

# MATERIAL SAFETY DATA SHEET

## R-TEC-4NP

**SECTION 1:**
**IDENTIFICATION**

Company Name:	QUALICHEM, INC.
Address:	P.O. BOX 926 SALEM, VA 24153
Phone No.	540.375.6700
Fax No.	540.375.3880
Emergency Phone No.	CHEM-TEL 800-255-3924
Date Prepared:	3/25/08
Date Revised:	5/13/09

**SECTION 2:**
**INGREDIENTS**

<u>MATERIAL</u>	<u>CAS NO.</u>	<u>%</u>
SODIUM NITRITE	7632-00-0	<90
SODIUM TETRABORATE	1303-96-4	1-5
SODIUM SILICATE	6834-92-0	1-5
SODIUM CARBONATE	497-19-8	1-5
BENZOTRIAZOLE	95-14-7	<1

**SECTION 3:**
**HEALTH HAZARDS**

Ingestion:	TOXIC. CAN IRRITATE THE MOUTH, ESOPHAGUS, STOMACH, ETC. EXCESSIVE AMOUNTS AFFECT THE BLOOD AND BLOOD VESSELS. SIGNS AND SYMPTOMS OF NITRITE POISONING INCLUDE INTENSE CYANOSIS, NAUSEA, DIZZINESS, VOMITING, COLLAPSE, SPASMS OF ABDOMINAL PAIN, RAPID HEART BEAT, IRREGULAR BREATHING, COMA, CONVULSIONS, AND DEATH DUE TO CIRCULATORY COLLAPSE. ESTIMATED LETHAL DOSE 1 TO 2 GRAMS.
Inhalation:	TOXIC. CAUSES IRRITATION TO THE RESPIRATORY TRACT AND SYSTEMIC POISONING WITH SYMPTOMS PARALLELING INGESTION.
Skin Contact:	CAUSES IRRITATION, REDNESS AND PAIN. MAY BE ABSORBED THROUGH THE SKIN CAUSING SYSTEMIC POISONING; SYMPTOMS MAY PARALLEL INGESTION.
Eye Contact:	CAUSES IRRITATION, REDNESS, AND PAIN.
Other Information:	OTHER THAN ACUTE EFFECTS LISTED ABOVE, NO LONG TERM EFFECTS KNOWN.

**SECTION 4:**
**FIRST AID**

Ingestion:	INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.
Inhalation:	REMOVE VICTIM TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION. GET MEDICAL ATTENTION.
Skin Contact:	IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. WASH CLOTHING BEFORE REUSE. THOROUGHLY CLEAN SHOES BEFORE REUSE. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS.
Eye Contact:	IMMEDIATELY FLUSH WITH CLEAR WATER FOR 15 MINUTES AND GET MEDICAL ATTENTION IMMEDIATELY.
Notes to Physician:	NO ANTIDOTES KNOWN. TREAT SYMPTOMS SUPPORTIVELY.

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### SECTION 5:

### FIRE AND EXPLOSION HAZARD DATA

Flash Point/Method:	NONE
Upper/Lower Limit in Air:	N.A.\N.A.
Extinguishing Media:	WATER OR WATER SPRAY IN EARLY STAGES OF FIRE. FOAM MAY ALSO BE USED, BUT AVOID THE USE OF MULTI-PURPOSE DRY CHEMICAL FIRE EXTINGUISHERS WHERE CONTACT WITH SODIUM NITRITE MAY OCCUR. WATER STREAMS MAY SCATTER MOLTEN MATERIAL.
Procedures:	WEAR NIOSH APPROVED SELF-CONTAINED BREATHING APPARATUS. IN THE EVENT OF A FIRE, WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS WITH FULL FACEPIECE OPERATED IN THE PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE.
Unusual Hazards:	DECOMPOSITION OF SODIUM NITRITE MAY LEAVE A CAUSTIC RESIDUE. NOT COMBUSTIBLE, BUT SUBSTANCE IS A STRONG OXIDIZER AND ITS HEAT OF REACTION WITH REDUCING AGENTS OR COMBUSTIBLES MAY CAUSE IGNITION. INCREASES THE FLAMMABILITY OF ANY COMBUSTIBLE MATERIAL.

### SECTION 6:

### ACCIDENTAL RELEASE MEASURES

Personal Precautions:	WEAR PERSONAL PROTECTIVE EQUIPMENT AS SPECIFIED IN SECTION 8. DO NOT ALLOW PRODUCT OR RESIDUES TO ENTER WATERWAYS AND/OR ANY SOURCE OF DRINKING WATER. CLEAN UP SPILLS IN A MANNER THAT DOES NOT DISPERSE DUST INTO THE AIR. USE NON-SPARKING TOOLS AND EQUIPMENT. REDUCE AIRBORNE DUST AND PREVENT SCATTERING BY MOISTENING WITH WATER. PICK UP SPILL FOR RECOVERY OR DISPOSAL AND PLACE IN A CLOSED CONTAINER. VENTILATE AREA OF LEAK OR SPILL. OBEY ALL FEDERAL, STATE OR LOCAL REGULATIONS FOR DISPOSAL. REMOVE ALL SOURCES OF IGNITION.
Environmental Precautions:	
Procedures for Clean Up:	
Prohibited Materials:	

### SECTION 7:

### HANDLING AND STORAGE

Handling:	AVOID CONTACT WITH SKIN AND EYES. DO NOT BREATHE PRODUCT DUSTS. AVOID CONTACT WITH COMBUSTIBLE MATERIALS AND ACIDS.
Storage:	KEEP OUT OF REACH OF CHILDREN. STORE IN A COOL, DRY PLACE. KEEP CONTAINERS TIGHTLY CLOSED WHEN NOT IN USE. DO NOT STORE ON WOODEN FLOORS. ISOLATE FROM COMBUSTIBLE MATERIALS.

### SECTION 8:

### EXPOSURE CONTROLS/PERSONAL PROTECTION

Precautionary Measures:	STANDARD INDUSTRIAL HANDLING PRECAUTIONS. WASH THOROUGHLY AFTER HANDLING CHEMICALS. USE WITH ADEQUATE VENTILATION TO KEEP EXPOSURES BELOW OCCUPATIONAL EXPOSURE LIMITS. SODIUM BORATE: NIOSH REL = 1 MG/M3 (TWA); ACGIH TLV = 5 MG/M3 (TWA). WEAR SAFETY GOGGLES IN ANY AREA WHERE DUSTY CONDITIONS MAY OCCUR. USE IMPERVIOUS GLOVES (E.G. RUBBER) FOR ROUTINE HANDLING. WEAR LONG SLEEVED SHIRT AND PANTS. IMPERVIOUS WORK APRONS MAY BE REQUIRED FOR TRANSFER OF MATERIAL FROM PACKAGES TO PROCESS EQUIPMENT. EYEWASH STATION AND SAFETY SHOWER IN AREA OF USE.
Engineering Controls:	
Control Limits:	
Equipment for Personal Protection:	

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**SECTION 9:**
**PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	WHITE GRANULAR POWDER
Odor:	CHARACTERISTIC
pH (undiluted):	N.A.
Specific Gravity:	N.D.
Density:	N.D.
Solubility in Water:	UP TO 30%
Boiling Point:	N.A.
Percent Volatile:	NONE
Vapor Pressure (mmHg):	N.A.
Vapor Density:	N.A.
Evaporation Rate:	N.A.

**SECTION 10:**
**STABILITY AND REACTIVITY**

Stability:	STABLE
Conditions to Avoid:	NONE
Hazardous Polymerization:	STABLE
Conditions to Avoid:	NONE
Incompatibility:	HAZARDOUS REACTIONS CAN OCCUR WITH ACIDS, AMMONIUM COMPOUNDS, REDUCING AGENTS (PARTICULARLY CYANIDES, THIOCYANATES AND THIOSULFATES). MAY IGNITE ORGANIC COMPOUNDS AND OTHER COMBUSTIBLE MATERIALS.
Hazardous Decomposition Products:	IF WATER EVAPORATED, OXIDES OF CARBON AND NITROGEN COULD BE PRODUCED. CONTACT WITH ACIDS CAN RELEASE TOXIC NITROGEN GASES.

**SECTION 11:**
**TOXICOLOGICAL INFORMATION**

Material & Tests:	SODIUM NITRITE: ORAL RAT LD50 = 180 mg/kg; INHALATION RAT LC50 = 5500 ug/m3; IRRITATION EYE RABBIT = 500 mg/24 HR = MILD. SODIUM TETRABORATE: ORAL RAT LD50 = 2660 mg/kg. SODIUM SILICATE: ORAL LD50 RAT = 1153 mg/kg; SKIN RABBIT LD50 >4640 mg/kg; STANDARD DRAIZE TEST, SKIN RABBIT 500 mg/24 HR = SEVERE; EYE RABBIT 10 mg/24 HR = SEVERE. SODIUM CARBONATE: ORAL RAT LD50 = 4090 mg/kg; INHALATION RAT LC50 = 2300 mg/m3/2HR; IRRITATION EYE RABBIT = 50 mg SEVERE. BENZOTRIAZOLE: ORAL LD50 (RAT) - 560 mg/kg; INHALATION LC50 (RAT) - 1910 mg/m3/3 hour.
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**SECTION 12:**
**ECOLOGICAL INFORMATION**

Aquatic Toxicity:	SODIUM NITRITE: 96 HR LC50 RAINBOW TROUT (JUVENILE) = 0.19 mg/l (flow-through); 24 HR NOEL = 17.1 ppm (fresh water); 48 HR TLm MOSQUITO FISH = 7.5 ppm (fresh water). SODIUM TETRABORATE: 24 DAY LC50 RAINBOW TROUT = 776 mg/l; 7 DAY LC50 GOLDFISH = 573 mg/l; 24 HR EC50 DAPHNIA MAGNA = 2,134 mg/l. SODIUM SILICATE: 96 HR LC50 LEPOMIS MACROCHIRUS = 301-478 mg/l; 96 HR LC50 BRACHYDANIO RERIO = 3,185 mg/l (semi-static); 96 HR EC50 DAPHNIA MAGNA = 216 mg/l. SODIUM CARBONATE: 96 HR LC50 LEPOMIS MACROCHIRUS = 300 mg/l (static); 48 HR EC50 DAPHNIA MAGNA = 265 mg/l. BENZOTRIAZOLE: LC50 (TROUT) - 39 mg/L; LC50 (ALGAE) - 15.4 mg/L; LC50 (DAPHNIA MAGNA) 48 HRS - 141.6 mg/L.
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**SECTION 13:**
**DISPOSAL CONSIDERATIONS**

General Considerations: Procedures:	THIS PRODUCT WOULD NOT BE CONSIDERED A HAZARDOUS WASTE. DISPOSAL BY USE PREFERRED. OBEY ALL FEDERAL, STATE OR LOCAL REGULATIONS.
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**SECTION 14: TRANSPORT INFORMATION**

Shipping Name:	OXIDIZING SOLID, N.O.S. (SODIUM NITRITE)
Primary Hazard Class:	5.1
Identification No.:	UN1479
Packing Group:	III
2004 NAERG No.:	140

**SECTION 15: REGULATORY INFORMATION**

<u>Regulation</u>	<u>Material</u>	<u>RQ</u>	<u>Max. %</u>
CERCLA (40 CFR302.4):	SODIUM NITRITE	100 lbs.	90
SARA 302 (Sect. 355, Appendix A):	<u>Material</u>	<u>TPQ</u>	<u>Max. %</u>
SARA 311/312:	<u>Categories</u>	<u>Hazards</u>	
	IMMEDIATE HEALTH	EYE IRRITANT	
SARA 313 (40 CFR 372.45):	<u>Material</u>	<u>Max. %</u>	
	SODIUM NITRITE	90	
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.		

**SPECIAL STATE REGULATIONS**

<u>STATE</u>	<u>INGREDIENT</u>	<u>%</u>	<u>REGULATORY DESIGNATION</u>
NONE			

**SECTION 16 OTHER INFORMATION**

**SUGGESTED HAZARD RATINGS**

<u>NFPA*</u>	<u>HAZARD</u>	<u>HMIS*</u>
2	HEALTH (Blue)	2
0	FIRE (Red)	0
1	REACTIVITY (Yellow)	1
OX	PERSONAL PROTECTION SPECIAL HAZARDS	E

\*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.