrahydrate

NEW JERSEY RIGHT TO KNOW: Cadmium nitrate tetrahydrate

ILLINOIS RIGHT TO KNOW: Cadmium nitrate tetrahydrate

RHODE ISLAND RIGHT TO KNOW: Cadmium nitrate tetrahydrate

CALIFORNIA PROP. 65: Cadmium nitrate tetrahydrate

SECTION 16 OTHER INFORMATION

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SDS DEPT.