



SAFETY DATA SHEET

According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

SECTION 1: Identification

Product identifier	
Product name	Copper Total 4.5 - Reagent B
Product number	R-8043B
Recommended use and restrictions	To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
Manufacturer	Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Phone: (410) 472-4340 Emergency phone: (800) 837-8548

SECTION 2: Hazard(s) identification

Physical hazards	Not applicable
Health hazards	Not applicable
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.
Label elements	
Hazard pictograms	Not applicable
Signal word	Not applicable
Hazard statements	Not applicable
Precautionary statements	
Prevention	Avoid contact with skin, eyes, or clothing. For contact with skin or eyes, flush 20 minutes with water. If ingested, contact physician or local poison control center. Treat symptoms as needed.
Response	This reagent is not defined as a hazardous chemical per OSHA's Hazard Communication Standard 2012; however, use care when handling.
Storage	Keep tightly capped. Store out of direct sunlight between 36°F–85°F.
Disposal	Not applicable
Hazards not otherwise classified	Not applicable

SECTION 3: Composition/information on ingredients

Mixture			
Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	80–90
Sodium citrate	Sodium citrate tribasic dihydrate; Citric acid trisodium salt dihydrate	6132-04-3	5–10
Sodium L- tartrate dibasic dihydrate	Disodium tartrate dihydrate; Sodium tartrate dibasic dihydrate	6106-24-7	5–10
Cyclohexanediaminetetraacetic acid	N, N' -1,2-cyclohexanedeylbis[N-carboxy-methyl]glycine	482-54-2	0.1–5

SECTION 4: First-aid measures

If inhaled

Remove individual to fresh air. Seek medical advice/attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical advice/attention if irritation develops.

In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice/attention.

If swallowed

Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs. If symptoms persist or in all cases of concern, seek medical advice/attention.

Most important symptoms and effects, both acute and delayed

Refer to section 2 and/or section 11 of the SDS for the most important known symptoms and effects.

Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: Firefighting measures**Extinguishing media**

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the substance or mixture

Fire hazard Not flammable
Explosion hazard Not explosive
Reactivity Hazardous reactions will not occur under normal conditions.
Hazardous combustion products Carbon oxides, nitrogen oxides, sodium oxides. Other irritating fumes and smoke.

Advice for firefighters

Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.
Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.
Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.
Other information Refer to section 9 of the SDS for flammability properties.

SECTION 6: Accidental release measures**Personal precautions, protective equipment, and emergency procedures**

Wear appropriate protective equipment and clothing during cleanup. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

Methods and material for containment and cleaning up

Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

SECTION 7: Handling and storage**Personal precautions, protective equipment, and emergency procedures**

Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS).

SECTION 8: Exposure controls/personal protection**Occupational exposure limits****US ACGIH Threshold Limit Values**

Not regulated

US NIOSH: Pocket Guide to Chemical Hazards

Not regulated

US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Not regulated

Biological limit values

No biological exposure limits noted for the ingredient(s)

Exposure controls

Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.
Personal protective equipment	
Eye/face protection	Wear appropriate chemical safety goggles if contact is likely to occur.
Skin protection	Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection	Wear appropriate protective clothing.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear
Odor	Odorless
Odor threshold	Not applicable
pH	7.45
Evaporation rate	No data available
Melting point	Not applicable
Freezing point	No data available
Boiling point	No data available
Flash point	Not applicable
Specific gravity	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Flammability (solid, gas)	Not applicable
Upper Flammability Limit	Not applicable
Lower Flammability Limit	Not applicable
Vapor pressure	17 mm Hg
Relative vapor density	No data available
Solubility	Soluble in all proportions
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	80–90%

SECTION 10: Stability and reactivity

Reactivity	Hazardous reactions will not occur under normal conditions.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.

Incompatible materials
Hazardous decomposition products

Strong oxidizing agents
No hazardous decomposition products under normal conditions

SECTION 11: Toxicological information

Information on toxicological effects

Inhalation May cause irritation to the respiratory system
Skin contact May cause slight or mild transient irritation
Eye contact May cause slight or mild transient irritation
Ingestion May cause irritation, nausea, vomiting, and diarrhea

Most important symptoms/effects, acute and delayed

Direct skin contact may cause slight or mild transient irritation. Symptoms may include redness and itching.

Direct eye contact may cause slight or mild transient irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Inhalation of mists can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.

Ingestion may cause gastrointestinal irritation, nausea, vomiting, and diarrhea.

Acute toxicity

This product is not classified as an acute toxicity hazard. See below for product and individual ingredient acute toxicity data.

<u>Product</u>	<u>Species</u>	<u>Acute Toxicity Estimate (ATE)</u>
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Copper Total 4.5 - Reagent B (CAS Mixture)

Acute

Dermal

LD ₅₀	Rat	Not classified as an acute toxicity hazard
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Inhalation

LC ₅₀	Rat	Not classified as an acute toxicity hazard
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Oral

LD ₅₀	Rat	Not classified as an acute toxicity hazard
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Skin corrosion/irritation

May cause slight or mild transient irritation

Serious eye damage/eye irritation

May cause slight or mild transient irritation

Respiratory sensitization

No data available

Skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity

Not classifiable

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

US National Toxicology Program (NTP) Report on Carcinogens

Not regulated

Reproductive toxicity

No data available

Specific target organ toxicity (single exposure)

No data available

Specific target organ toxicity (repeated exposure)

No data available

Aspiration hazard

No data available

SECTION 12: Ecological information

Ecotoxicity

This product is not classified as environmentally hazardous.

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil No data available

Other adverse effects Large or frequent spills can have a harmful or damaging effect on the environment.

SECTION 13: Disposal considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

DOT Not regulated as dangerous goods

IATA Not regulated as dangerous goods

IMDG Not regulated as dangerous goods

SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

Safe Drinking Water Act (SDWA)

Not regulated

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Not regulated

Pennsylvania Worker and Community Right-to-Know Act

Not regulated

SECTION 16: Other information

NFPA Rating

Health hazard	0
Fire hazard	0
Reactivity	0
Specific	N/A

Disclaimer

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