

SAFETY DATA SHEET

Preparation Date: 8/14/2017

Revision date 10/28/2019

Revision Number: G3

1. IDENTIFICATION

Product identifier

Product code: AA165
Product Name: COPPER ATOMIC ABSORPTION STANDARD (1000 ppm Copper)

Other means of identification

Synonyms: No information available
CAS #: Mixture
RTECS # Not available
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Tom Tyner (USA - West Coast)
Contact Person: Ibad Tirmiz (USA - East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Corrosive to metals	Category 1

Label elements

Danger

Hazard statements

Causes severe skin burns and eye damage
 May be corrosive to metals



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or physician
Absorb spillage to prevent material damage
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/Take off immediately all contaminated clothing. Rinse skin with water
Wash contaminated clothing before reuse
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or physician.
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

Precautionary Statements - Storage

Store locked up
Store in corrosive resistant/ .? container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents and container to an approved waste disposal plant in accordance with local, regional, national and international regulations as applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No	Weight-%
Water	7732-18-5	97.9
Nitric acid	7697-37-2	2
Copper Metal	7440-50-8	0.1

4. FIRST AID MEASURES

First aid measures

General Advice: National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation 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. Immediate medical attention is required. Call a physician immediately.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Follow with Milk of Magnesia or egg whites beaten with water. Immediate medical attention is required. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Symptoms
 Severe skin and eye irritation or burns
 Dyspnea (Shortness of breath and difficulty breathing)
 Can burn mouth, throat, and stomach
 Causes digestive (gastrointestinal) tract irritation
 May cause gastrointestinal (digestive) tract burns
 Abdominal pain
 Nausea
 Vomiting
 May cause erosion of tooth enamel
 May cause bronchitis

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous combustion products No information available.

Specific hazards No information available.

Special Protective Actions for Firefighters

Specific Methods: No information available

Special Protective Equipment 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: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk.

Methods for cleaning up Neutralize with Sodium carbonate or Sodium bicarbonate. Dilute with water. Absorb spill with inert material (e.g. vermiculite, dry sand or earth), then place in a suitable chemical waste container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors or spray mist. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed. Keep in a well-ventilated place. Store at room temperature in the original container. May corrode metallic surfaces. Do not store in uncoated metallic containers. Store in a segregated and approved area. Store away from incompatible materials.

Incompatible Materials:

Bases
Reducing agents
Combustible materials
Organic materials
Metals

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Water	7732-18-5	None	None	None	None

Nitric acid	7697-37-2	2 ppm TWA 5 mg/m ³ TWA	2 ppm TWA 5 mg/m ³ TWA 4 ppm STEL 10 mg/m ³ STEL	4 ppm STEL 2 ppm TWA	No information available
Copper Metal	7440-50-8	0.1 mg/m ³ TWA 1 mg/m ³ TWA	1 mg/m ³ TWA 0.1 mg/m ³ TWA	0.2 mg/m ³ TWA fume	None

Canada

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Water	7732-18-5	None	None	None	None
Nitric acid	7697-37-2	2 ppm TWA 5.2 mg/m ³ TWA 4 ppm STEL 10 mg/m ³ STEL	2 ppm TWA 4 ppm STEL	4 ppm STEL	None
Copper Metal	7440-50-8	0.2 mg/m ³ TWA fume 1 mg/m ³ TWA dust and mist	1 mg/m ³ TWA dust and mist 0.2 mg/m ³ TWA fume	None	0.2 mg/m ³ TWA EV fume 1 mg/m ³ TWA EV dust and mist

Australia and Mexico

Component	CAS No	Australia	Mexico
Water	7732-18-5	None	None
Nitric acid	7697-37-2	4 ppm STEL 10 mg/m ³ STEL 2 ppm TWA 5.2 mg/m ³ TWA	2 ppm TWA 4 ppm STEL
Copper Metal	7440-50-8	1 mg/m ³ TWA 0.2 mg/m ³ TWA	0.2 mg/m ³ TWA 1 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Face-shield.

Skin and body protection: Chemical resistant apron
Long sleeved clothing
Gloves
If working with large quantities:
Chemical resistant protective suit
Boots

Respiratory protection: Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or

smoke. Wash hands before breaks and immediately after handling the product

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Liquid	Appearance: No information available.	Color: Colorless to pale yellow.
Odor: No information available.	Taste No information available.	Formula No information available
Molecular/Formula weight (g/mole): No information available	Flammability (solid, gas) no data available	Flashpoint (°C/°F): No information available
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): No information available	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm3): 1.03
Specific gravity: 1.02	pH No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: No information available	

10. STABILITY AND REACTIVITY

Reactivity

Incompatible with combustible materials, organic materials, metallic powders, bases, ammonia, reducing agents, carbides, aldehydes, cyanides, chromic acid, hydrogen sulfide, sulfides, metals, organic solvents, acetic acid, alkalis, alcohols, cesium and rubidium acetylides, nitrobenzene, turpentine, arsine, phosphine, tetraborane, 4-Methylcyclohexane

Chemical stability

Stability: Stable.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Incompatible materials.

Incompatible Materials:
Bases
Reducing agents
Combustible materials
Organic materials
Metals

Hazardous decomposition products: Nitrogen oxides (NO_x).

Other Information

Corrosivity:

Severe corrosive effect on Brass
Severe corrosive effect on Copper
No corrosive effect on 304 Stainless Steel
No corrosive effect on 316 Stainless Steel
No corrosive effect on Bronze
No corrosive effect on Aluminum

Special Remarks on Corrosivity: No corrosivity data for zinc. and steel

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

Water	
CAS No	7732-18-5

LD50/oral/rat = > 90 mL/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Nitric acid	
CAS No	7697-37-2

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = 67 ppm Inhalation LC50 Rat 4 h
2500 ppm Inhalation LC50 Rat 1 h
130 mg/m³ 4 h
7 mg/l 1 h
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = 430 mg/kg Oral LDL Rat

Copper Metal	
CAS No	7440-50-8

LD50/oral/rat = No information available
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50information = No information available

Product Information

Product code: AA165

Product name: COPPER ATOMIC
ABSORPTION STANDARD (1000 ppm
Copper)

LD50/oral/rat =
Value - Acute Toxicity = No information available

LD50/oral/mouse =
Value - Acute Tox = No information available

LD50/dermal/rabbit
Value - Acute Toxicity = No information available

LD50/dermal/rat
VALUE - Acute Tox = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Severe skin irritation. Causes skin burns. May cause deep penetrating ulcers of the skin with a characteristic yellow to brownish discoloration. Absorption through the skin may cause methemoglobinemia (the formation of methemoglobin in the blood which causes deficient oxygenation of the blood due to decreased available hemoglobin).

Eye Contact: Severe eye irritation. Causes eye burns. May cause irreversible eye damage.

Inhalation Causes irritation and possible burns of the respiratory tract with burning pain in the nose and throat, coughing, sneezing, wheezing, shortness of breath and pulmonary edema.

Ingestion Causes serious gastrointestinal tract irritation or burns with nausea, vomiting, severe abdominal pain, and possible "coffee grounds" appearance of the vomitus . May cause perforation of the digestive tract.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Repeated inhalation may produce changes in pulmonary function and/or chronic bronchitis. It may also cause weight loss, and affect behavior/central nervous system (headache, dizziness, drowsiness, muscle contraction or spasticity, weakness, loss of coordination, mental confusion), and urinary system (kidney failure, decreased urinary output after several hours of uncorrected circulatory collapse). Repeated exposure may cause discoloration and/or erosion of teeth (dental enamel). Eye irritation and respiratory tract signs and symptoms resembling those of frequent upper respiratory viral infections have been associated with chronic nitric acid exposure.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Nitric acid	7697-37-2	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed
Copper Metal	7440-50-8	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: No information available

Developmental Effects: May cause adverse developmental effects based on animal data

Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Target Organs: Skin. Eyes. Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Nitric acid - 7697-37-2

Fish 72 mg/L LC50 *Gambusia affinis* 96h

Copper Metal - 7440-50-8

Algae/aquatic plants EC50: 0.0426 - 0.0535mg/L (72h, *Pseudokirchneriella subcapitata*) EC50: 0.031 - 0.054mg/L (96h, *Pseudokirchneriella subcapitata*)

Fish LC50: 0.0068 - 0.0156mg/L (96h, *Pimephales promelas*) LC50: <0.3mg/L (96h, *Pimephales promelas*) LC50: =0.2mg/L (96h, *Pimephales promelas*) LC50: =0.052mg/L (96h, *Oncorhynchus mykiss*) LC50: =1.25mg/L (96h, *Lepomis macrochirus*) LC50: =0.3mg/L (96h, *Cyprinus carpio*) LC50: =0.8mg/L (96h, *Cyprinus carpio*) LC50: =0.112mg/L (96h, *Poecilia reticulata*)

Crustacea EC50: =0.03mg/L (48h, *Daphnia magna*)

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility in soil No information available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Water	7732-18-5	None	None	None	None
Nitric acid	7697-37-2	None	None	None	None
Copper Metal	7440-50-8	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: UN2031
Proper Shipping Name: Nitric acid solution
Hazard Class 8
Subsidiary Class No information available
Packing group: II
Emergency Response Guide Number 157
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions A6, B2, B47, B53, IB2, T8, TP2
Symbol(s): No information available
Description: UN2031, Nitric acid, 8, II

TDG (Canada)

UN-No: UN2031
Proper Shipping Name: Nitric acid, solution
Hazard Class 8
Subsidiary Risk: No information available
Packing Group: II
Marine Pollutant No Information available
Description: UN2031,NITRIC ACID,8,PG II,Solution
 Forbidden for transport by passenger carrying vessel, passenger carrying road vehicle or passenger carrying railway vehicle

ADR

UN Number UN2031
Proper Shipping Name: Nitric acid solution
Transport hazard class(es) 8
Packing group II
Subsidiary Risk: No information available
Description: UN2031, Nitric acid, 8, II

IMDG

UN-No: UN2031
Proper Shipping Name: Nitric acid solution
Hazard Class: 8
Subsidiary Risk: No information available

Packing Group: II
Marine Pollutant No information available
EMS: F-A
Description UN2031, Nitric acid, 8, II

RID

UN Number UN2031
Proper Shipping Name: Nitric acid solution
Transport hazard class(es) 8
Subsidiary Risk: No information available
Packing group II
Description: UN2031, Nitric acid, 8, II

ICAO (air)

UN-No: UN2031
Proper Shipping Name: Nitric acid solution
Hazard Class 8
Subsidiary Risk: No information available
Packing Group: II
Description: UN2031, Nitric acid, 8, II

IATA

UN Number UN2031
Proper Shipping Name: Nitric acid solution
Transport hazard class(es) 8
Subsidiary Risk: No information available
Packing group II
Precautionary Statements - Response 8L
Special Provisions No information available
Description: UN2031, Nitric acid, 8, II

15. REGULATORY INFORMATION

International Inventories

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
<i>Water</i>	7732-18-5	PresentACTIVE	Present KE-35400	Present	Not present	Present	Present	Present 231-791-2
<i>Nitric acid</i>	7697-37-2	Present (ACTIVE)	Present KE-25911	Present	Present (1)-394	Present	Present	Present 231-714-2
<i>Copper Metal</i>	7440-50-8	PresentACTIVE	Present KE-08896	Present	Not present	Present	Present	Present 231-159-6

U.S. Regulations

Nitric acid

Massachusetts RTK: Present
Massachusetts EHS: extraordinarily hazardous
New Jersey RTK Hazardous Substance List: 1356
New Jersey (EHS) List: 1356 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
New Jersey TCPA - EHS: 15000lbTQ
 450lbTQ
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Michigan PSM HHC: = 500 lb TQ 94.5% by weight or greater

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

1000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 1000lbfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4

454kgfinal RQAs listed in 40 CFR 117.3 Table 117.3 and 40 CFR 302.4 Table 302.4

1000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period

100lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into the atmosphere

California Directors List of Hazardous Substances: Present

Copper Metal

Massachusetts RTK: Present

New Jersey RTK Hazardous Substance List: 0528

New Jersey (EHS) List: 0528 500 lb TPQ

New Jersey - Discharge Prevention - List of Hazardous Substances: Present

Pennsylvania RTK: Environmental hazard

Pennsylvania RTK - Environmental Hazard List Present

Michigan - Critical Materials List: Present

Minnesota - Hazardous Substance List: Present

New York Release Reporting - List of Hazardous Substances:

5000 lb RQ

100 lb RQ

Louisiana Reportable Quantity List for Pollutants: 5000lbfinal RQAs listed in 40 CFR 302.4 Table 302.4. No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

2270kgfinal RQAs listed in 40 CFR 302.4 Table 302.4. No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

100lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into the atmosphere. No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

5000lbRQAs listed in Louisiana Administrative Code, Title 33, Part 1, Subpart 2, Chapter 39, Subchapter E. Applies to unauthorized emissions based on total mass emitted into or onto all media within any consecutive 24-hour period. No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is $\geq 100 \mu\text{m}$

California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Water	7732-18-5	Not Listed	Not Listed	Not Listed	Not Listed
Nitric acid	7697-37-2	Not Listed	Not Listed	Not Listed	Not Listed
Copper Metal	7440-50-8	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Water	7732-18-5	None	None	None	None	None
Nitric acid	7697-37-2	1000 lb final RQ 454 kg final RQ	1000 lb EPCRA RQ	None	None	1.0 % de minimis concentration
Copper Metal	7440-50-8	5000 lb final RQ 2270 kg final RQ	None	None	None	1.0 % de minimis concentration

U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals	TSCA 8(d) -Health and Safety
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		With Significant New Use Rules (SNURS)	Reporting
Water	7732-18-5	Not Applicable	Not Applicable
Nitric acid	7697-37-2	Not Applicable	Not Applicable
Copper Metal	7440-50-8	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component
Water
7732-18-5 (97.9)
Nitric acid
7697-37-2 (2)

Copper Metal
7440-50-8 (0.1)

WHMIS 2015 Hazard Classification
Not a dangerous product according to HPR classification criteria

Oxidizing liquids - Category 3: H272 May intensify fire, oxidizer.; Corrosive to Metals - Category 1: H290 May be corrosive to metals. (potentially corrosive to metals; the supplier should be contacted for more information); Acute toxicity - Inhalation - Category 1: H330 Fatal if inhaled.; Acute toxicity - Inhalation - Category 3: H331 Toxic if inhaled. (6.3%); Health Hazard Not Otherwise Classified - Category 1: Causes severe damage to the respiratory tract; Skin corrosion/irritation - Category 1: H314 Causes severe skin burns and eye damage.; Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.

Acute toxicity - Oral - Category 4: H302 Harmful if swallowed.; Combustible Dust - Category 1: May form combustible dust concentrations in air (factors such as combustibility and explosiveness of dusts including composition and shape and size of particles could cause substance to belong to 'Combustible dust' hazard class)

Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Water	7732-18-5	Present	Not Listed
Nitric acid	7697-37-2	Present	Not Listed
Copper Metal	7440-50-8	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Water	7732-18-5	Not listed
Nitric acid	7697-37-2	Not listed
Copper Metal	7440-50-8	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Water	7732-18-5	Not listed
Nitric acid	7697-37-2	Not listed
Copper Metal	7440-50-8	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Water	7732-18-5	
Nitric acid	7697-37-2	Oxidizing liquids - Ox. Liq. 2: H272

Product code: AA165

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		<p>May intensify fire, oxidizer.; Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage.; Supplemental Hazards - EUH071 Corrosive to the respiratory tract.007-004-00-1</p> <p>Oxidizing liquids - Ox. Liq. 2: H272 May intensify fire, oxidizer. (C >= 99 %); Oxidizing liquids - Ox. Liq. 3: H272 May intensify fire, oxidizer. (65 % <= C <99 %); Skin corrosion/irritation - Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (C >= 20 %); Skin corrosion/irritation - Skin Corr. 1B: H314 Causes severe skin burns and eye damage. (5 % <= C <20 %)007-004-00-1</p>
Copper Metal	7440-50-8	

EU - CLP (1272/2008)

R-phrase(s)

R34 - Causes burns

S -phrase(s)

S23 - Do not breathe gas/fumes/vapor/spray

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36 - Wear suitable protective clothing

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

S 1/2 - Keep locked up and out of the reach of children.

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Water	7732-18-5		No information	
Nitric acid	7697-37-2	C; R35 O; R8	20%<=C C;R35 5%<=C<20% C;R34 70%<=C O;R8	S1/2 S23 S26 S36 S45
Copper Metal	7440-50-8		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

C - Corrosive



16. OTHER INFORMATION

Preparation Date: 8/14/2017
Revision date: 10/28/2019
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet