

SECTION 1: Identification

Product identifier	
Product name	Copper Total 4.5 - Reagent A
Product number	R-0843A
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	Self-heating substances and mixtures	Category 2
Health hazards	Eye damage/irritation	Category 2B
Environmental hazards	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.	

Label elements

Hazard pictograms



Signal word	Warning
Hazard statements	Self-heating in large quantities; may catch fire. Causes eye irritation.
Precautionary statements	
Prevention	Keep cool. Protect from sunlight. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur.
Response	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.
Storage	Maintain air gap between stacks/pallets. Store away from other materials. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store in a dry place.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards not otherwise classified	Contact with acids liberates toxic gas.

SECTION 3: Composition/information on ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Potassium chloride	Not available	7447-40-7	70–80
Sodium sulfite	Sodium sulphite	7757-83-7	20–25
Sodium hydrosulfite	Disodium dithionite; Dithionous acid; Sodium hydrosulphite	7775-14-6	5–10

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. Seek medical advice/attention if irritation persists or if concerned.

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	Alcohol-resistant foam, carbon dioxide, dry chemical powder, water spray
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	Addition of small amounts of water may cause self-ignition.
Explosion hazard	Not explosive
Reactivity	Addition of small amounts of water may cause self-ignition.
Hazardous combustion products	Hydrogen chloride gas, potassium oxides, sodium oxides, sulfur 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	Wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Use water spray or fog for cooling exposed containers. Do not get water inside container. Remove containers from fire area, if safely possible. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
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**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe mist or dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. 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

Avoid dispersal of dust in air (i.e., clearing dust surfaces with compressed air). Sweep up or vacuum up spillage and collect in suitable container for later disposal. 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 dust. 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

Store in corrosive-resistant container with a corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store locked up. 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	Solid
Form	Powder
Color	White
Odor	Sulfidic
Odor threshold	No data available
pH	Not applicable
Evaporation rate	Not applicable
Melting point	No data available
Freezing point	Not applicable
Boiling point	Not applicable
Flash point	No data available
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	Not applicable
Relative vapor density	Not applicable
Solubility	Soluble in all proportions
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

SECTION 10: Stability and reactivity

Reactivity	Small amounts of water may cause self-ignition.
Chemical stability	Stable under recommended handling and storage conditions (refer to section 7 of the SDS)
Possibility of hazardous reactions	Exposure to moisture
Conditions to avoid	Do not allow water to enter container. Moisture. Heat. Contact of incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Acids, strong oxidizing agents, water
Hazardous decomposition products	No hazardous decomposition products under normal use. In the event of fire, see section 5 of the SDS.

SECTION 11: Toxicological information**Information on toxicological effects**

Inhalation	May cause irritation to the respiratory system
Skin contact	May cause slight or mild irritation to the skin
Eye contact	Causes eye irritation
Ingestion	May cause irritation to the gastrointestinal tract
Most important symptoms/effects, acute and delayed	Direct skin contact may cause slight or mild irritation. Symptoms may include redness, edema, drying, and cracking of the skin.
	Direct eye contact causes eye irritation. Symptoms may include stinging and tearing.
	Inhalation of dust can cause respiratory irritation. Symptoms may include coughing and breathing difficulties.
	Ingestion may cause gastrointestinal irritation. Symptoms may include abdominal pain, 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.

Product	Species	Acute Toxicity Estimate (ATE)
Copper Total 4.5 - Reagent A (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD ₅₀	Rat	No data available
<i>Inhalation</i>		
LC ₅₀	Rat	>5 mg/L
<i>Oral</i>		
LD ₅₀	Rat	>5000 mg/kg
Components	Species	Acute Toxicity Estimate (ATE)
Sodium hydrosulfite (CAS 7775-14-6)		
Acute		
<i>Dermal</i>		
LD ₅₀	Rat	No data available
<i>Inhalation</i>		
LC ₅₀	Rat	No data available
<i>Oral</i>		
LD ₅₀	Rat	2500 mg/kg
Sodium sulfite (CAS 7757-83-7)		
Acute		
<i>Dermal</i>		
LD ₅₀	Rat	No data available
<i>Inhalation</i>		
LC ₅₀	Rat	5.5 mg/L
<i>Oral</i>		
LD ₅₀	Rat	3200 mg/kg

Skin corrosion/irritation	May cause slight or mild irritation to the skin
Serious eye damage/eye irritation	Causes eye 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

UN number	1384
UN proper shipping name	Sodium hydrosulfite
Transport hazard class(es)	
Class	4.2
Subsidiary risk	None
Label(s)	4.2
Packing group	II
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	A19, A20, IB6, IP2, T3, TP33
Packaging exceptions	None
Packaging, non-bulk	212
Packaging, bulk	241

IATA

UN number	1384
UN proper shipping name	Sodium hydrosulphite
Transport hazard class(es)	
Class	4.2
Subsidiary risk	None
Packing group	II

Special provisions	None
ERG code	4L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Forbidden
Cargo aircraft only	50 Kg

IMDG

UN number	1384
UN proper shipping name	Sodium dithionite (Sodium hydrosulphite)
Transport hazard class(es)	
Class	4.2
Subsidiary risk	None
Packing group	II
Environmental hazards	No
Marine pollutant	No
EmS	F-A, S-J
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	This substance/mixture is not intended to be transported in bulk.

DOT



IATA; IMDG



SECTION 15: Regulatory information

US federal regulations

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

OSHA Hazard Communication Standard (29 CFR 1910.1200)

<u>Chemical name</u>	<u>CAS number</u>
Sodium hydrosulfite	7775-14-6
Sodium sulfite	7757-83-7

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

<u>Chemical name</u>	<u>CAS number</u>
Sodium hydrosulfite	7775-14-6
Sodium sulfite	7757-83-7

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

<u>Chemical name</u>	<u>CAS number</u>
Sodium hydrosulfite	7775-14-6

Pennsylvania Worker and Community Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Sodium hydrosulfite	7775-14-6

Rhode Island Right-to-Know Act

<u>Chemical name</u>	<u>CAS number</u>
Sodium hydrosulfite	7775-14-6

SECTION 16: Other information**NFPA Rating**

Health hazard	1
Fire hazard	1
Reactivity	1
Specific	N/A

Disclaimer

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