

MATERIAL SAFETY DATA SHEET

CLOSED LOOP CHEMICAL 338

SECTION 1:
IDENTIFICATION

Company Name: Address: Phone No. Fax No. Emergency Phone No. Date Prepared: Date Revised:	QUALICHEM TECHNOLOGIES 885 WOODSTOCK RD ROSWELL, GA 30075 800.658.7716 877.209.1556 CHEM-TEL 800-255-3924 5/01/88 5/23/06
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SECTION 2:
INGREDIENTS

Hazardous Ingredients

MATERIAL
CAS NO.
%
TLV

 SODIUM HYDROXIDE
 SODIUM NITRITE

 1310-73-2
 7632-00-0

 <2.0
 <20.0

 2mg/m³/15M
 NONE ESTAB.

Non-Hazardous Ingredients

 SODIUM BORATE
 SODIUM SILICATE
 SODIUM TOLYLTRIAZOLE
 WATER

 1-5
 1-5
 1-5
 BAL.

 NONE ESTAB.
 NONE ESTAB.
 NONE ESTAB.
 NONE ESTAB.

SECTION 3:
HEALTH HAZARDS

Ingestion: Inhalation: Skin Contact: Eye Contact: Other Information:	MAY BE TOXIC. DUE TO HIGH pH, MAY CAUSE IRRITATION TO INTERNAL TISSUES. LARGE AMOUNTS CAN RESULT IN ACUTE TOXIC EFFECTS WHICH MAY BE FATAL. NOT A LIKELY ROUTE OF EXPOSURE. INHALATION OF MISTMAY BE IRRITATING TO RESPIRATORY TRACT. PROLONGED CONTACT MAY CAUSE IRRITATION. CAUSES IRRITATION, POSSIBLE BURNS AND EYE DAMAGE. OTHER THAN ACUTE EFFECTS LISTED ABOVE, NO LONG TERM EFFECTS KNOWN.
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SECTION 4:
FIRST AID

Ingestion: Inhalation: Skin Contact: Eye Contact: Notes to Physician:	DRINK SEVERAL GLASSES OF WATER TO DILUTE. DO NOT INDUCE VOMITING. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET IMMEDIATE MEDICAL ATTENTION. IF CYANOSIS (blue skin) DEVELOPS, ADMINISTER OXYGEN. REMOVE VICTIM TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION IF SYMPTOMS PERSIST. WASH WITH PLAIN WATER OR SOAP AND WATER. IMMEDIATELY FLUSH WITH CLEAR WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION IF IRRITATION PERSISTS. NO ANTIDOTES KNOWN. TREAT SYMPTOMS SUPPORTIVELY.
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SECTION 5:
FIRE AND EXPLOSION HAZARD DATA

Flash Point/Method: Lower Limit in Air: Upper Limit in Air: Extinguishing Media: Procedures: Unusual Hazards:	NONE N.A. N.A. FLOOD WITH WATER. HEAVY WATER JET ADVANTAGEOUS. IF WATER IS EVAPORATED, THE DRY NITRITE CAN BREAK DOWN AT TEMPERATURES ABOVE 610°F TO RELEASE TOXIC NITROGEN OXIDE GASES. WEAR NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. IF WATER IS EVAPORATED, THE DRY NITRITE IS AN OXIDIZING AGENT AND CAN SUPPLY OXYGEN TO STIMULATE OR ACCELERATE THE COMBUSTION OF OTHER COMBUSTIBLES.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Environmental Precautions: Procedures for Clean Up: Prohibited Materials:	THE WEARING OF SAFETY GLASSES AS A MINIMUM IS RECOMMENDED. THIS PRODUCT HAS A MODERATE HAZARD POTENTIAL IF RELEASED INTO THE ENVIRONMENT ACCIDENTLY. SMALL SPILLS MAY BE FLUSHED WITH COPIOUS QUANTITIES OF WATER TO A SANITARY SEWER OR WASTE TREATMENT FACILITY. LARGER SPILLS SHOULD BE DIKED TO PREVENT RUN OFF AND PUMPED INTO A SUITABLE CONTAINER FOR DISPOSAL. IF ABSORBANT IS USED TO SOAK UP SPILLED PRODUCT, USE SAND OR A NON-FLAMMABLE MEDIA. NONE
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SECTION 7: HANDLING AND STORAGE

Handling: Storage:	NORMAL INDUSTRIAL HANDLING PRACTICES. KEEP OUT OF REACH OF CHILDREN. STORE IN A COOL, DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE.
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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary Measures: Engineering Controls: Control Limits: Equipment for Personal Protection:	STANDARD INDUSTRIAL HANDLING PRECAUTIONS. NONE NONE. WORKERS SHOULD WEAR SAFETY GLASSES AS A MINIMUM. EYEWASH STATION AND SAFETY SHOWER IN AREA OF USE.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Odor: pH (undiluted): Specific Gravity: Density: Solubility in Water: Boiling Point: Percent Volatile: Vapor Pressure (mmHg): Vapor Density: Evaporation Rate:	CLEAR LIQUID CHARACTERISTIC <12.5 1.15-1.17 9.65 lbs./gal. COMPLETE 212°F >70 (WATER) N.D. N.D. (water=1): ~1
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SECTION 10: STABILITY AND REACTIVITY

Stability: Conditions to Avoid: Hazardous Polymerization: Conditions to Avoid: Incompatibility: Hazardous Decomposition Products:	STABLE NONE STABLE NONE MAY REACT WITH STRONG OXIDIZING AGENTS OR ACIDS. IF WATER EVAPORATED, OXIDES OF CARBON & NITROGEN COULD BE PRODUCED BY COMBUSTION. CONTACT WITH ACIDS CAN RELEASE TOXIC NITROGEN GASES.
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SECTION 11: TOXICOLOGICAL INFORMATION

Material & Tests: Symptoms:	As SODIUM NITRITE: LD50 (ORAL RAT): 85 mg/kg. LDLo (ORAL HUMAN): 14 mg/kg. ALTHOUGH SMALL AMOUNTS OF NITRITE ARE USED IN FOOD PREPARATION (<100 ppm), INGESTION OF LARGER AMOUNTS CAN RESULT IN ACUTE TOXIC EFFECTS: NAUSEA, CONVERSION OF HEMOGLOBIN TO METHEMOGLOBIN PRODUCING CYANOSIS (blue skin); A MARKED FALL IN BLOOD PRESSURE LEADING TO COLLAPSE, COMA AND POSSIBLY DEATH.
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SECTION 12: ECOLOGICAL INFORMATION

Possible Effects:	THIS PRODUCT HAS A MODERATE HAZARD POTENTIAL FOR ALL BUT LARGE SPILLS.
Biodegradability:	INORGANIC PRODUCT.
Persistence:	NOT PERSISTENT.
Aquatic Toxicity:	. FOR SODIUM NITRITE: TLm (MUSQUITO FISH)/48 hr. 7.5 ppm. NO EFFECT LEVEL (MINNOWS)/14 hr. 17.1 ppm. TOXICITY ESTIMATE FOR PRODUCT >50 ppm.

SECTION 13: DISPOSAL CONSIDERATIONS

General Considerations: Procedures:	THIS PRODUCT IS NOT A HAZARDOUS WASTE. DISPOSAL BY USE PREFERRED BUT IF THIS NOT POSSIBLE, DILUTE SMALL QUANTITIES WITH COPIOUS QUANTITIES OF WATER AND FLUSH TO WASTE, PREFERABLY TO A SANITARY SEWER. HOWEVER, OBEY ALL FEDERAL, STATE OR LOCAL REGULATIONS.
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SECTION 14: TRANSPORT INFORMATION

Shipping Name:	COMPOUNDS, WATER TREATMENT, N.O.S. (NOT REGULATED BY US DOT)
Primary Hazard Class:	8
Secondary Hazard Class:	N.A.
Identification No.	UN3266
Packing Group:	III
2000 NAERG No.	154

SECTION 15: REGULATORY INFORMATION

Regulation	Material	RQ	Max. %
CERCLA (40 CFR302.4):	SODIUM HYDROXIDE	1000 lbs.	2.0
SARA 302 (Sect. 355, Appendix A):	<u>Material</u>	<u>TPQ</u>	<u>Max. %</u>
SARA 311/312:	IMMEDIATE HEALTH		<u>Hazards</u> EYE IRRITANT
SARA 313 (40 CFR 372.45):	<u>Material</u>		<u>Max. %</u>
CWA (40 CFR 401.15):	NONE		
RCRA (40 CFR 261):	NONE		
OSHA (29 CFR 1910.1200):	ALL COMPONENTS LISTED UNDER THIS STANDARD ARE SHOWN IN SECTION 2 OF THIS MSDS.		
TSCA	ALL INGREDIENTS IN THIS PRODUCT ARE LISTED IN THE TSCA INVENTORY.		

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SPECIAL STATE REGULATIONS

STATE	INGREDIENT	%	REGULATORY DESIGNATION
NONE			

SECTION 16 OTHER INFORMATION

SUGGESTED HAZARD RATINGS

NFPA*	HAZARD	HMIS*
2	HEALTH (Blue)	2
0	FIRE (Red)	0
0	REACTIVITY (Yellow)	0
	PERSONAL PROTECTION	B
	SPECIAL HAZARDS	

*Notes: 0 = Insignificant; 1 = Slight; 2 = Moderate; 3 = High; 4 = Extreme

The data contained in this Material Safety Data Sheet has been prepared based upon an evaluation of the ingredients in the product, their concentration in the product and potential interactions. The information is offered in good faith and is believed to be accurate. It is furnished to the customer who is urged to study it carefully to become aware of hazards, if any, in the storage, handling, use and disposal of the product; and to insure his employees are properly informed and advised of all safety precautions required. The information is furnished for compliance with the "Occupational Safety and Health Act" of 1970, the "Hazards Communication Act" of 1983 as well as various other Federal, State and Local regulations. Use or dissemination of all or part of this information for any other purpose is prohibited by law.