

# Safety Data Sheet (SDS)

## Section 1: Identification

**Product identifier:** Marble's Reagent

**Other name(s):** Marble's Etch

**Item number(s):** 141, 142

**Identified use:** SU24 Scientific research and development.

**Details of the supplier of the safety data sheet:**

ES Laboratory, LLC

2041 E. Gladstone St. Unit N Glendora, CA 91740 USA

Tel: 626-208-9011

**Emergency telephone number:**

CHEMTREC®

Domestic: 800-424-9300

International: 703-527-3887

## Section 2: Hazard(s) Identification

**Hazardous classification of the substance or mixture:**

| Hazard Class                                     | Category code |
|--|---------------|
| Skin Corrosion                                   | 1A            |
| Serious Eye Damage                               | 1             |
| Specific target organ toxicity - single exposure | 3             |

**Signal word:** Danger

**Pictogram:**



**Hazard statement(s):**

H314 Cause severe skin burn and eye damage.

H335 May cause respiratory irritation.

**Precautionary statement(s):**

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

**Response statement(s):**

P303+P361+P353 IF ON SKIN (or hair): remove/take off immediately all contaminated clothing. Rinses skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P330+P331 IF SWALLOWED: rinse mouth. DO NOT induce vomiting.

**Storage statement(s):**

P405 Store locked up.

**Disposal statement(s):**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified:** No information.

**Label elements:** See tables above

**HMIS Ratings:**

Health: 3

Flammability: 0

Reactivity: 1

**NFPA Ratings:**

Health: 3

Flammability: 0

Reactivity: 1

Special hazard: None

## Section 3: Composition/Information on Ingredients

| Component                 | CAS No.   | Concentration |
|---------------------------|-----------|---------------|
| Cupric sulfate, anhydrous | 7758-98-7 | 10-20%        |

|                   |           |        |
|-------------------|-----------|--------|
| Hydrochloric acid | 7647-01-0 | 50-60% |
|-------------------|-----------|--------|

Any concentration shown as a range is to protect confidentiality or is due to batch variation. Only hazardous components are shown.

## Section 4: First-Aid Measures

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical aid immediately.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid immediately.

**Skin contact:** Wash the areas of contact with water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately.

**Ingestion:** Do not induce vomiting. Rinse mouth. Get medical aid immediately.

**Most important symptoms and effects, both acute and delayed:** No information.

**Recommendation for immediate medical care and special treatment needed, when necessary:** No information.

## Section 5: Fire-Fighting Measures

**Extinguishing media:** alcohol-resistant foam, dry chemical, dry sand, or carbon dioxide.

**Special hazards arising from the substance or mixture:** In the case of fire, the following can be released: acidic liquid, sulfur oxide.

**Special protective equipment or precautions for firefighters:** Wear full protective clothing and self-contained respirator.

## Section 6: Accidental Release Measures

**Personal precautions, protective equipment and emergency procedures:** Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

**Environmental precautions:** Do not allow the material to be released to the environment without proper government permits.

**Methods and materials for containment and cleaning up:** Absorb with a liquid binding material (sand, diatomite, acid binder, universal binders, sawdust). Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation.

## Section 7: Handling and Storage

**Precautions for safe handling:** Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation in the workplace. Open and handle container with care.

**Condition for safe storage:** Keep container tightly sealed. Store in an approved corrosive liquid storage container/area.

**Incompatibilities:** Store away from strong bases.

**Specific storage requirement(s):** No information.

## Section 8: Exposure Controls/Personal Protection

### Exposure Limits

| Component                 | CAS No.   | ACGIH TLV | OSHA PEL |
|---------------------------|-----------|-----------|----------|
| Cupric sulfate, anhydrous | 7758-98-7 | No data   | No data  |
| Hydrochloric acid         | 7647-01-0 | C 5 ppm   | C 5 ppm  |

**Engineering controls:** Use general and/or local exhaust ventilation to control the vapor concentration.

**Eye protection:** Wear safety glasses or goggles.

**Skin protection:** Wear protective clothing and chemical resistant gloves.

**Respiratory protection:** Use self-contained respiratory device in an emergency situation.

## Section 9: Physical and Chemical Properties

**Appearance:**

Dark green liquid

|   |                 |
|---|-----------------|
| <b>UFL/LEL:</b>                                 | Not determined  |
| <b>LFL/LEL:</b>                                 | Not determined  |
| <b>Odor:</b>                                    | Acidic, pungent |
| <b>Vapor pressure:</b>                          | Not determined  |
| <b>Odor threshold:</b>                          | Not determined  |
| <b>Vapor density:</b>                           | Not determined  |
| <b>pH:</b>                                      | Not determined  |
| <b>Relative density:</b>                        | Not determined  |
| <b>Melting Point/Freezing point:</b>            | Not determined  |
| <b>Solubility in water:</b>                     | Miscible        |
| <b>Boiling point/boiling range:</b>             | Not determined  |
| <b>Flash point:</b>                             | Not determined  |
| <b>Evaporation Rate:</b>                        | Not determined  |
| <b>Flammability (solid, gas):</b>               | Not applicable  |
| <b>Partition coefficient (n-octanol/water):</b> | Not determined  |
| <b>Auto-ignition temperature:</b>               | Not determined  |
| <b>Decomposition temperature:</b>               | Not determined  |
| <b>Viscosity:</b>                               | Not determined  |

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### Section 10: Stability and Reactivity

**Reactivity:** No information.

**Chemical stability:** Stable under recommended conditions.

**Stabilizer(s):** Not required.

**Safety issues that may arise should the product change in appearance:** No information.

**Thermal decomposition/ conditions to Avoid:** Decomposition will not occur if used and stored according to specifications. Avoid excessive heat.

**Possibility of hazardous reactions:** see incompatibilities.

**Incompatibilities:** Strong bases.

**Hazardous decomposition products:** hydrogen chloride and sulfur oxide when heated to decomposition.

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### Section 11: Toxicological Information

#### For Hydrochloric Acid:

**Acute toxicity:**

Oral rat LD50: 900 mg/kg.

**Other exposure effect:**

Inhalation: Strong corrosive effect.

On the Skin: Strong corrosive effect.

On the Eye: Strong corrosive effect.

Sensitization: No sensitizing effects were known.

**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP or OSHA. IARC-3 Not classifiable as to human carcinogenicity.

#### For Cupric sulfate, anhydrous:

**Acute toxicity:**

Oral rat LD50: 300 mg/kg.

**Other exposure effect:**

Inhalation: May cause irritation.

On the Skin: Cause skin irritation.

On the Eye: Cause serious eye irritation.

Sensitization: No sensitizing effects known.

**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from NTP, IARC or OSHA.

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### Section 12: Ecological Information

#### Toxicity:

**Aquatic toxicity:** Cupric sulfate is very toxic to aquatic organisms.

**Persistence and degradability:** Cupric sulfate may cause long lasting harmful effects to aquatic life.

#### Behavior in environmental system:

**Bioaccumulative potential:** No information.

**Mobility in soil:** No information.

**Additional ecological information:** Avoid transfer into the environment.

**Other adverse effects:** No information.

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### Section 13: Disposal Considerations

Place in a chemical waste container for proper disposal in an approved waste disposal facility. Dispose of the content and container in accordance with local, regional, national, international regulations.

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### Section 14: Transport Information

**D.O.T. shipping name:** Hydrochloric Acid

**D.O.T. hazard class:** 8

**UN number:** UN1789

**Packing group:** II

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### Section 15: Regulatory Information

**Not meant to be all inclusive, selected regulation represented**

**OSHA status:** These items meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA status:** All components are listed.

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### Section 16: Other Information

**Disclaimer:** The information above is believed to be accurate and represents the best information currently available to us. ES Laboratory, LLC makes no warranty, express or implied, as to its accuracy, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. We shall not be liable for any damages to person or property resulting from its use.

**Revised Date:** 2/9/2017