Arch Treatment Technologies, Inc.

MATERIAL SAFETY DATA SHEET

FOR ANY EMERGENCY, 24 HOURS / 7 DAYS, CALL:	1-800-654-6911
FOR ALL TRANSPORTATION ACCIDENTS, CALL CHEMTREC®:	1-800-424-9300
FOR ALL MSDS QUESTIONS & REQUESTS, CALL:	1-800-511-MSDS

PRODUCT NAME: **COPPER AMINE C9**
EPA Registration Number: 75506-8

1. PRODUCT AND COMPANY IDENTIFICATION

Arch Treatment Technologies, Inc.
1955 Lake Park Drive, Suite 100
Smyrna, GA 30080

REVISION DATE:	12/03/2007
SUPERCEDES:	11/02/2007
MSDS Number:	000000002131
SYNONYMS:	None
CHEMICAL FAMILY:	Mixture
DESCRIPTION / USE:	General-use pesticide for wood preservative.
FORMULA:	None established

2. HAZARDS IDENTIFICATION

OSHA Hazard Classification:	**Corrosive to eyes, skin and mucous membranes, Liver and kidney toxin**

Routes of Entry:	Inhalation, skin, eyes, ingestion
Chemical Interactions:	No known or reported interactions.
Medical Conditions Aggravated:	Pre-existing liver diseases, Pre-existing kidney disease

Human Threshold Response Data

Odor Threshold
Ethanolamine 2.6 ppm

Irritation Threshold Not established.

Ethanolamine > 5.0 ppm

Hazardous Materials Identification System / National Fire Protection Association Classifications

Hazard Ratings :	Health	Flammability	Physical / Instability	PPI / Special hazard.
HMIS	3	1	0	
NFPA	Not established			

Immediate (Acute) Health Effects

Inhalation Toxicity: High concentrations are moderately irritating to the eyes, nose, throat, and lungs.

Skin Toxicity:	Dermal exposure can cause severe irritation characterized by redness and swelling. Prolonged skin exposure may cause scab formation and/or permanent damage. May be absorbed through skin, but it is unlikely that harmful effects will occur unless contact is prolonged, repeated, and extensive.
Eye Toxicity:	Severe irritation and/or burns can occur following exposure. Direct contact may cause impairment of vision and corneal damage. Rinsing of the eye should take place immediately.
Ingestion Toxicity:	Moderately toxic if swallowed. Ingestion may cause severe irritation of the gastrointestinal tract and may also cause gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea. Exposure to large quantities of this material may result in liver and kidney damage, based on animal studies.
Acute Target Organ Toxicity:	Eyes, Skin, Liver, Kidneys

Prolonged (Chronic) Health Effects

Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
Reproductive and Developmental Toxicity:	No reproductive or developmental risk to humans is expected from exposure to this product.
Inhalation:	Prolonged or repeated exposure will cause more severe irritation and possibly lung damage. Prolonged or repeated inhalation may cause kidney and liver damage.
Skin Contact:	Prolonged or repeated exposure will cause more severe irritation and possibly permanent skin damage.
Skin Absorption:	May be absorbed through skin, but it is unlikely that harmful effects will occur unless contact is prolonged, repeated, and extensive.
Ingestion:	Chronic ingestion of this product may cause severe irritation and possible corrosive effects. The acute corrosivity of this product, makes chronic ingestion of significant amounts unlikely.
Eye Contact:	Prolonged contact may result in permanent damage. Corneal involvement or visual impairment is expected.
Sensitization:	A similar product was found to be a negative skin sensitizer in the Guinea pig Buehler method test.
Chronic Target Organ Toxicity:	Eyes, Skin, Liver, Kidneys
Supplemental Health Hazard Information :	Short term exposures to skin (3 minutes to 1 hour) can produce mild to moderate irritation. Prolonged exposures (>1 hour to 4 hours) can produce severe irritation characterized by blister and scar formation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

CAS OR CHEMICAL NAME	CAS #	% RANGE
Ethanolamine	141-43-5	30.00 - 33.00
COPPER COMPOUNDS	MIXTURE	8.00 - 10.00

Water	7732-18-5	45.00 - 48.00

4. FIRST AID MEASURES

General Advice: Call a poison control center or doctor for treatment advice. For 24-hour emergency medical assistance, call Arch Chemical Emergency Action Network at 1-800-654-6911. Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

Inhalation: IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Skin Contact: IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye Contact: IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Ingestion: IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammability Summary (OSHA): Combustible.

Flammable Properties

Flash Point: > 230

Fire / Explosion Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death.

Extinguishing Media: Not Applicable. - Choose extinguishing media suitable for surrounding materials.

Fire Fighting Instructions: Response to this material requires the use of a full encapsulated suit and self-contained breathing apparatus (SCBA). Use water to cool containers.

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide, Copper metal and copper oxides

Upper Flammable / Explosive Limit, % in air: Not applicable

Lower Flammable / Explosive Limit, % in air: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Personal Protection for Emergency Situations:	Additional protective clothing must be worn to prevent personal contact with this material. Those items include but are not limited to boots, impervious gloves, hard hat, splash-proof goggles, impervious clothing, i.e., chemically impermeable suit, self-contained breathing apparatus.
Spill Mitigation Procedures	
Air Release:	Hazardous concentrations in air may be found in local spill area and immediately downwind. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.
Water Release:	This material is soluble in water. Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so.
Land Release:	Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Do not place spill materials back in their original containers. Contain all liquid for treatment and/or disposal as a (potential) hazardous waste.
Additional Spill Information :	Remove all sources of ignition. Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

7. HANDLING AND STORAGE

Handling:	Avoid contact with material, avoid breathing vapors, use only in a well ventilated area, use bonding and grounding when transferring quantities of material. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. An eye wash and safety shower should be provided in the immediate work area.
Storage:	Store in a cool dry ventilated location, away from oxidizers, heat, flame, or other incompatible conditions. Keep container(s) closed. Do not store at temperatures below: 40 Deg. F (4.4 Deg. C)
Incompatible Materials for Storage:	oxidizers
Do Not Store At temperatures Above:	4 DEG°C – 110 DEG°C / 40 DEG°F – 230 DEG°F
Empty Container Warning:	Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation:	Local exhaust ventilation or other engineering controls are normally required when handling or using this product.

Protective Equipment for Routine Use of Product

Respiratory Protection :	Wear a NIOSH approved respirator if levels above the exposure limits are possible.
Respirator Type :	A NIOSH approved air purifying respirator equipped with combination organic vapor and P100 prefilter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.
Skin Protection :	Wear impervious gloves, boots and apron to avoid skin contact. A full impervious suit is recommended if exposure is possible to a large portion of the body. A safety shower should be provided in the immediate work area.
Eye Protection:	Use chemical goggles and a faceshield. Emergency eyewash should be provided in the immediate work area.
Protective Clothing Type:	Neoprene, Butyl rubber, Nitrile

Exposure Limit Data

CHEMICAL NAME	CAS #	Name of Limit	Exposure
Ethanolamine	141-43-5	ACGIH	3 ppm TWA
Ethanolamine	141-43-5	ACGIH	6 ppm STEL
Ethanolamine	141-43-5	OSHA Z1	3 ppm PEL 6 mg/m3 PEL
Ethanolamine	141-43-5	NIOSH-IDLH	30 ppm
COPPER COMPOUNDS		NIOSH-IDLH	100 mg/m3

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	liquid
Form	colored, aqueous solution
Color:	Blue
Odor:	Amine
Molecular Weight:	None established
Specific Gravity :	Not applicable
pH :	9.0 - 11.0
Boiling Point:	110 DEG°C / 230 DEG°F
Freezing Point:	-30 DEG°C / -22 DEG°F
Melting Point:	
Density:	1.25g/ml
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Viscosity:	Not applicable
Fat Solubility:	No data
Solubility in Water:	soluble
Partition coefficient n-octanol/water:	Not applicable
Evaporation Rate:	Not applicable
Oxidizing:	No data
Volatiles, % by vol.:	50.8%
VOC Content	25.2 wt%/wt EPA Method 24
HAP Content	Not applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity Summary:	Stable under normal conditions. Product will not undergo hazardous polymerization.
Conditions to Avoid:	Sparks, open flame, other ignition sources, and elevated temperatures., Contact with incompatible substances
Chemical Incompatibility:	Strong oxidizing agents, strong acids
Hazardous Decomposition Products:	Carbon monoxide, Carbon dioxide, Oxides of nitrogen
Decomposition Temperature:	Not applicable

11. TOXICOLOGICAL INFORMATION

Component Animal Toxicology

Oral LD50 value:

Ethanolamine	LD50 = 1,700 mg/kg Rat

Dermal LD50 value:

Ethanolamine	LD50 Approximately 1,000 mg/kg Rabbit

Inhalation LC50 value:

Ethanolamine	Inhalation LC50 1 h > 4.8 MG/L Mouse
Ethanolamine	Inhalation LC50 4 h > 970 ppm Mouse

Product Animal Toxicity

Oral LD50 value:	LD50 Approximately 800 mg/kg Rat
Dermal LD50 value:	LD50 > 2,000 mg/kg Rabbit
Inhalation LC50 value:	No data
Skin Irritation:	Dermal exposure can cause severe irritation characterized by redness and swelling. Prolonged skin exposure may cause scab formation and/or permanent damage.
Eye Irritation:	This material is expected to cause irreversible effects to the cornea with impairment of vision or corrosion to the eyes.
Skin Sensitization:	A similar product was found to be a negative skin sensitizer in the Guinea pig Buehler method test.
Acute Toxicity:	This product is corrosive to all tissues contacted and upon inhalation, may cause irritation to mucous membranes and respiratory tract.
Subchronic / Chronic Toxicity:	Animal studies suggest that chronic (repeated) overexposure may result in damage to the liver and kidney.
Reproductive and Developmental Toxicity:	Not known or reported to cause reproductive or developmental toxicity.
Ethanolamine	This chemical has been tested in laboratory animals and no evidence of teratogenicity, embryotoxicity or fetotoxicity was seen.
Mutagenicity:	Not known or reported to be mutagenic.
Ethanolamine	This material was non-mutagenic in the Ames test.
Carcinogenicity:	This product is not known or reported to be carcinogenic by any reference

	source including IARC, OSHA, NTP or EPA.
Ethanolamine	Mixture with nitrites can form nitrosamines which have caused cancer in laboratory animals.

12. ECOLOGICAL INFORMATION

Overview: Toxic to fish and other aquatic organisms., Toxic to wildlife and domestic animals., Do not discharge effluent containing this product into lakes, ponds, streams, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Ecological Toxicity Values for: **Ethanolamine**

Rainbow trout (Salmo gairdneri),	-	(nominal, static). 96 h LC50 = 150 mg/l
Mosquito fish	-	(nominal, static). 96 h LC50 = 337.5 mg/l
Bluegill	-	(nominal, static). 96 h LC50 = 329.16 mg/l
Fathead minnow (Pimephales promelas),	-	(measured, flow-through) 96 h LC50 = 2,070 mg/l
Goldfish	-	24 h LC50 = 190 mg/l
Daphnia magna,	-	(nominal, static). 24 h LC50= 140 mg/l
Common shrimp (Crangon crangon)	-	(nominal, renewal). 48 h LC50> 100 mg/l
Brine shrimp	-	48 h LC50= 7,100 mg/l

13. DISPOSAL CONSIDERATIONS

CARE MUST BE TAKEN TO PREVENT ENVIRONMENTAL CONTAMINATION FROM THE USE OF THE MATERIAL. THE USER OF THE MATERIAL HAS THE RESPONSIBILITY TO DISPOSE OF UNUSED MATERIAL, RESIDUES AND CONTAINERS IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS REGARDING TREATMENT, STORAGE AND DISPOSAL FOR HAZARDOUS AND NONHAZARDOUS WASTES.

Waste Disposal Summary : If this product becomes a waste, it DOES NOT meet the criteria of a hazardous waste as defined under 40 CFR 261, in that it does not exhibit the characteristics of hazardous waste of Subpart C, nor is it listed as a hazardous waste under Subpart D.

Disposal Methods : As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations.

Potential US EPA Waste Codes : Not applicable

14. TRANSPORT INFORMATION

Land (US DOT): UN2491 ETHANOLAMINE SOLUTION 8 III

Water (IMDG): UN2491 ETHANOLAMINE SOLUTION, 8 III

Air (IATA): UN2491 ETHANOLAMINE SOLUTION, 8 III
Emergency Response Guide Number: ERG # 153

15. REGULATORY INFORMATION

UNITED STATES:

Toxic Substances Control Act (TSCA): This is an EPA registered pesticide.
EPA Pesticide Registration Number: 75506-8

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments and Reauthorization Act (SARA) Title III:

Hazard Categories Sections 311 / 312 (40 CFR 370.2):
Health Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
Physical None

Emergency Planning & Community Right to Know (40 CFR 355, App. A):

Extremely Hazardous Substance Section 302 - Threshold Planning Quantity:

Reportable Quantity (49 CFR 172.101, Appendix):

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components

Clean Air Act Toxic ARP Section 112r:
CAA 112R None established

Clean Air Act Socmi:
HON SOC

US. EPA Hazardous Organic NESHAP (HON) Synthetic Organic Chemicals (40 CFR 63.100-.106, Table 1)
HON SOC
07 1999
Group I
ETHANOLAMINE

Clean Air Act VOC Section 111:
CAA 111

US. EPA Clean Air Act (CAA) Section 111 SOCMI Intermediate or Final Volatile Organic Compounds (40 CFR 60.489)
CAA 111
01 1996
ETHANOLAMINE

Clean Air Act Haz. Air Pollutants Section 112:
CAA None established

CAA 112I None established

CAA AP None established

State Right-to-Know Regulations Status of Ingredients
Pennsylvania:

CAS #	COMPONENT NAME
141-43-5	Ethanolamine

PENN RTK

US. Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)
PENN RTK
08 1989
ETHANOL, 2-AMINO-

New Jersey:

CAS #	COMPONENT NAME
141-43-5	Ethanolamine
	COPPER COMPOUNDS

NJ RTK

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
NJ RTK
12 1989
Substance no. 0835
ETHANOLAMINE

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
NJ RTK
12 1989
Substance no. 0835
ETHANOL, 2-AMINO- ETHANOLAMINE

US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)
NJ RTK
12 1989
Hazard Designation:
Substance no. 0835
ETHANOLAMINE

US. New Jersey Community Right-To-Know Survey, Table A: NJ Environmental Hazardous Substances [EHS] List (N.J. Admin. Code Title 7 Section 1G-2.1)
NJ RTK
2001
Substance no. 2215
COPPER COMPOUNDS [EXCEPT: C.I. PIGMENT BLUE 15, C.I. PIGMENT GREEN 7, AND C.I. PIGMENT GREEN 36]

Massachusetts:

CAS #	COMPONENT NAME
141-43-5	Ethanolamine

MASS RTK

US. Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)
MASS RTK
04 1993
2-AMINOETHANOL ETHANOLAMINE

California Proposition 65:

CAS #	COMPONENT NAME
US CA CRT	None established
US CA65CRT	None established

WHMIS Hazard Classification:
WHMIS

Canada. Canadian Environmental Protection Act (CEPA). WHMIS Ingredient Disclosure List (Can. Gaz., Part II, Vol. 122, No. 2)
WHMIS
01 1988
Threshold limits: 1%
English List no. 1096
MONOETHANOLAMINE

16. OTHER INFORMATION

MSDS REVISION STATUS :	Revised to meet the ANSI standard of 16 sections
SECTIONS REVISED:	9
Major References :	Available upon request.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. THIS INFORMATION HAS BEEN PREPARED FOR THE GUIDANCE OF PLANT ENGINEERING, OPERATIONS AND MANAGEMENT AND FOR PERSONS WORKING WITH OR HANDLING THIS PRODUCT. ARCH CHEMICALS BELIEVES THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF THE DATE OF PUBLICATION BUT, MAKES NO WARRANTY THAT IT IS. ADDITIONALLY, IF THIS MSDS IS MORE THAN THREE YEARS OLD, YOU SHOULD CONTACT ARCH CHEMICALS MSDS CONTROL AT THE PHONE NUMBER ON THE FRONT PAGE TO MAKE CERTAIN THAT THIS DOCUMENT IS CURRENT. .