

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name Copper Test Solution

Other means of identification

Product Code(s) 5267
UN-No 2672

Recommended use of the chemical and restrictions on use

Recommended Use Use as a laboratory reagent. Laboratory chemicals. Industrial (not for food or food contact use).

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 number

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

2. HAZARDS IDENTIFICATION

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

EMERGENCY OVERVIEW

DANGER

Hazard statements

Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. May cause drowsiness or dizziness.



Appearance Clear, colorless

Physical state liquid

Odor pungent Ammonia

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area.

Precautionary Statements - Response

Immediately call a POISON CENTER or physician. Specific treatment (see .? on this label).

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Immediately call a POISON CENTER or physician

Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell, Rinse mouth, Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Other Hazards

Toxic to aquatic life with long lasting effects Toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Ammonium chloride	12125-02-9	7
Ammonium hydroxide (28-30% Ammonia)	1336-21-6	<35

4. FIRST AID MEASURES

First Aid Measures**General advice**

Do not get in eyes, on skin, or on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Remove contaminated clothing and shoes. Immediate medical attention is required.

Eye contact

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

Skin contact

Remove material from skin immediately. Wash off immediately with soap and plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Seek immediate medical attention/advice.

Inhalation

Remove to fresh air. If breathing is difficult, give oxygen. Call a physician immediately.

Ingestion

Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Self-protection of the first aider

Use personal protective equipment. See section 8 for more information. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to Physician

For additional information, see Safety Data Sheet.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

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

Specific hazards arising from the chemical

Closed containers may explode when heated.

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 Use personal protective equipment. Ensure adequate ventilation. Wear respiratory protection. If you have not donned special protective clothing approved for this material, do not expose yourself to any risk of this material touching you. Evacuate personnel to safe areas.

Other Information Ventilate the area.

Methods and material for containment and cleaning up

Methods for containment Dike to collect large liquid spills. 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). Do not flush to sewer.

Methods for cleaning up Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Keep in suitable and closed containers for disposal.

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 breathe mist/vapors/spray. Do not mix with acids.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store below 25°C (77°F). Store away from incompatible materials. Protect from sunlight. Keep out of the reach of children.

Incompatible Products Strong acids. Metals. Sodium hypochlorite.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ammonium chloride 12125-02-9	20 mg/m ³ STEL (fume) TWA: 10 mg/m ³	-	TWA: 10 mg/m ³ STEL: 20 mg/m ³
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	-	50ppm (NH ₃)	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). If splashes are likely to occur. Face protection shield. Maintain eye wash and quick drench shower facilities in work area.
Skin and body protection	Wear protective gloves/clothing. Wear suitable protective clothing.
Respiratory protection	Handle in an enclosing hood with exhaust ventilation. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection with *Ammonia* cartridges should be worn.
Hygiene Measures	Use only with adequate ventilation. Wear suitable gloves and eye/face protection. Avoid contact with eyes, skin and clothing. Wash hands and face before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	liquid	Odor	pungent Ammonia
Appearance	Clear, colorless		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
		No information available
pH		
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	No information available	
Evaporation rate		
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	16%	
Lower flammability limit:	25%	
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 normal conditions of use and storage.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Ignitions sources - heat, sparks and open flames. Direct sunlight. Incompatible products.
Incompatible materials	Strong acids. Metals. Sodium hypochlorite.

Hazardous decomposition products Hazardous decomposition products. Ammonia. Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

Product Information Harmful if swallowed, inhaled, or absorbed through skin

Information on likely routes of exposure

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Ammonium chloride 12125-02-9	= 1650 mg/kg (Rat)	Not Established	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
Ammonium chloride 12125-02-9	Not Established	Not Established	Not Established	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established	Not Established	Not Established	Not Established

Chronic toxicity Repeated exposure may cause damage to the tissues of the mucous membranes, respiratory tract, eyes, and skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
Ammonium chloride 12125-02-9	Not Established	209: 96 h Cyprinus carpio mg/L LC50 static 725: 24 h Lepomis macrochirus mg/L LC50	202: 24 h Daphnia magna mg/L LC50
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

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

Chemical name	Log Pow
Ammonium chloride 12125-02-9	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. Should not be released into the environment.

Contaminated packaging

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

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Ammonium chloride 12125-02-9	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
Ammonium chloride 12125-02-9	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
Ammonium chloride 12125-02-9	-
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	-

14. TRANSPORT INFORMATION

DOT

Proper shipping name AMMONIA SOLUTION (With >10% - <35% AMMONIA)
UN-No 2672
Hazard Class 8
Packing group III
Reportable Quantity (RQ) 1000lb for Ammonium hydroxide, 5000lb Ammonium chloride

IATA

Proper shipping name AMMONIA SOLUTION (With >10% - <35% AMMONIA)
UN-No 2672
Hazard Class 8
Packing group III

IMDG/IMO

Proper shipping name AMMONIA SOLUTION (With >10% - <35% AMMONIA)
UN-No 2672
Hazard Class 8
Packing group III

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Does not comply
IECSC Complies
KECL Complies
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 %
Ammonium chloride 12125-02-9	1.0
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	Yes
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
Ammonium chloride 12125-02-9	5000 lb	Not Established	Not Established	X
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
Ammonium chloride 12125-02-9	5000 lb	Not Established	RQ 5000 lb final RQ RQ 2270 kg final RQ
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**

This product does not contain any Proposition 65 chemicals

Chemical name	California Proposition 65
Ammonium chloride 12125-02-9	Not Established
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Not Established

U.S. State Right-to-Know Regulations

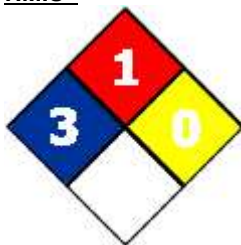
Chemical name	New Jersey	Massachusetts	Pennsylvania
Ammonium chloride 12125-02-9	X	X	X
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	X	X	X

CPSC (Consumer Product Safety Commission) - Specially Regulated Substances

Chemical name	CPSC (Consumer Product Safety Commission) - Specially Regulated Substances
Ammonium hydroxide (28-30% Ammonia) 1336-21-6	Add POISON to label, 16 CFR 1500.129 (>=5%, free or chemically uncombined)

16. OTHER INFORMATION

NFPA	Health hazard 3	Flammability 1	Instability 0	Physical and Chemical Hazards N/A
HMIS	Health hazard 3	Flammability 0	Stability 1	



Health Hazard	3
Fire Hazard	0
Reactivity	1

Prepared by	Regulatory Affairs Department
Issuing Date	Jul-06-2015
Revision Date	Jul-24-2015
Reason for revision	Initial Release

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 Material Safety Data Sheet