

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: March 25, 2021

1 Identification

- **Product identifier**
- **Trade name:** Galvanized Passivation Solution
- **Product code:** CU6790SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:**
No relevant information available.
Contact manufacturer/supplier
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Met. Corr.1 H290 May be corrosive to metals.
Acute Tox. 4 H302 Harmful if swallowed.
Skin Corr. 1C H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS05 GHS07
- **Signal word:** Danger
- **Hazard statements:**
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.

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· **Precautionary statements:**





- P234 Keep only in original container.
 P260 Do not breathe mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a poison center/doctor.
 P321 Specific treatment - See Section 4 of this Safety Data Sheet.
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P405 Store locked up.
 P406 Store in corrosive resistant container with a resistant inner liner.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7732-18-5	Water	70-72%
7758-99-8	copper sulphate pentahydrate  Eye Dam. 1, H318  Acute Tox. 4, H302	25%
7647-01-0	Hydrochloric acid  Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318  Acute Tox. 4, H302; STOT SE 3, H335	3-5%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air.
 Provide oxygen treatment if affected person has difficulty breathing.
 If experiencing respiratory symptoms: Call a poison center/doctor.

· **After skin contact:**

Immediately remove any clothing soiled by the product.
 Immediately rinse with water.

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- If skin irritation continues, consult a doctor.
- Seek immediate help for blistering or open wounds.
- **After eye contact:**
 - Protect unharmed eye.
 - Remove contact lenses if worn.
 - Rinse opened eye for 15 to 20 minutes under running water. Then consult a doctor.
- **After swallowing:**
 - Rinse out mouth and then drink plenty of water.
 - Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
 - Caustic effect on skin and mucous membranes.
 - Discoloration of skin.
 - Gastric or intestinal disorders when ingested.
 - Nausea in case of ingestion.
- **Danger:**
 - Danger of gastric perforation.
 - Causes serious eye damage.
 - Harmful if swallowed.
- **Indication of any immediate medical attention and special treatment needed:**
 - Medical supervision for at least 48 hours.
 - If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** No relevant information available.
- **Special hazards arising from the substance or mixture**
 - During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Isolate area and prevent access.
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation.
 - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
 - Do not allow to enter sewers/ surface or ground water.
 - Prevent from spreading (e.g. by damming-in or oil barriers).
 - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
 - Use one of the following agents to absorb and neutralize spills:
 - Baking Soda (Sodium bicarbonate / Sodium hydrogen carbonate)

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Lime (Calcium oxide / Calcium hydroxide)
Chalk/Limestone (Calcium Carbonate)
Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.
Unsuitable material for receptacle: aluminium.
Unsuitable material for receptacle: steel.

· **Information about storage in one common storage facility:**

Store away from foodstuffs.
Store away from metals.
Do not store together with alkalis (caustic solutions).
Store away from oxidizing agents.

· **Further information about storage conditions:** Keep containers tightly sealed.

· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7647-01-0 Hydrochloric acid

PEL (USA)	Ceiling limit value: 7 mg/m ³ , 5 ppm
REL (USA)	Ceiling limit value: 7 mg/m ³ , 5 ppm
TLV (USA)	Ceiling limit value: 2.98 mg/m ³ , 2 ppm
EL (Canada)	Ceiling limit value: 2 ppm
EV (Canada)	Ceiling limit value: 2 ppm
LMPE (Mexico)	Ceiling limit value: 2 ppm
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· **Exposure controls**

· **General protective and hygienic measures:**

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The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** Use suitable respiratory protective device when high concentrations are present.
- **Protection of hands:**



Protective gloves

- **Material of gloves**

Nitrile rubber, NBR

Butyl rubber, BR

Neoprene gloves

- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Acid resistant protective clothing.
- **Limitation and supervision of exposure into the environment**
No relevant information available.
- **Risk management measures** No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form: Liquid

Color: Blue

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value at 20 °C (68 °F):** <2

· **Melting point/Melting range:** <0 °C (<32 °F)

· **Boiling point/Boiling range:** >100 °C (>212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits

Lower: Not determined.

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<ul style="list-style-type: none"> · Upper: Not determined. · Oxidizing properties: Non-oxidizing. 	
<ul style="list-style-type: none"> · Vapor pressure: Not determined. 	
<ul style="list-style-type: none"> · Density at 20 °C (68 °F): 1.64-1.68 g/cm³ (13.69-14.02 lbs/gal) · Relative density: Not determined. · Vapor density: Not determined. · Evaporation rate: Not determined. 	
<ul style="list-style-type: none"> · Solubility in / Miscibility with Water: Fully miscible. 	
<ul style="list-style-type: none"> · Partition coefficient (n-octanol/water): Not determined. 	
<ul style="list-style-type: none"> · Viscosity <ul style="list-style-type: none"> Dynamic: Not determined. Kinematic: Not determined. · Other information No relevant information available. 	

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Reacts with alkali (lyes).
Corrosive action on metals.
Reacts with oxidizing agents.
Reacts with metals forming hydrogen.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
Metals.
Alkalis
Oxidizing agents.
- **Hazardous decomposition products**
Under fire conditions only:
Copper oxides.
Sulfur oxides (SO_x)
Chlorine compounds

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Harmful if swallowed.
- **LD/LC50 values that are relevant for classification:**

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ATE (Acute Toxicity Estimate)

Oral	LD50	>1494-2103 mg/kg
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7758-99-8 copper sulphate pentahydrate

Oral	LD50	400-580 mg/kg (rat)
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- **Primary irritant effect:**
- **On the skin:** Caustic effect on skin and mucous membranes.
- **On the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

7647-01-0	Hydrochloric acid	3
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· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** Causes severe skin burns and eye damage.
- **Repeated dose toxicity:** No relevant information available.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· Toxicity

- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.

· Additional ecological information

· General notes:

Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment can not be excluded.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

Very toxic for aquatic organisms

- **Other adverse effects** No relevant information available.

13 Disposal considerations

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· **Waste treatment methods**

· **Recommendation:**

The user of this 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. Residual materials should be treated as hazardous.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**

· **DOT, ADR/RID/ADN, IMDG, IATA** UN3264

· **UN proper shipping name**

· **DOT** Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid)

· **ADR/RID/ADN** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID), ENVIRONMENTALLY HAZARDOUS

· **IMDG** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, COPPER SULPHATE PENTAHYDRATE), MARINE POLLUTANT

· **IATA** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID)

· **Transport hazard class(es)**

· **DOT**



· **Class** 8

· **Label** 8

· **ADR/RID/ADN**



· **Class** 8 (C1)

· **Label** 8

· **IMDG**



· **Class** 8

· **Label** 8

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· IATA



· Class 8
· Label 8

· Packing group III
· DOT, ADR/RID/ADN, IMDG, IATA

· Environmental hazards Product contains environmentally hazardous substances: copper sulphate pentahydrate
· Marine pollutant: Yes (DOT)
Symbol (fish and tree)

· Special precautions for user Warning: Corrosive substances
· Hazard identification number (Kemler code): 80
· EMS Number: F-A,S-B
· Segregation groups Acids

· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· United States (USA)
· SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

7647-01-0 Hydrochloric acid

· TSCA (Toxic Substances Control Act)

All ingredients are listed or exempt.

· Proposition 65 (California)

· Chemicals known to cause cancer:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

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· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

7647-01-0 | Hydrochloric acid

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· **Canadian Domestic Substances List (DSL):**

All ingredients listed on DSL or NDSL.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers