



Issuing Date 11/22/2011

Revision Number 0

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** COPPER A

**Product Code(s)** 6367

**Synonyms** none

**Recommended Use** Test kit reagent. Laboratory chemicals. Industrial (not for food or food contact use).

**Company** LaMotte Company, Inc.  
802 Washington Avenue  
P.O. Box 329  
Chestertown, MD 21620  
USA

**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

**WARNING!****Emergency Overview**

May be harmful if swallowed  
Irritating to eyes, respiratory system and skin

**Appearance** Clear, colorless**Physical State** Liquid**Odor** Slight, Ammoniacal**Potential Health Effects****Principle Routes of Exposure** Eye contact, Skin contact, Inhalation, Ingestion.**Acute Toxicity**

**Eyes** Irritating to eyes.  
**Skin** Irritating to skin.  
**Inhalation** Irritating to respiratory system.  
**Ingestion** May be harmful if swallowed.

**Chronic Effects**

None known

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Thiosulfate, sodium, pentahydrate	10102-17-7	1-2
Citric acid monohydrate	5949-29-1	5
Ammonium hydroxide	1336-21-6	3-7
Hydrochloric acid	7647-01-0	5-10
Water	7732-18-5	to 100%

## 4. FIRST AID MEASURES

<b>General Advice</b>	Do not get in eyes, on skin, or on clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Consult a physician.
<b>Inhalation</b>	Move to fresh air. Not an expected route of exposure.
<b>Ingestion</b>	Drink plenty of water. Clean mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Protection of First-aiders</b>	Use personal protective equipment. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

## 5. FIRE-FIGHTING MEASURES

<b>Flammable Properties</b>	Not a fire hazard.			
<b>Flash Point</b>	Not applicable			
<b>Suitable Extinguishing Media</b>	Water spray, dry chemical, carbon dioxide (CO <sub>2</sub> ), or foam.			
<b>Explosion Data</b>				
<b>NFPA</b>	<b>Health Hazard 2</b>	<b>Flammability 0</b>	<b>Stability 0</b>	<b>Physical and Chemical Hazards -</b>
<b>HMIS</b>	<b>Health Hazard 2</b>	<b>Flammability 0</b>	<b>Stability 0</b>	

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Refer to Section 8. Avoid contact with skin, eyes, and clothing.
<b>Methods for Containment</b>	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).
<b>Methods for Cleaning Up</b>	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

<b>Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Prevent contact with skin, eyes, and clothing. Do not ingest. Do not eat, drink, or smoke when using this product.
<b>Storage</b>	Keep containers tightly closed in a dry, cool, and well-ventilated place. Separate from acids. Do not store in metal containers. Keep out of the reach of children.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Thiosulfate, sodium, pentahydrate 10102-17-7	None Known	None Known	None Known

Citric acid monohydrate 5949-29-1	None Known	None Known	None Known
Ammonium hydroxide 1336-21-6	25ppm (NH3)(TWA), 35ppm (STEL)	50ppm (NH3)	None Known
Hydrochloric acid 7647-01-0	None Known	Ceiling 5 ppm (7mg/m <sup>3</sup> )	IDLH: 50 ppm Ceiling: 7 mg/m <sup>3</sup> Ceiling: 5 ppm
Water 7732-18-5	None Known	None Known	None Known

NIOSH IDLH: Immediately Dangerous to Life or Health

**Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location.  
Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields.

**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

<b>Appearance</b>	Clear, colorless	<b>Odor</b>	Slight, Ammoniacal
<b>Physical State</b>	Liquid	<b>pH</b>	8.5
<b>Flash Point</b>	Not applicable	<b>Boiling Point/Range</b>	No data available
<b>Freezing Point</b>	No information available		

<b>Vapor Pressure</b>	No data available	<b>Vapor Density</b>	No data available
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## 10. STABILITY AND REACTIVITY

**Stability** Stable under normal conditions of use and storage.

**Incompatible Products** Strong acids. Metals. Strong oxidizing agents.

**Conditions to Avoid** Excessive heat.

**Hazardous Decomposition Products** Ammonia. Nitrogen oxides (NOx). Chlorine.

**Hazardous Polymerization** Hazardous polymerization does not occur.

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Thiosulfate, sodium, pentahydrate	5000 mg/kg ( Rat )	None Known	None Known
Citric acid monohydrate	3000 mg/kg ( Rat )	None Known	None Known
Ammonium hydroxide	350 mg/kg ( Rat )	None Known	None Known
Hydrochloric acid	700 mg/kg ( Rat )	5010 mg/kg ( Rabbit )	3124 ppm ( Rat ) 1 h
Water	90 mL/kg ( Rat )	None Known	None Known

**Chronic Toxicity****Chronic Toxicity** None known.

Chemical Name	ACGIH	IARC	NTP	OSHA
Thiosulfate, sodium, pentahydrate	None Known	None Known	None Known	None Known
Citric acid monohydrate	None Known	None Known	None Known	None Known
Ammonium hydroxide	None Known	None Known	None Known	None Known
Hydrochloric acid	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

Chemical Name	EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Thiosulfate, sodium, pentahydrate	None Known	None Known	None Known
Citric acid monohydrate	None Known	None Known	None Known
Ammonium hydroxide	None Known	None Known	None Known
Hydrochloric acid	None Known	None Known	None Known
Water	None Known	None Known	None Known

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
Thiosulfate, sodium, pentahydrate	None Known	LC50= 24000 mg/L <i>Gambusia affinis</i> 96 h	None Known	None Known
Citric acid monohydrate	None Known	LC50= 1516 mg/L <i>Lepomis macrochirus</i> 96 h LC50= 440 mg/L <i>Leuciscus idus</i> 96 h	None Known	None Known
Ammonium hydroxide	None Known	LC50= 8.2 mg/L <i>Pimephales promelas</i> 96 h	None Known	EC50 = 0.66 mg/L 48 h
Hydrochloric acid	None Known	LC50= 282 mg/L <i>Gambusia affinis</i> 96 h	None Known	None Known
Water	None Known	None Known	None Known	None Known

**Persistence and Degradability** Based on components, product is expected to be readily biodegradable.

Chemical Name	Log Pow
Thiosulfate, sodium, pentahydrate	None Known
Citric acid monohydrate	None Known
Ammonium hydroxide	None Known
Hydrochloric acid	None Known
Water	None Known

**13. DISPOSAL CONSIDERATIONS****Waste Disposal Method**

Dispose of in accordance with local regulations. Dispose according to federal, state, and local regulations. If permitted, neutralize reagent with acid, add to large volume of water to dilute, rinse to drain with excess water.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Thiosulfate, sodium, pentahydrate - 10102-17-7	None Known	None Known	None Known	None Known
Citric acid monohydrate - 5949-29-1	None Known	None Known	None Known	None Known
Ammonium hydroxide - 1336-21-6	None Known	None Known	None Known	None Known
Hydrochloric acid - 7647-01-0	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

**14. TRANSPORT INFORMATION****DOT**

Not regulated

**IATA**

Not regulated

**IMDG/IMO**

Not regulated

## 15. REGULATORY INFORMATION

**International Inventories**

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Thiosulfate, sodium, pentahydrate 10102-17-7 ( 1-2 )	TSCA	X	EINECS/ELINCS	1-503	X	KECL	X	X
Citric acid monohydrate 5949-29-1 ( 5 )	TSCA	X	EINECS/ELINCS	ENCS	X	KECL	X	X
Ammonium hydroxide 1336-21-6 ( 3-7 )	Present	X	X	1-314	X	KE-01688	X	X
Hydrochloric acid 7647-01-0 ( 5-10 )	T	X	X	X	X	KE-20189 X	X	X
Water 7732-18-5 ( to 100% )	Present	X	X	ENCS	X	KE-35400	X	X

**U.S. 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	CAS-No	Weight %	SARA 313 - Threshold Values %
Thiosulfate, sodium, pentahydrate	10102-17-7	1-2	None Known
Citric acid monohydrate	5949-29-1	5	None Known
Ammonium hydroxide	1336-21-6	3-7	1.0
Hydrochloric acid	7647-01-0	5-10	1.0
Water	7732-18-5	to 100%	None Known

**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

**Clean Water Act**

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Thiosulfate, sodium, pentahydrate 10102-17-7 ( 1-2 )	None Known	None Known	None Known	None Known
Citric acid monohydrate 5949-29-1 ( 5 )	None Known	None Known	None Known	None Known
Ammonium hydroxide 1336-21-6 ( 3-7 )	1000 lb	None Known	None Known	X
Hydrochloric acid 7647-01-0 ( 5-10 )	5000 lb	None Known	None Known	X
Water 7732-18-5 ( to 100% )	None Known	None Known	None Known	None Known

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depleters	Class 2 Ozone Depleters
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Thiosulfate, sodium, pentahydrate	10102-17-7	1-2	None Known	None Known	None Known	None Known
Citric acid monohydrate	5949-29-1	5	None Known	None Known	None Known	None Known
Ammonium hydroxide	1336-21-6	3-7	None Known	None Known	None Known	None Known
Hydrochloric acid	7647-01-0	5-10	Present	None Known	None Known	None Known
Water	7732-18-5	to 100%	None Known	None Known	None Known	None Known

**CERCLA**

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Thiosulfate, sodium, pentahydrate	None Known	None Known
Citric acid monohydrate	None Known	None Known
Ammonium hydroxide	1000 lb	None Known
Hydrochloric acid	5000 lb	5000 lb
Water	None Known	None Known

**U.S. State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical Name	CAS-No	California Prop. 65
Thiosulfate, sodium, pentahydrate	10102-17-7	None Known
Citric acid monohydrate	5949-29-1	None Known
Ammonium hydroxide	1336-21-6	None Known
Hydrochloric acid	7647-01-0	None Known
Water	7732-18-5	None Known

**U.S. State Right-to-Know Regulations**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Thiosulfate, sodium, pentahydrate	None Known	X	None Known	None Known	None Known
Citric acid monohydrate	None Known	None Known	None Known	None Known	None Known
Ammonium hydroxide	X	X	X	None Known	None Known
Hydrochloric acid	X	X	X	X	X
Water	None Known	None Known	None Known	None Known	None Known

**International Regulations****Mexico - Grade**

Chemical Name	Carcinogen Status	Exposure Limits
Thiosulfate, sodium, pentahydrate	None Known	None Known
Citric acid monohydrate	None Known	None Known
Ammonium hydroxide	None Known	None Known
Hydrochloric acid	None Known	None Known
Water	None Known	None Known

**Canada**



This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Component	WHMIS Hazard Class
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Thiosulfate, sodium, pentahydrate 10102-17-7 ( 1-2 )	Uncontrolled product according to WHMIS classification criteria
Citric acid monohydrate 5949-29-1 ( 5 )	1 % E
Ammonium hydroxide 1336-21-6 ( 3-7 )	1 % E
Hydrochloric acid 7647-01-0 ( 5-10 )	1 % A D1A E D1B E D1A E
Water 7732-18-5 ( to 100% )	Uncontrolled product according to WHMIS classification criteria



## 16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>0</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	0	Reactivity	0		
Health Hazard	2								
Fire Hazard	0								
Reactivity	0								

Prepared By Regulatory Affairs Department

Issuing Date 11/22/2011

Revision Date 29-Nov-2011

#### Revision Note

Initial Release

#### Disclaimer

The information provided on this MSDS 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 MSDS**