



Fisher Science Education

A Fisher Scientific Company
fisheredu.com

MATERIAL SAFETY DATA SHEET

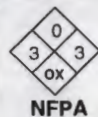
485 South Frontage Road
Burr Ridge, IL 60521
Tel: 1-800-255-1177
Fax: 1-800-955-0740

MSDS No. CC0020
Effective Date January 1, 2004

SECTION I NAME

Product	Cadmium Nitrate, Tetrahydrate
Chemical Synonyms	Cadmium Nitrate, Tetrahydrate
Formula	$\text{Cd}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$
Unit Size	up to 2.5 Kg.
C.A.S. No.	10022-68-1

24 HOUR EMERGENCY ASSISTANCE



CHEMTREC
800-424-9300
Day 716-226-6177

Health	3
Fire	0
Reactivity	3

NFPA

HAZARD RATING
MINIMAL SLIGHT MODERATE SERIOUS SEVERE
0 1 2 3 4

HMIS *

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Cadmium Nitrate, Tetrahydrate	100%	See Section V.

DANGER! STRONG OXIDIZER! MAY BE FATAL IF SWALLOWED, INHALED OR

ABSORBED THROUGH SKIN. IRRITANT TO SKIN, EYES OR MUCOUS MEMBRANES.

SECTION III PHYSICAL DATA

Melting Point (°F)	59.5°C (139°F)	Specific Gravity ($\text{H}_2\text{O} = 1$)	2.455
Boiling Point (°F)	132°C (269°F)	Percent Volatile by Volume (%)	N/A
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	Freely soluble in water.		
Appearance & Odor	White amorphous crystals, pieces or hygroscopic needles; no odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-combustible.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Extinguisher Media	Water spray; dry chemical; alcohol foam; carbon dioxide.				

SPECIAL FIREFIGHTING PROCEDURES

In the event of a fire, wear full protective clothing and NIOSH/MSHA-approved, self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 141)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Contact with oxidizable substances may cause extremely violent combustion. **EXPLOSION:** Strong oxidants may explode when shocked, or if exposed to heat, flame or friction. Also may act as initiation source for dust or vapor explosions.

D.O.T. Oxidizing solid, toxic, n.o.s., (Cadmium nitrate), 5.1, UN3087, PG II

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V

Threshold Limited Value

HEALTH HAZARD DATA

CC0020

ACGIH (as Cadmium) - TLV 8-hour TWA (dust) 0.05 mg/m³; Fume 0.05 mg/m³.
OSHA-PEL 8-hour TWA (dust) 0.2 mg/m³; 0.1 mg/m³. ACGIH STEL 0.2 mg/m³.
RTECS No. EV1850000; Oral-rat LD50 300 mg/kg.

Effects of Overexposure

Material is extremely destructive to tissues of the mucous membranes, upper respiratory tract, eyes and skin. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache. Ingestion may cause nausea, vomiting, diarrhea, abdominal cramps. May cause damage to kidneys, lungs. May cause chemical pneumonitis and pulmonary edema. Cadmium compounds are known carcinogens based on tests with laboratory animals. Target organs: Liver, kidneys, blood.

Emergency and First Aid Procedures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI

REACTIVITY DATA

Stability	Unstable	Stable	Conditions to Avoid	Stable under ordinary conditions of use and storage. Excessive temperature and heat.
		X		

Incompatibility (Materials to Avoid)

Reducing agents, hydrides, halogen, combustible material. Easily oxidizable material.

Hazardous Decomposition Products

Oxides of nitrogen. Cadmium metal as dust or fume.

Hazardous Polymerization

Conditions to Avoid

May Occur	Will Not Occur
	X

Not applicable.

SECTION VII

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Clean-up personnel require protective clothing and respiratory protection from dust. Sweep up and collect in a suitable container and send to RCRA-approved waste disposal facility. Do NOT flush to sewer.

Waste Disposal Method

Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.

SECTION VIII

SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) If dusty or fume conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator for fumes.

Ventilation	Local Exhaust	Recommended.	Special	No.
	Mechanical (General)	Recommended.	Other	Adequate to maintain below exposure limits.

Protective Gloves

Rubber.

Eye Protection

Goggles.

Other Protective Equipment

Goggles with face shield, lab coat, ventilation hood, proper gloves, eye wash station.

SECTION IX

SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use. Store in cool, dry, well-ventilated area away from flammable and oxidizable materials. Wash thoroughly after handling.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Avoid breathing dust. Avoid contact with eyes, skin and clothing. Do not enter storage area unless adequately ventilated. Use with adequate ventilation. Remove and wash contaminated clothing.

Revision No. 8	Date 01/01/04	Approved Michael Raszeja	Chemical Safety Coordinator MR
----------------	---------------	--------------------------	--------------------------------

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards. Printed on recycled paper.