

MATERIAL SAFETY DATA SHEET								ADDRESS: Reaction Engineering Inc. P.O. Box 1452 Dodge City, Ks. 67801-1452					
<p>"ESSENTIALLY SIMILAR" TO OSHA FORM 20</p> <p><b>PRODUCT NAME</b> RXN-100</p> <p><b>CHEMICAL NAME AND MOLECULAR FORMULA</b> Proprietary Formulation</p> <p><b>SYNONYMS</b> None</p>								<p><b>DATE</b> 01/01/07</p> <p><b>EMERGENCY PHONE NUMBERS</b></p> <p>BUSINESS: (620) 225-2180</p> <p>OTHER: (800) 255-3924</p> <p><b>CAS NO.</b> See Below</p> <p><b>CHEMICAL FAMILY</b> Water Treating Chemicals</p>					
<p><b>MATERIALS OR COMPONENTS</b></p> <p>SODIUM META SILICATE CAS No. 6834-92-0</p> <p>SODIUM TETRABORATE CAS No. 1303-96-4</p> <p>SODIUM NITRITE CAS No. 7632-00-0</p> <p>None of these ingredients are listed under SARA Title III, Section 313.</p>								<p><b>% W/W</b></p> <p>&lt;10</p> <p>&lt;10</p> <p>&lt;20</p> <p><b>HAZARD DATA</b></p> <p>2 ppm mg/M3 TWA (MFG.)</p> <p>5 mg/M3 TWA (ACGIH)</p> <p>Not Listed</p>					
<b>SHIPPING INFORMATION</b>		OXIDIZING SUBSTANCES LIQUID, n.o.s., 5.1, PG-III, UN-3139, Oxidizer Label/ Placard Required. RQ = 127 gals. (Sodium Nitrite).											
<p><b>BOILING POINT/RANGE</b> °C 212 °F</p>				<p><b>MELTING POINT</b> °C NE °F</p>				<p><b>FREEZING POINT</b> °C &lt;32 °F</p>				<b>MOLECULAR WEIGHT</b> NE	
<p><b>SPECIFIC GRAVITY (H<sub>2</sub>O=1)</b> 1.20 @ 20/20 °C</p>				<p><b>VAPOR PRESSURE (mm Hg)</b> @ °C NE</p>				<p><b>VAPOR DENSITY (AIR=1)</b> NE</p>					
<p><b>SOLUBILITY IN H<sub>2</sub>O</b> Complete</p>				<p><b>% VOLATILES BY VOLUME</b> &gt;50</p>				<p><b>EVAPORATION RATE</b> &lt;1</p> <p><input type="checkbox"/> ETHER=1 <input checked="" type="checkbox"/> WATER=1 <input type="checkbox"/> BUTYLACETATE=1</p>					
<p><b>APPEARANCE AND ODOR</b> Deep blue colored liquid</p>				<p><b>OTHER:</b> pH &gt; 12.0</p>									
<p><b>FLASH POINT</b> °C °F None</p>				<p><b>FLAMMABLE LIMITS</b> LOWER NA % UPPER NA</p>				<p><b>AUTOIGNITION TEMP/FIRE POINT</b> °C NA °F</p>					
<p><b>EXTINQUISHING MEDIA</b></p> <p><input checked="" type="checkbox"/> WATER- SPRAY <input checked="" type="checkbox"/> WATER- FOG <input type="checkbox"/> WATER- STREAM <input checked="" type="checkbox"/> CO<sub>2</sub> <input checked="" type="checkbox"/> DRY CHEMICAL <input type="checkbox"/> ALCOHOL <input type="checkbox"/> FOAM <input type="checkbox"/> EARTH/ SAND</p>													
<p><b>SPECIAL FIRE FIGHTING PROCEDURES</b></p> <p><input type="checkbox"/> DON'T ENTER BUILDING <input type="checkbox"/> ALLOW FIRE TO BURN <input type="checkbox"/> WATER MAY CAUSE FROTHING <input type="checkbox"/> DON'T USE WATER <input checked="" type="checkbox"/> USE SELF CONTAINED BREATHING APPARATUS</p>													
<p><b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b></p> <p><input checked="" type="checkbox"/> DUST EXPLOSION HAZARD <input type="checkbox"/> SENSITIVE TO SHOCK <input checked="" type="checkbox"/> CONTAMINATION <input type="checkbox"/> TEMPERATURE OTHER: Nitrite is an oxidizer.</p>													
<p><b>STABILITY</b></p> <p><input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE</p>				<p><b>CONDITIONS CONTRIBUTING TO INSTABILITY</b></p> <p><input type="checkbox"/> THERMAL DECOMPOSITION <input type="checkbox"/> PHOTO DEGRADATION <input type="checkbox"/> POLYMERIZATION <input type="checkbox"/> CONTAMINATION</p>									
<p><b>INCOMPATIBILITY - AVOID CONTACT WITH</b></p> <p><input type="checkbox"/> STRONG ACIDS <input type="checkbox"/> STRONG ALKALIS <input type="checkbox"/> STRONG OXIDIZERS OTHER: Reducing Agents.</p>													
<p><b>HAZARDOUS DECOMPOSITION PRODUCTS - THERMAL AND OTHER (LIST)</b></p> <p>Nitrogen oxides (acidic) and oxygen (flammable)</p>													
<p><b>CONDITION TO AVOID</b></p> <p><input type="checkbox"/> HEAT <input type="checkbox"/> OPEN FLAMES <input type="checkbox"/> SPARKS <input type="checkbox"/> IGNITION SOURCES OTHER: Sulfamic acid</p>													
<p><b>STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED</b></p> <p><input type="checkbox"/> FLUSH WITH WATER <input checked="" type="checkbox"/> ABSORD WITH SAND OR INERT MATERIAL <input type="checkbox"/> NEUTRALIZE <input checked="" type="checkbox"/> SWEEP/SCOOP UP AND REMOVE <input checked="" type="checkbox"/> KEEP UPWIND <input checked="" type="checkbox"/> PREVENT SPILL</p>													
<p><b>DISPOSE IMMEDIATELY</b></p>				<p>OTHER: See Below.</p>									
<p><b>WASTE DISPOSAL METHOD-</b></p>				<p>Consult federal, state, or local authorities.</p>									
<p>In accordance with Federal, State, and Local regulations.</p>													
						CONTINUED ON NEXT PAGE							
NA - NOT APPLICABLE						NE - NOT ESTABLISHED							

T O X I C I T Y	ORAL (ACUTE): Strong irritant - may cause burns.	DERMAL (ACUTE): Strong irritant - may cause burns.	EYE: Strong irritant - may cause burns.	INHALATION: Irritant.	
	CHRONIC, SUBCHRONIC, ETC.				
SODIUM NITRITE INDUCES THE FORMATION OF METHEMOGLOBIN. THE SYMPTOMS INCLUDE CYANOSIS, EUPHORIA, HEADACHE, FLUSHED FACE, LIGHT-HEADEDNESS, ATAXIA, WEAKNESS, RAPID HEARTBEAT, LABORED BREATHING, NAUSEA, VOMITING, MENTAL CONFUSION, BLURRING OF VISION, REDUCED BLOOD PRESSURE, AND SYNCOPES.					
E F F E C T S  H E A Z A R E D  I N F O R M A S T T I O N A N I C  S P E C I A L O P R M O T T E C T I O N N  P P E C I A L I C N	PERMISSIBLE EXPOSURE LIMIT (SPECIFY IF TLVA/TWA OR CEILING[C])				
	ACGIH 19_ NA	OSHA 19_ NA	OTHER: NA		
	IRRITATION	<input checked="" type="checkbox"/> SKIN <input checked="" type="checkbox"/> EYE	<input checked="" type="checkbox"/> SEVERE <input checked="" type="checkbox"/> SEVERE	<input type="checkbox"/> MODERATE <input type="checkbox"/> MODERATE <input type="checkbox"/> MILD (TRANSIENT)	
	CORROSIVITY	<input type="checkbox"/> SKIN <input type="checkbox"/> EYE	<input type="checkbox"/> 4 HRS. (DOT) <input type="checkbox"/> MAY CAUSE BLINDNESS	<input type="checkbox"/> 24 HRS. (CPSC)	
	SENSITIZATION	<input type="checkbox"/> SKIN <input type="checkbox"/> RESPIRATORY	<input checked="" type="checkbox"/> ALLERGEN	<input type="checkbox"/> NARCOTIC <input type="checkbox"/> CYANOSIS <input type="checkbox"/> ASPHYXIANT	
	LUNG EFFECTS (SPECIFY):	NOT KNOWN			
	OTHER (SPECIFY):	<input checked="" type="checkbox"/> REPEATED CONTACT SKIN DEFATTER			
	INGESTION	<input checked="" type="checkbox"/> INDUCE VOMITING	<input type="checkbox"/> DO NOT INDUCE VOMITING	<input checked="" type="checkbox"/> GIVE PLENTY OF WATER	<input checked="" type="checkbox"/> GET MEDICAL ATTENTION
	DERMAL	<input checked="" type="checkbox"/> FLUSH WITH SOAP AND WATER	<input checked="" type="checkbox"/> GET MEDICAL ATTENTION	<input checked="" type="checkbox"/> CONTAMINATED CLOTHING LAUNDER	<input type="checkbox"/> CONTAMINATED SHOES DESTROY
	EYE CONTACT	<input checked="" type="checkbox"/> FLUSH WITH PLENTY OF WATER FOR 15 MINUTES	<input checked="" type="checkbox"/> GET MEDICAL ATTENTION	OTHER:	
INHALATION	<input checked="" type="checkbox"/> REMOVE TO FRESH AIR	<input checked="" type="checkbox"/> IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION	<input type="checkbox"/> GIVE OXYGEN	<input type="checkbox"/> GET MEDICAL ATTENTION	
VENTILATIONS REQUIREMENTS - ALWAYS MAINTAIN EXPOSURE BELOW PERMISSIBLE EXPOSURE LIMITS					
SPILL CONTROL	<input type="checkbox"/> CONSULT AND INDUSTRIAL HYGIENIST	<input checked="" type="checkbox"/> LOCAL EXHAUST	<input checked="" type="checkbox"/> USE WITH ADEQUATE VENTILATION	<input type="checkbox"/> CHECK FOR CONTAMINANT AND OXYGEN DEFICIENCY	
OTHER:					
PROTECTION	EYE  <input checked="" type="checkbox"/> SAFETY GLASSES	FACE SHIELD AND GOGGLES  <input checked="" type="checkbox"/> GOGGLES	HAND (GLOVE TYPE)  <input type="checkbox"/> POLYVINYL CHLORIDE	BUTYL RUBBER  <input checked="" type="checkbox"/> NEOPRENE  <input checked="" type="checkbox"/> NATURAL RUBBER	OTHER (SPECIFY):  <input type="checkbox"/> POLYVINY ALCOHOL  <input type="checkbox"/> POLYETHYLENE
RESPIRATOR TYPE - USE ONLY NIOSH APPROVED EQUIPMENT	<input type="checkbox"/> SELF-CONTAINED	<input type="checkbox"/> SUPPLIED AIR	<input type="checkbox"/> CAN OR CARTRIDGE GAS OR VAPOR	<input type="checkbox"/> FILTER-DUST, FUME, MIST	OTHER: VENTILATION
OTHER PROTECTIVE EQUIPMENT	<input checked="" type="checkbox"/> RUBBER BOOTS	<input checked="" type="checkbox"/> APRON	OTHER: SAFETY SHOWER AND EYE WASH STATION.		
PRECAUTIONARY LABELING					
SPECIFICATION	<input checked="" type="checkbox"/> WASH AFTER HANDLING	<input checked="" type="checkbox"/> DON'T GET IN EYES, SKIN, CLOTHING	<input checked="" type="checkbox"/> DO NOT BREATHE, GAS DUST, VAPOR	<input checked="" type="checkbox"/> KEEP CONTAINER CLOSED	<input checked="" type="checkbox"/> KEEP AWAY FROM HEAT, SPARKS
	<input type="checkbox"/> DON'T STORE NEAR COMBUSTIBLES	<input type="checkbox"/> KEEP FROM CONTACT WITH CLOTHING	<input type="checkbox"/> EMPTY CONTAINER MAY CONTAIN HAZARDOUS	<input type="checkbox"/> USE EXPLOSION PROOF EQUIPMENT	OTHER:
OTHER HANDLING AND STORAGE CONDITIONS:	DO NOT SMOKE WHEN HANDLING CHEMICALS. KEEP OUT OF REACH OF CHILDREN.				
THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS, AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE AND THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL. WE MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIM ALL LIABILITY FOR RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.					