Marbles Reagent

1. Identification

Product Name: Marbles Reagent **Item #:** MA0605001 **Web SDS:** S389

Synonyms: N/A

Recommended Use: N/A **Restrictions on Use:** N/A

Manufacturer:
BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477

In Case of Emergency:
Chemtrec US 1-800-424-9300
Chemtrec International 703-527-3887

2. Hazards Identification

OSHA Hazard Classification(s):

Acute Toxicity - Oral - Category 4
Acute Toxicity - Inhalation - Category 3
Skin Corrosion - Category 1A
Eye Damage - Category 1
Germ Cell Mutagenicity - Category 2
Toxic to Reproduction - Category 2
Specific Target Organ Toxicity (repeated exposure) - Category 2

Signal Word: Danger

Hazard Statement(s): Harmful if swallowed. Toxic if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. Suspect of causing genetic defects. Suspected of damaging fertility of the unborn child. May cause damage to organs (liver) through prolonged or repeated exposure.

Pictogram(s):

Precautionary Statement(s): Prevention: Wash body thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust, vapors. Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Wear protective gloves, protective clothing, eye protection and face protection. Wear eye protection, face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, vapors.

Response: If swallowed: Call a doctor if you feel unwell. Rinse mouth. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor. Specific treatment (see first aid section on this label). If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off all contaminated clothing and wash it before reuse. Immediately call a doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If exposed or concerned: Get medical attention. Call a doctor if you feel unwell.

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

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	50
Hydrochloric Acid 31.5%		7647-01-0	50
Copper II Sulfate		7758-98-7	10

4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.
Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.
Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.
Symptoms: Irritation eyes, nose, throat; headache, dizziness, dermatitis, redness of skin, burns to skin or eyes. Nausea, respiratory distress.
Recommendations for immediate medical care/special treatment: Get medical advice/attention for any direct exposure.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water.
Fire Hazards (Chemical): Not flammable.
Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.
Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.
Protective Equipment: See section 8
Environmental Precautions: Prevent release to the environment by using barriers.
Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product. Empty containers retain product residue and can be dangerous. Do not pressurize, cut weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.
Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, sparks, and flame. Surfaces that are hot may ignite liquid product even in the absence of sparks or flame. Do not add water directly to this product and do not mix with alkalies such as sodium hydroxide (caustic soda) or alkali metals to avoid possible violent reactions. This product may be added to water with mixing and dilution.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
Hydrochloric Acid	7647-01-0	5ppm

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Hydrochloric Acid	7647-01-0	2ppm	

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.
Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.
Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

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Appearance: Green, Liquid
Molecular Weight: N/A
Molecular Formula: N/A
pH: 1.1-1.2
Boiling Point and Boiling Range: N/A
Melting Point/Freezing Point: N/A
Flash Point: N/A
Specific Gravity/Relative Density: N/A
Odor: Pungent
Odor Threshold: N/A
Color: Green
Flammability (solid/gas): N/A
Vapor Density: N/A
Upper/Lower flammability or explosive limits: N/A
Vapor Pressure: N/A
Evaporation Rate: N/A
Partition Coefficient: n-octanol/water: N/A
Viscosity: N/A
Auto-ignition temperature: N/A
Solubility: N/A
Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:
Chemical Stability: Stable
Conditions of Stability/Instability: Avoid heat, flame and other sources of ignition. Reacts with alkalis and metals.
Stabilizers needed: None
Safety issue indicated by appearance change: N/A
Other: N/A
Hazardous Reactions: N/A
Hazardous Polymerization: Does not occur
Conditions to avoid: N/A
Classes of Incompatible Materials: Oxidizers, Strong Acids, Strong Base, Metals
Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire. Chlorine gas may be released by mixing with strong oxidizers.

11. Toxicological Information

Likely Routes of Exposure

Eyes: Corrosive to eyes. May cause permanent or severe damage to cornea and vision. High vapor concentrations may also be irritating to the eyes.

Skin: Corrosive to skin. May cause permanent damage to skin. May cause redness, pain, itching, irritation and chemical burns. Blisters and tissue destruction may occur.

Inhalation: Toxic by inhalation. May cause death. Irritation and inflammation to mucous membranes. Dizziness, headache.

Ingestion: Fatal by ingestion. Very acidic solution. May cause burns to mouth, throat, stomach. May damage gastrointestinal tract. May cause headaches, dizziness, nausea and general weakness.

Signs or Symptoms of Exposure: Long term exposure may cause germ cell mutation. May be toxic to reproductive organs. May damage gastrointestinal tract, brain, stomach, liver or kidneys. Aspiration pneumontis may be evidenced by coughing, labored breathing and cyanosis (bluish skin). In severe cases death may result.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache,

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dizziness, nausea. Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

Acute Toxicity (Numerical Measures): Hydrochloric Acid: LD50(oral, rat)=900 mg/kg; LC50(inhalation, mouse)=1108 ppm/1H; LC50(inhalation, mouse)=3940 mg/m3/30M
Copper II Sulfate: LD50(oral,human)=50 mg/kg; LD50(oral,mouse)=87 mg/kg

Carcinogenicity (NTP, IARC, OSHA): Not listed as a carcinogen.

12. Ecological Information

Ecotoxicity: Hydrochloric Acid Fish: LC50 (96 Hr) Mosquito Fish: 282 mg/L LC100(24Hr) Trout: 10 mg/L Invertebrates: LC50(48Hr) Starfish: 100-330 mg/L LC50 (48Hr) Shrimp: 100-330 mg/L Copper II Sulfate: Toxicity to fish: Mortality LC50-other fish- 1-2.5mg/l-96h Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50-Daphnia magna(Water flea)-0.024mg/l-48h

Persistence and degradability: Hydrochloric Acid can be acutely toxic in aquatic life through reduction in aqueous pH to toxic levels. Typically most aquatic species are intolerant of pH levels lower than 5.5 for any extended length of time. Reduction in aqueous pH levels may also cause the liberation of metals such as aluminum which will also contribute to exhibited toxicity. Hydrochloric acid will dissociate in water and undergo neutralization with carbonate and other naturally occurring buffering agents. Terrestrial organisms would be subject to severe burns if exposed to HCl during an accidental release. A large HCl release could lead to a persistent reduction in pH in a poorly buffered system lacking in carbonates or other naturally occurring acid neitralizers. Care should be taken to avoid accidental release to aquatic or terrestrial ecosystems.

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: May cause adverse environmental effects

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number: UN1789

UN Proper Shipping Name: Hydrochloric Acid Solution

Transport Hazard Class(es): 8

Packing Group Number: II

Environmental Hazards (IMDG code):

Marine Pollutant: No

Transport in Bulk (IBC Code): N/A

Special Transport Precautions: N/A

15. Regulatory Information

OSHA:

DOT:

EPA:

CPSC:

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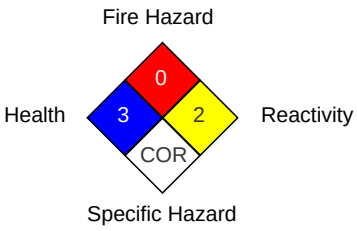
16. Other Information

Revision Date: 12/04/2015

NFPA

Health	3
Fire Hazard	0
Reactivity	2
Specific Hazard	COR

National Fire Protection Association (USA) NFPA



HMIS

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	

Hazardous Material Information System HMIS

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	

Notice to Reader:

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