

# SAFETY DATA SHEET (S.D.S.)



## 1. IDENTIFICATION

<b>SUPPLIER'S NAME:</b>	ADENA TECHNOLOGIES	REGULAR TELEPHONE NO: EMERGENCY TELEPHONE NO (ONLY IN THE EVENT OF CHEMICAL EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT INVOLVING CHEMICALS)	888-247-2312  800-255-3924
<b>ADDRESS:</b>	101 TECHNOLOGY LANE, EXPORT, PA 15632		
<b>PRODUCT NUMBER:</b>	AD1001		
<b>PRODUCT NAME:</b>	ADENA 1001		
<b>SYNONYMS:</b>	COMPOUND, INDUSTRIAL PROCESS WATER TREATING		
<b>RECOMMENDED USE</b>	CLOSED RECIRCULATING LOOP SCALE AND CORROSION INHIBITOR		
<b>RESTRICTIONS ON USE</b>	NOT FOR USE WHERE THE TREATED WATER MAY CONTACT FOOD		

## 2. HAZARD(S) IDENTIFICATION

<b>HAZARD CLASSIFICATION</b>	OXIDIZING LIQUID, TOXIC	<b>SIGNAL WORD</b>	<b>WARNING</b>
<b>HAZARD STATEMENT</b>	<b>MAY INTENSIFY FIRE. TOXIC IF SWALLOWED. CORROSIVE TO SKIN AND EYES. MAY CAUSE RESPIRATORY IRRITATION.</b>		
<b>ROUTES OF EXPOSURE</b>	<b>HAZARD CLASSIFICATION</b>		
<b>INHALATION:</b>	IRRITANT		
<b>SKIN CONTACT:</b>	CORROSIVE		
<b>SKIN ABSORPTION:</b>	IRRITANT		
<b>EYE CONTACT:</b>	CORROSIVE		
<b>INGESTION:</b>	TOXIC		
<b>PRECAUTIONARY STATEMENTS</b>	WASH HANDS THOROUGHLY AFTER HANDLING. DO NOT EAT, DRINK, OR SMOKE WHEN USING THIS PRODUCT. IF SWALLOWED: RINSE MOUTH AND IMMEDIATELY CALL A POISON CENTER OF DOCTOR/PHYSICIAN. STORE LOCKED UP. DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL, REGIONAL, AND FEDERAL REGULATION.		
<b>HAZARDS NOT OTHERWISE SPECIFIED</b>	<b>NONE KNOWN</b>		

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT NAME	COMMON NAME/SYNONYM	CAS NO.	CONCENTRATION %	HAZARD DATA
SODIUM NITRITE	N/A	7632-00-0	22.39	TOXIC, OXIDIZER
SODIUM HYDROXIDE	CAUSTIC SODA	1310-73-2	1.39	CORROSIVE
POLYMERIC DISPERSANTS	N/A	BLEND	1.0-2.0	NON-HAZARDOUS
SODIUM TOLYLTRIAZOLE	N/A	64665-57-2	0.3-0.5	CORROSIVE
WATER	N/A	7732-18-5	BALANCE	NON-HAZARDOUS

## 4. FIRST-AID MEASURES

EFFECTS OF OVEREXPOSURE	
<b>ACUTE OVEREXPOSURE:</b>	TOXIC BY INGESTION. CORROSIVE TO SKIN AND EYES.
<b>CHRONIC OVEREXPOSURE:</b>	MULTIPLE REPRODUCTIVE TESTS INDICATE SODIUM NITRITE IS NOT TERATOGENIC. FETAL TOXICITY HAS BEEN DEMONSTRATED IN PREGNANT ANIMALS FED TOXIC DOSES. THIS IS DUE TO THE FORMATION OF METHEMOGLOBIN.
<b>ROUTE OF EXPOSURE:</b>	<b>FIRST AID PROCEDURES</b>
<b>EYES:</b>	IMMEDIATELY FLUSH EYES WITH LARGE QUANTITIES OF WATER FOR AT LEAST 15 MINUTES HOLDING THE EYELIDS APART. GET IMMEDIATE MEDICAL ATTENTION.
<b>SKIN:</b>	WASH WITH SOAP AND WATER WHILE REMOVING CONTAMINATED CLOTHES AND SHOES. GET MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE.
<b>INHALATION:</b>	REMOVE TO FRESH AIR. IF BREATHING HAS STOPPED, GIVE ARTIFICIAL RESPIRATION TO MAINTAIN BREATHING. IF BREATHING IS DIFFICULT, OXYGEN SHOULD BE ADMINISTERED, PROVIDED A QUALIFIED OPERATOR IS PRESENT. GET IMMEDIATE MEDICAL ATTENTION FOR ANY SYMPTOMS.
<b>INGESTION:</b>	WASH MOUTH AND OTHER CONTACTED PARTS WITH WATER. IF CONSCIOUS, GIVE 2 TO 4 CUPS OF WATER AND INDUCE VOMITING BY TOUCHING FINGER TO BACK OF THROAT. CONTINUE TO VOMIT UNTIL VOMITED FLUID IS CLEAR. GET IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS OR CONVULSING PERSON.
<b>NOTES TO PHYSICIAN:</b>	TREAT SYMPTOMATICALLY AND SUPPORTIVELY. SODIUM NITRITE FORMS METHEMOGLOBIN IN THE BLOOD STREAM.



# SAFETY DATA SHEET (S.D.S.)

## 5. FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING EQUIPMENT/MEDIA	N/A (NOT FLAMMABLE)
UNSUITABLE EXTINGUISHING EQUIPMENT/MEDIA	DO NOT USE DRY CHEMICALS CONTAINING AMMONIUM PHOSPHATE.
SPECIAL FIRE FIGHTING PROCEDURES:	USE SCBA IF PRODUCT IS INVOLVED IN A FIRE
UNUSUAL FIRE AND EXPLOSION HAZARD:	MATERIAL DOES NOT BURN BUT IS AN OXIDIZING AGENT AND WILL SUPPORT COMBUSTION OF OTHER MATERIALS. SODIUM NITRITE DECOMPOSES ABOVE 608 °F RELEASING TOXIC NITROGEN OXIDES.
SPECIAL INFORMATION FOR FIRE FIGHTERS	WEAR FULL PROTECTIVE CLOTHING AND NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS (SCBA) TO PREVENT CONTACT WITH THERMAL DECOMPOSITION PRODUCTS. SEE FIRST AID INSTRUCTIONS IF CONTACTED.

## 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	DO NOT INGEST. PROTECT EYES AND SKIN.
REQUIRED PROTECTIVE EQUIPMENT:	SEE SECTION 8
EMERGENCY PROCEDURES:	SPILLS AND RELEASES MAY HAVE TO BE REPORTED TO FEDERAL AND/OR LOCAL AUTHORITIES. SEE SECTION 15.
CONTAINMENT-METHODS AND MATERIALS:	SEE BELOW
CLEANUP PROCEDURES:	VENTILATE AREA OF SPILL OR RELEASE. ABSORB SMALL SPILLS WITH SUITABLE MATERIAL (VERMICULITE, SAND, CLAYS, EARTH, ETC.) AND PLACE INTO LEAK-PROOF CONTAINER FOR LATER DISPOSAL. FLUSH BALANCE OF AREA WITH WATER. DISPOSE OF ALL MATERIAL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS.
NEUTRALIZING CHEMICALS:	N/A

## 7. HANDLING AND STORAGE

### PRECAUTIONS FOR SAFE HANDLING:

INCOMPATIBLE CHEMICALS:	STRONG ACIDS AND OXIDIZERS
GENERAL HYGIENE PRACTICES:	STANDARD INDUSTRIAL HYGIENE PRACTICES.
SPECIAL HANDLING INSTRUCTIONS:	.AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. AVOID PROLONGED OR REPEATED CONTACT WITH SKIN. DO NOT BREATHE VAPORS. USE ONLY WITH ADEQUATE VENTILATION. WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. KEEP CONTAINERS CLOSED WHEN NOT IN USE.
SPECIAL STORAGE INSTRUCTIONS:	STORE IN A COOL, DRY, WELL VENTILATED AREA. DO NOT FREEZE PRODUCT. DO NOT EXPOSE PRODUCT TO EXCESSIVE HEAT. KEEP AWAY FROM STRONG ACIDS. PROTECT FROM PHYSICAL DAMAGE. KEEP OUT OF THE REACH OF CHILDREN.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA PELs:	NO DATA	ACGIH TLVS:	NO DATA	OTHER EXPOSURE LIMITS:	NO DATA
VENTILATION REQUIREMENTS	MECHANICAL VENTILATION.				
OTHER ENGINEERING CONTROLS:	NONE				
PERSONAL PROTECTIVE MEASURES:	SAFETY GLASSES AND IMPERVIOUS GLOVES AS A MINIMUM. FOLLOW THE OSHA RESPIRATOR REGULATIONS FOUND IN 29 CFR 1910.134. USE A NIOSH/MSHA APPROVED RESPIRATOR IF EXPOSURE LIMITS ARE EXCEEDED OR IF IRRITATION OR OTHER SYMPTOMS ARE EXPERIENCED. <b>WARNING: AIR-PURIFYING RESPIRATORS DO NOT PROTECT WORKERS IN OXYGEN-DEFICIENT ATMOSPHERES.</b>				
SPECIFIC PERSONAL PROTECTIVE EQUIPMENT:					
EYE:	WEAR SAFETY GOGGLES AND FULL FACE SHIELD WHERE SPLASHING IS POSSIBLE AS DESCRIBED BY OSHA'S EYE AND FACE PROTECTION REGULATIONS IN 29 CFR 1910.133.				
SKIN:	USE IMPERVIOUS GLOVES (E.G. HEAVY DUTY PVC, RUBBER, OR SIMILAR TYPE) FOR ROUTINE HANDLING OR DIRECT CONTACT. WEAR LONG SLEEVED SHIRT AND PANTS. IMPERVIOUS WORK APRONS OR COVERALLS AND BOOTS AS NEEDED TO PREVENT CONTACT.				
OTHER CLOTHING/EQUIPMENT:	SAFETY SHOWER AND EYEWASH FOUNTAIN SHOULD BE LOCATED IN THE IMMEDIATE WORK AREA.				

# SAFETY DATA SHEET (S.D.S.)

## 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	CLEAR – PALE YELLOW SOLUTION	FLAMMABILITY/EXPLOSIVE LIMITS IN AIR, % BY VOLUME:	UPPER	N/A	LOWER:	N/A
SPECIFIC GRAVITY (H <sub>2</sub> O =1):	1.13-1.15	% VOLATILES BY VOL:	NE (NOT ESTABLISHED)	FLASH POINT: (TEST METHOD)	N/A	
ODOR:	ODORLESS	pH (AS IS):	11.5-13.5	VAPOR PRESSURE:	NO DATA	
ODOR THRESHOLD	NO DATA	pH (1% SOLN.):	NO DATA	VAPOR DENSITY (AIR = 1):	N/A	
MELTING POINT, °F:	N/A	FREEZING POINT	28°F	RELATIVE DENSITY	1.14 g/ml	
SOLUBILITY IN H <sub>2</sub> O % BY WT:	COMPLETE	INITIAL BOILING POINT, 760 MM HG, °F:	220°F	BOILING RANGE	220°F	
EVAPORATION RATE (BUTYL ACETATE = 1):	SAME AS WATER	DECOMPOSITION TEMPERATURE	>608 °F	VISCOSITY	NO DATA	
PARTITION COEFFICIENT: N-OCTANOL/WATER	NO DATA	AUTOIGNITION TEMPERATURE:	N/A			

## 10. STABILITY AND REACTIVITY

### REACTIVITY

DESCRIPTION OF SPECIFIC TEST DATA	NO SPECIFIC DATA
<b>CHEMICAL STABILITY</b>	
IS PRODUCT STABLE UNDER NORMAL AMBIENT TEMPERATURE AND CONDITIONS WHILE IN STORAGE AND BEING HANDLED?	YES
CONDITIONS CONTRIBUTING TO INSTABILITY:	NONE
STABILIZERS NEEDED TO MAINTAIN STABILITY:	N/A
SAFETY ISSUES IN THE EVENT OF CHANGE IN PHYSICAL APPEARANCE OF PRODUCT:	N/A
<b>OTHER</b>	
POSSIBLE HAZARDOUS REACTIONS:	NONE KNOWN
CONDITIONS CONTRIBUTING TO HAZARDOUS REACTIONS:	NONE KNOWN
CONDITIONS THAT SHOULD BE AVOIDED:	NONE KNOWN
INCOMPATIBLE MATERIALS:	STRONG ACIDS, AMMONIUM COMPOUNDS, REDUCING AGENTS (PARTICULARLY CYANIDES, THIOCYANATES AND THIOSULFATES).
HAZARDOUS DECOMPOSITION PRODUCTS:	OXIDES OF NITROGEN (TOXIC AND IRRITATING).
CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION:	NONE KNOWN

## 11. TOXICOLOGICAL INFORMATION

ROUTES OF EXPOSURE		
INHALATION:	IRRITANT	
SKIN CONTACT:	CORROSIVE	
EYE CONTACT:	CORROSIVE	
INGESTION:	TOXIC	
EFFECTS OF EXPOSURE: (DELAYED, IMMEDIATE AND/OR CHRONIC)		
SHORT-TERM EXPOSURE	CORROSIVE TO SKIN AND EYES. TOXIC BY INGESTION	
LONG-TERM EXPOSURE	MULTIPLE REPRODUCTIVE TESTS INDICATE SODIUM NITRITE IS NOT TERATOGENIC. FETAL TOXICITY HAS BEEN DEMONSTRATED IN PREGNANT ANIMALS FED TOXIC DOSES. THIS IS DUE TO THE FORMATION OF METHEMOGLOBIN.	
NUMERICAL MEASURE OF TOXICITY:	SODIUM NITRITE (13%W/W): LD50, ORAL, RAT, 88MG/KG	
SYMPTOMS ASSOCIATED WITH EXPOSURE: (FROM LOWEST TO MOST SEVERE)		
ITCHING AND BURNING OF SKIN AND EYS. NAUSEA AND CENTRAL NERVOUS SYSTEM DEPRESSION IF INGESTED		
NTP:	IS THIS PRODUCT OR ANY OF ITS INGREDIENTS LISTED IN THE LATEST EDITION OF THE NATIONAL TOXICOLOGY PROGRAM REPORT ON CARCINOGENS?	NO
IARC:	IS THIS PRODUCT OR ANY OF ITS INGREDIENTS LISTED IN THE LATEST EDITION OF THE INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER MONOGRAPHS?	NO
OSHA:	IS THIS PRODUCT OR ANY OF ITS INGREDIENTS FOUND TO BE A POTENTIAL CARCINOGEN BY OSHA?	NO

## 12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY (E.G. 96 HR. TLM):	SODIUM NITRITE, ONCORHYNCHUS MYKISS, LC50, 96 HR, 0.19 MG/L
IS THERE POTENTIAL FOR PRODUCT TO PERSIST AND DEGRADE IN THE ENVIRONMENT EITHER THROUGH BIODEGRADATION OR OTHER PROCESSES?	NOT KNOWN
RESULTS OF TESTS OF BIOACCUMULATION POTENTIAL: (REFERENCE KOW AND BCF)	NO DATA
IS THERE POTENTIAL FOR PRODUCT TO MOVE FROM SOIL TO GROUNDWATER?	NOT KNOWN
RESULTS FROM ADSORPTION STUDIES OR LEACHING STUDIES:	NO DATA
OTHER ADVERSE ECOLOGICAL EFFECTS:	NONE KNOWN



# SAFETY DATA SHEET (S.D.S.)

## 13. DISPOSAL CONSIDERATIONS

APPROPRIATE DISPOSAL CONTAINERS::	SHIPPING CONTAINER
APPROPRIATE DISPOSAL METHODS:	WHATEVER CANNOT BE SAVED FOR RECOVERY OR RECYCLING SHOULD BE MANAGED IN AN APPROPRIATE AND APPROVED WASTE FACILITY. US EPA GUIDELINES FOR THE CLASSIFICATION DETERMINATION ARE LISTED IN 40 CFR PARTS 261.3. ALTHOUGH NOT A LISTED RCRA HAZARDOUS WASTE, THIS MATERIAL MAY EXHIBIT ONE OR MORE CHARACTERISTICS OF A HAZARDOUS WASTE AND REQUIRE APPROPRIATE ANALYSIS TO DETERMINE SPECIFIC DISPOSAL REQUIREMENTS. PROCESSING, USE OR CONTAMINATION OF THIS PRODUCT MAY CHANGE THE WASTE MANAGEMENT OPTIONS. STATE AND LOCAL DISPOSAL REGULATIONS MAY DIFFER FROM FEDERAL DISPOSAL REGULATIONS. DISPOSE OF CONTAINER AND UNUSED CONTENTS IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REQUIREMENTS.
PHYSICAL PROPERTIES THAT MAY AFFECT DISPOSAL ACTIVITIES	THIS MATERIAL DOES NOT MEET RCRA'S CHARACTERISTIC DEFINITION OF IGNITABILITY, CORROSIVITY, OR REACTIVITY AND IS NOT LISTED IN 40 CFR 261.33.
CHEMICAL PROPERTIES THAT MAY AFFECT DISPOSAL ACTIVITIES	TCLP HAS NOT BEEN EVALUATED
SPECIAL PRECAUTIONS	NEITHER THE PRODUCT NOR ITS EFFLUENT SHOULD BE DISCHARGED INTO ANY RIVER, LAKE, STREAM, CREEK, OR WATERSHED THAT MIGHT CONTAMINATE DRINKING WATER OR WELL WATER. ANY DISCHARGE MUST BE SPECIFICALLY PERMITTED BY THE PROPER AUTHORITY LIKE THE DEP OR DER DEPENDING ON YOUR STATE LAWS.
<b>DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. ALL DISPOSAL PRACTICES MUST BE IN COMPLIANCE WITH ALL FEDERAL, STATE/PROVINCIAL AND LOCAL LAWS AND REGULATIONS. REGULATIONS MAY VARY IN DIFFERENT LOCATIONS. WASTE CHARACTERIZATIONS AND COMPLIANCE WITH APPLICABLE LAWS ARE THE RESPONSIBILITY SOLELY OF THE WASTE GENERATOR.</b>	

## 14. TRANSPORT INFORMATION

SHIPPING NAME, DOT:	UN3099, OXIDIZING LIQUID, TOXIC, N.O.S. (CONTAINS: SODIUM NITRITE), 5.1, 6.1, PG III
SHIPPING NAME, IATA:	N/A (NOT APPLICABLE)
SPECIAL PRECAUTIONS:	NONE KNOWN
<p>THIS INFORMATION IS NOT INTENDED TO CONVEY ALL SPECIFIC REGULATORY OR OPERATIONAL REQUIREMENTS/INFORMATION RELATING TO THIS PRODUCT.</p> <p>ADDITIONAL TRANSPORTATION SYSTEM INFORMATION CAN BE OBTAINED THROUGH AN AUTHORIZED SALES OR CUSTOMER SERVICE REPRESENTATIVE.</p> <p>IT IS THE RESPONSIBILITY OF THE TRANSPORTING ORGANIZATION TO FOLLOW ALL APPLICABLE LAWS, REGULATIONS AND RULES RELATING TO THE TRANSPORTATION OF THE MATERIAL.</p>	

## 15. REGULATORY INFORMATION

FEDERAL FDA:	NONE					
EPA:	SARA-SECTION 302 (EXTREMELY HAZARDOUS SUBSTANCE LIST): (YES OR NO)	NO				
	SARA-SECTION 311/312 (HAZARDOUS CATEGORIES):	ACUTE HEALTH				
	SARA-SECTION 313 (TOXIC CHEMICAL LIST): (YES OR NO)	NO				
TSCA:	IS THIS PRODUCT, OR ALL ITS INGREDIENTS; BEING CERTIFIED FOR INCLUSION IN THE TOXIC SUBSTANCES CONTROL ACT INVENTORY OF CHEMICAL SUBSTANCES?	ALL COMPONENTS ARE LISTED ON TSCA LIST				
OSHA:	NONE					
OTHER:	"REPORTABLE QUANTITIES" (RQS) AND/OR "THRESHOLD PLANNING QUANTITIES" (TPQS) EXIST FOR THE FOLLOWING INGREDIENTS. <table><tr><td><u>INGREDIENT NAME</u></td><td><u>SARA/CERCLA RQ (LB)</u></td></tr><tr><td>SODIUM NITRITE</td><td>100</td></tr></table>		<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (LB)</u>	SODIUM NITRITE	100
<u>INGREDIENT NAME</u>	<u>SARA/CERCLA RQ (LB)</u>					
SODIUM NITRITE	100					
STATE:	NONE					
ADDITIONAL REGULATORY CONCERNS:	NONE					

## 16 OTHER INFORMATION

PREPARED BY:	DEAN NORWOOD
TITLE:	CHEMIST
COMPANY:	BROWNE LABORATORIES, INC.
ADDRESS:	4138 S. CREEK ROAD, CHATTANOOGA, TN 37406
REVISION DATE:	9/13/13

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. GENERAL PRODUCTS & SUPPLY, INC. ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE TO USERS OR THIRD PARTIES CAUSED BY THE MATERIAL. USERS ASSUME ALL RISKS ASSOCIATED WITH THE USE OF THE MATERIAL.