



## MATERIAL SAFETY DATA SHEET

ROLF C. HAGEN INC., 3225 SARTELON,  
MONTREAL, QUEBEC, H4R 1E8

### NO3 #3 (A-7848)

Section I. Product identification and uses		Section II. Hazardous ingredients	
Product name	Nitrate reagent # 3	- Cadmium metal	2 % W/W
Chemical formula	Mixture	CAS: 7440-43-9	TLV: Exposure limits: ACGIH TLV TWA: 0,01 mgC Cd ) / m3 MSHA Standard-air: TWA 0,2 mg/m3
Chemical family	Mixture	- Ethoxydiglycol	98 %
Material uses	Reagent to determine nitrate level in water	CAS: 111-90-0	TLV: Not available
Section III. Physical data			
Physical state and appearance/ Odour	Suspension of metal in liquid.		
pH	6.0 - 7.0		
Percent volatile	Not available		
Freezing point	Not available		
Boiling point	Not available		
Specific gravity	1		
Vapour density	Not available		
Vapour pressure	Not available		
Evaporation rate	Not available		
Solubility	Insoluble in water.		
Section IV. Fire and explosion data			
- Flash point: > 80 °C      - Flammable limits: UPPER : 23,5% volume in air at 182 °C ; LOWER : 1,2% volume in air at 135 °C.			
Section V. Reactivity data			
- Stability: Stable. Condition to avoid: High temperature, sparks, open flames and all other sources of ignition and contamination.			

Section VI. Toxicological properties	
<b>Routes of entry</b>	
Effects of acute exposure	May be fatal by ingestion, inhalation or skin absorption. Irritant! Cadmium is a cumulative poison and even exposure to small amounts can raise the body's content to toxic levels. Target organs: respiratory system, lungs, kidneys, prostate, blood and liver. Danger of serious irreversible affects.
Eye	Will irritate the eyes and prolonged contact may damage the eyes. May cause permanent damage.
Skin	Contact may cause irritation or burns. Readily absorbed through skin. See inhalation.
Inhalation	If inhaled, causes nose and throat irritation. Prolonged or repeated exposure can lead to cadmium poisoning ( see ingestion ).
Ingestion	Highly toxic! Symptoms of cadmium poisoning may result in abdominal pain, nausea, headache, salivation, vomiting, muscle pain, dizziness, diarrhea, chills, cardiac depression, kidney damage and death possible.
Effects of chronic overexposure	The chronic exposure to cadmium are the same cause by ingestion. Carcinogen. Overall IARC evaluation of carcinogenic risk: group 2A. Proven by NTP. To the best of our knowledge, the chemical, physical and toxicity of this substance has not been fully investigated.
Section VII First aid measures	
Eye contact	Immediately flush with copious quantities of water for at least 20 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.
Skin contact	Remove the contaminated clothes and flush with plenty of water and soap. Seek immediate medical attention.
Inhalation	If inhaled, remove patient to fresh air. If syndromes persist, get medical attention immediately.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water or milk. Induce vomiting of conscious victim by pressing finger down throat, while keeping victim's head below hips to prevent aspiration of liquid into lungs. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

Section VIII. Preventive measures	
Protective clothing in case of spill and leak	Not applicable
Spill and leak	Absorb spill with inert material such as clays, sand, earth or vermiculite and place in closed container for disposal. Clean the spill area after product complete removal. DO NOT empty into drain.
Waste disposal	According to all applicable regulations.
Storage and handling	Store in cool dry place. Keep containers closed and in upper position.

Section IX. Protective measures	
Protective clothing	Not applicable
Engineering controls	Not applicable

Section X. Other information	
Special precautions or comments	Highly toxic! Carcinogen! Teratogen! Reproductive toxin! Mutagen! Neurotoxic! Avoid all contact with product. Always wash hands after manipulation of product containers, and before eating.

Prepared by Rolf C. Hagen Inc. (514) 332-0914	Validated January 19, 2005	MSDS A7848
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