

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**Product identifier****Product name** Copper 1**Other means of identification****Product Code(s)** 6446**Recommended use of the chemical and restrictions on use****Recommended Use** Laboratory chemicals. Industrial (not for food or food contact use). Use as a laboratory reagent.**Details of the supplier of the safety data sheet****Manufacturer Address**LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620 USA
T 410-778-3100
F 410-778-9748**Emergency telephone numbers**

(CHEM-TEL):USA, Canada, Puerto Rico 1-800-255-3924 Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A

EMERGENCY OVERVIEW**WARNING****Hazard statements**

Causes skin irritation. Causes serious eye irritation.



Appearance Clear, colorless liquid **Physical state** liquid **Odor** pungent ammoniacal

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves /protective clothing /eye protection /face protection. Keep out of the reach of children.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Drink 1 or 2 glasses of water. Call a physician immediately.

Storage:

Store in a well-ventilated place. Keep cool.

Other Hazards

Harmful to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS*

Chemical name	CAS No	Weight-%
Toluene	108-88-3	<0.1
Diethylcarbomodithioic acid sodium salt trihydrate	20624-25-3	1
Ammonium hydroxide (28-30% Ammonia)	1336-21-6	<4

4. FIRST AID MEASURES**First Aid Measures****General advice**

Do not get in eyes, on skin, or on clothing.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention/advice. Immediate medical attention is required.

Skin contact

Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Call a physician immediately.

Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician immediately.
Ingestion	Do NOT induce vomiting. Rinse mouth. Call a physician or poison control center immediately.
<u>Self-protection of the first aider</u>	Use personal protection recommended in Section 8. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray, dry chemical, carbon dioxide (CO₂), or foam.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	See section 8. Avoid contact with eyes, skin and clothing.
Environmental precautions	See Section 12 for additional Ecological Information. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Methods and material for containment and cleaning up

Methods for containment	Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).
Methods for cleaning up	Use personal protective equipment. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13). Following product recovery, flush area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not taste or swallow. Do not eat, drink, or smoke when using this product.
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Conditions for safe storage, including any incompatibilities

Storage:	Keep containers tightly closed in a dry, cool and well-ventilated place. Separate from acids and alkalis. Keep out of the reach of children.
Incompatible Products	Strong acids. Metals. Chlorine.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Toluene 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm	IDLH: 500 ppm TWA: 100 ppm

		(vacated) TWA: 375 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m ³ Ceiling: 300 ppm	TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³
Diethylcarbamodithioic acid sodium salt trihydrate 20624-25-3	*-	*-	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	*-	50ppm (NH3)	Not Established

Appropriate engineering controls

Engineering Measures Showers
 Eyewash stations
 Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses with side shields (or goggles).

Skin and body protection Gloves & Lab Coat.

Respiratory protection Use only with adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state liquid
Appearance Clear, colorless liquid **Odor** pungent ammoniacal
Color Clear, colorless

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	12	
Melting point / freezing point	No information available	
Boiling point / boiling range	ca 100 °C No information available	
Flash point	Not Applicable	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific gravity	No information available	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point No information available
Molecular weight No information available
VOC Content (%) No information available

Density No information available
Bulk density No information available

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.
Hazardous polymerization Hazardous polymerization does not occur.
Conditions to avoid Excessive heat.
Incompatible materials Strong acids. Metals. Chlorine.
Hazardous decomposition products Ammonia. Nitrogen oxides (NOx). Contact with acid can release carbon disulfide.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Component identification

Chemical name	ATEmix (oral)	ATEmix (dermal)	Inhalation LC50
Toluene 108-88-3	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	= 1500 mg/kg (Rat)	> 1 g/kg (Rat)	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	= 350 mg/kg (Rat)	Not Established	Not Established

Information on toxicological effects

Chemical name	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3	Not Established	Group 3	Not Established	Not Established
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	Not Established	Group 3	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established	Not Established	Not Established	Not Established

ATEmix (oral) 20,192.00 mg/kg

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Toluene 108-88-3	12.5: 72 h Pseudokirchneriella subcapitata mg/L EC50 static 433: 96 h Pseudokirchneriella subcapitata mg/L EC50	11.0 - 15.0: 96 h Lepomis macrochirus mg/L LC50 static 14.1 - 17.16: 96 h Oncorhynchus mykiss mg/L LC50 static 15.22 - 19.05: 96 h Pimephales promelas mg/L LC50 flow-through 5.89 - 7.81: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 50.87 - 70.34: 96 h Poecilia reticulata mg/L LC50 static 12.6: 96 h Pimephales promelas mg/L LC50 static 28.2: 96 h Poecilia reticulata mg/L LC50 semi-static 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 54: 96 h Oryzias latipes mg/L LC50 static	5.46 - 9.83: 48 h Daphnia magna mg/L EC50 Static 11.5: 48 h Daphnia magna mg/L EC50

Diethylcarbamdithioic acid sodium salt trihydrate 20624-25-3	Not Established	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established	8.2: 96 h Pimephales promelas mg/L LC50	0.66: 48 h Daphnia pulex mg/L EC50 0.66: 48 h water flea mg/L EC50

Persistence and degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical name	Log Pow
Toluene 108-88-3	2.65
Diethylcarbamdithioic acid sodium salt trihydrate 20624-25-3	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of waste product or used containers according to local regulations.

Contaminated packaging

Do not reuse empty containers.

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Toluene 108-88-3	U220	Included in waste streams: F005, F024, F025, F039, K015, K036, K037, K149, K151	Not Established	U220
Diethylcarbamdithioic acid sodium salt trihydrate 20624-25-3	Not Established	-	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established	-	Not Established	Not Established

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Toluene 108-88-3	Not Established	Not Established	Toxic waste waste number F025 Waste description: Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	Not Established
Diethylcarbamdithioic acid sodium salt trihydrate 20624-25-3	Not Established	Not Established	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established	Not Established	Not Established	Not Established

Chemical name	California Hazardous Waste Status
Toluene 108-88-3	Toxic Ignitable
Diethylcarbamodithioic acid sodium salt trihydrate 20624-25-3	*-
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Toxic Corrosive

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO	Not regulated
IATA	Not regulated
IMDG/IMO	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Does not comply
EINECS/ELINCS	Does not comply
ENCS	Does not comply
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	SARA 313 - Threshold Values %
Toluene 108-88-3	1.0
Diethylcarbamodithioic acid sodium salt trihydrate 20624-25-3	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Toluene 108-88-3	1000 lb	X	X	X
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	Not Established	Not Established	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	1000 lb	Not Established	Not Established	X

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical name	Hazardous Substances RQs	CERCLA/SARA RQ	RQ
Toluene 108-88-3	1000 lb 1 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ RQ 1 lb final RQ RQ 0.454 kg final RQ
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	*	Not Established	-
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	1000 lb	Not Established	RQ 1000 lb final RQ RQ 454 kg final RQ

US State Regulations**California Proposition 65**

WARNING: Reproductive Harm - www.P65Warnings.ca.gov

Chemical name	California Proposition 65
Toluene 108-88-3	Developmental
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established

U.S. State Right-to-Know Regulations

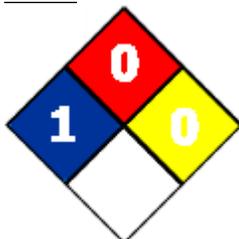
Chemical name	New Jersey	Massachusetts	Pennsylvania
Toluene 108-88-3	X	X	X
Diethylcarbomodithioic acid sodium salt trihydrate 20624-25-3	Not Established	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	X	X	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Toluene 108-88-3	Special labeling, 16 CFR 1500.14
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Add POISON to label, 16 CFR 1500.129
16. OTHER INFORMATION	

NFPA Health hazard 1 Flammability 0 Instability 0 Physical and Chemical Hazards N/A

HMIS Health hazard 1 Flammability 0 Stability 0



Health Hazard	1
Fire Hazard	0
Reactivity	0

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Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet