



MATERIAL SAFETY DATA SHEET

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

NO3 #2 (A-7847)

Section I. Product identification and uses		Section II. Hazardous ingredients
Product name	Nitrate # 2 reagent	- 1,2-Propanediol, 80-90% CAS: 57-55-6 TLV: Not established by ACGIH: AIHA WEEL 10mg/m3 (Aerosols only) - Acetic acid, glacial, 10-20% CAS: 64-19-7 TLV: Exposure limits: ACGIH TWA 10ppm (25mg/m3); STEL 15ppm (37mg/m3) - N-(1-naphthyl)-ethylenediamine dihydrochloride, 1-5% CAS: 1465-25-4 TLV: Not established by ACGIH
Chemical formula	Mixture	
Chemical family	Mixture	
Material uses	Reagent to determine nitrate in water.	
Section III. Physical data		
Physical state and appearance/ Odor	Liquid with pungent, vinegar like odor.	
pH (10%)	2.4 – 2.8	
Percent volatile	100%(V/V)	
Freezing point	Not available.	
Boiling point	Not available.	
Specific gravity	1,04 (Water = 1)	
Vapor density	2,1 (Air =1)	
Vapor pressure	11,4 mm of Hg.	
Evaporation rate	Not available.	
Solubility	Miscible in water.	
Section IV. Fire and explosion data		
- Flash point: Closed cup: (Tag closed cup) 39 C (Acetic acid, glacial)		
Section V. Reactivity data		
- Stability: Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, and contamination.		

Section VI. Toxicological properties	
Routes of entry	
Effects of acute exposure	Harmful by inhalation, in contact with skin and if swallowed. May be fatal. Corrosive. Target organs: liver, kidneys, eyes, skin, cardiovascular system, respiratory system, lungs and teeth.
Eye	Causes severe burns and loss of vision. May cause permanent damage. Direct contact with the eyes can cause irreversible damage including blindness.
Skin	Causes severe burns. Diluted solutions may cause dermatitis in some sensitive individuals. Readily absorbed through skin.
Inhalation	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract.
Ingestion	Burns in mouth, pharynx and gastrointestinal tract. Nausea, diarrhea, abdominal pain, hematemesis, albuminuria, hemolysis, hemoglobinuria, anuria, uremia, kidney damage, shock, coma and possible death.
Effects of chronic overexposure	Not applicable

Section VII First aid measures	
Eye contact	Washing within 1 minute is essential to achieve maximum effectiveness. IMMEDIATELY flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. If irritation persists, repeat flushing. Seek immediate medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash contaminated clothing before reusing.
Inhalation	Seek immediate medical attention.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. DO NOT induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. Keep patient warm and quiet. Guard against aspiration into lungs. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomit, rinse mouth and administer more water.

Section VIII. Preventive measures	
Protective clothing in case of spill and leak	Not applicable
Spill and leak	Cover with dry soda ash or lime. Absorb on sand or vermiculite and place in a closed container for disposal.
Waste disposal	According to all applicable regulations.
Storage and handling	Store in a cool place away from heated areas, sparks and flames. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry.

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

Section X. Other information	
Special precautions or comments	Corrosive! Combustible liquid! Causes severe burns wich may be delayed ! Risk of serious damage to eyes. Do not breathe vapor. Avoid all contact with the product. Keep away from heat, sparks and flame. RTECS NO: AF 1225000 (ACETIC ACID GLACIAL) RTECS NO: KV5330000 (N-(1-NAPHTYL)-ETHYLENEDIAMINE DIHYDROCHLORIDE). RTECS NO : TY2000000 (1,2 - PROPANEDIOL).

Prepared by Rolf C. Hagen Inc. (514) 332-0914	Validated January 19, 2005	MSDS A7847
---	----------------------------	------------