SAFETY DATA SHEET ISK BIOCIDES, INC.

SECTION 1: Identification

Product identifier: CuSol®-5
Other means of identification: CuSol®
SDS number: ISK008
Recommended use: Wood Preservative.
Recommended restrictions: None known.
Manufacturer/Importer/Supplier/Distributor information:

Company name: ISK Biocides, Inc.
Address: 416 East Brooks Road,
Memphis.
TN 38109.
Telephone: Office hours (Mon – Fri)
7:00 – 4:30pm (Central time)
(901) 344-5350 or (800) 248-7961
Contact Person: Anthony Accampo or Gail Watson
E-mail: SDSInquiry@iskbiocides.com
Emergency phone number: Chemtrec (800) 424-9300 (24hours)

SECTION 2: Hazard(s) identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200:

Physical hazards
none

Health hazards
Acute toxicity (oral), Category 4.
Acute toxicity, (inhalation) Category 2.
Acute toxicity (dermal), Category 4.
Skin corrosion, Category 1B.
Serious eye damage Category 1.

Environmental hazards
Acute aquatic toxicity Category 1.
Chronic aquatic toxicity Category 2.

Signal word: **DANGER**

Hazard statement(s): Harmful if swallowed.
Harmful in contact with skin.
Causes severe skin burns and eye damage.
Fatal if inhaled.

Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Hazard symbol(s):

Precautionary statement(s):

Prevention:

Do not breathe dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection /face protection.

Response:

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a Poison Center or doctor/physician.
Wash contaminated clothing before reuse.
Rinse mouth.

Storage:

Store in a well-ventilated place. Keep container tightly closed**.**

Disposal:

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations**.**

Hazard(s) not otherwise Classified (HNOC)

None known.

Percentage of ingredient(s) of unknown acute toxicity.

21 % of the mixture consists of ingredient(s) of unknown acute toxicity (oral).
28.5 % of the mixture consists of ingredient(s) of unknown acute toxicity (dermal).
21 % of the mixture consists of ingredient(s) of unknown acute toxicity (inhalation).

SECTION 3: Composition/information on ingredients

Chemical name	Concentration (weight %)	CAS#
Copper Hydroxide	5 – 10%	20427-59-2
Monoethanolamine	18 – 30%	141-43-5
Proprietary Acid	20 – 30%	Proprietary

The specific chemical identity and/or exact percentage (concentrate) of composition has been withheld under trade secret rights.

SECTION 4: First-aid Measures

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for further treatment advice.
Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or physician for treatment advice.
Eye contact: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or physician for treatment advice.
Ingestion: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or physician. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed: May cause eye irritation, skin rash, pain, diarrhea, nausea, vomiting, shock symptoms (rapid pulse, sweating, collapse) coma, even death, central nervous system (CNS) depression including giddiness, dizziness, confusion, drunken behavior, headache, nausea, diarrhea, vomiting, tiredness, and drowsiness. In extreme cases symptoms of central nervous system (CNS) depression include stupor, convulsions, unconsciousness, coma, and even death.

Indication of immediate medical attention and special treatment needed: If any symptoms described above are noted, contact a physician and give them this SDS sheet.

SECTION 5: Fire-fighting measures

Suitable extinguishing media: Use water spray, dry chemical, foam, or carbon dioxide to extinguish flames. Use water spray to cool fire exposed containers. Water or foam may cause some foam and frothing.
Unsuitable extinguishing media: None known.
Specific hazards arising from the chemical: May form toxic fumes with copper.
Hazardous combustion products may include: Carbon monoxide, carbon dioxide, nitrogen oxides (NOx), Copper oxides.

Special protective equipment and precautions for fire-fighters: Wear special chemical protective clothing and full protective clothing. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Decontaminate or discard any clothing that may contain chemical residue.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Wear protective equipment when handling. Use only with adequate ventilation. Wash thoroughly after handling. Do not get in eyes, on skin, or clothing. Do not swallow.

Methods and materials for containment and cleaning up:
SMALL SPILL: Wear appropriate protective clothing (see Section 8). Recover free material. Absorb remainder with sand or clay and place into drums. The floor may be slippery, avoid falls. Follow all local, state, and federal regulations for disposal. Do not discharge into lakes and streams.
LARGE SPILL: Wear appropriate protective clothing (see Section 8). Restrict access to contaminated area. Stop spill at source. Dike to prevent spreading. Pump liquid to a recovery vessel. Absorb remainder of material with sand or clay and place in a properly labeled waste receptacle. Follow all local, state, and federal regulations for disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Prohibit contamination of streams, lakes, or other bodies of water.

SECTION 7: Handling and Storage

Precautions for safe handling: Observe good personal hygiene practices. Change protective gloves/clothing when signs of contamination appear. Keep out of reach of children. Avoid getting this material into contact with your skin and eyes. Use this product with adequate ventilation. Read and follow the directions on the product label; they are the best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

Conditions for safe storage, including any incompatibles: Store in a secure, well-ventilated area protected from extreme temperatures. Do not transfer to an unmarked container. Keep container closed when not in use. (See Section 10 for incompatibles).

SECTION 8: Exposure controls/personal protection

Control Parameters:
Occupational exposure limits:

US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200): Permissible Exposure Limits		
Substance	**PEL-TWA (8 hour)**	**PEL-STEL (15 min)**
Copper hydroxide	0.1 mg/m3	Not available
Monoethanolamine	3 ppm (6 mg/m3)	Not available

Proprietary Acid	Not available	Not available

ACGIH Threshold Limit Values		
Substance	**TLV-TWA (8 hour)**	**TLV-STEL (15 min)**
Copper hydroxide	0.1 mg/m3	Not available
Monoethanolamine	3 ppm (7.5 mg/m3)	6 ppm (15 mg/m3)
Proprietary Acid	Not available	Not available

Other Exposure Limits: Monoethanolamine NIOSH TWA – 3 ppm, STEL - 6ppm (National Institute for Occupational Safety and Health).

Copper dihydroxide; NIOSH TWA 1mg/m3 (National Institute for Occupational Safety and Health).

Appropriate engineering controls: Ventilate via mechanical methods (general or local exhaust) to maintain exposure below TLV(s), if applicable. Good industrial hygiene practice dictates that indoor work areas should be isolated and provided with adequate local exhaust ventilation.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Wear chemical splash goggles and/or face shield during mixing and when exposed to mist.

Skin and Hand protection: Wear impervious gloves, such as: Nitrile Rubber, Neoprene, PVA, PVC, or NBR(Buna-N). Special precautions should be taken to ensure that material cannot get inside gloves.

Respiratory protection: Airborne concentrations should be kept at the lowest possible levels. If vapor, mist or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

Other: Impervious boots (nitrile rubber/neoprene/PVC), aprons, hats, or chemical suits should be worn when necessary to prevent skin contact. Safety showers and eyewash stations should be provided in all areas in which this product is stored and/or handled. Persons exposed routinely to this material should shower prior to leaving work each day. Work clothing should be changed daily.

Thermal hazards: None known.

SECTION 9: Physical and chemical properties

Appearance:

Physical state:	Liquid
Form:	Blue liquid.
Color:	Blue
Odor:	Mild amine odor.
Odor threshold:	Not available.
pH:	10.5 - 10.7
Melting point/freezing point:	Not known.
Initial Boiling point/Boiling Range:	212-250 ºF
Flash point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Upper/lower flammability or explosive limits	
Flammability limit – lower:	Non-combustible. Limits Not Applicable.
Flammability limit – upper:	Non-combustible. Limits Not Applicable.
Explosive limit – lower:	Non-combustible. Limits Not Applicable.
Explosive limit – upper:	Non-combustible. Limits Not Applicable.
Vapor pressure:	Unknown
Vapor density:	> 1
Relative density (Specific gravity):	1.0865
Solubilities (water, other):	Miscible in water.
Partition coefficient (n-octanol/water):	Not available.
Auto-ignition temperature:	Not known.
Decomposition temperature:	Not available.
Viscosity:	60 – 65 cPs Brookfield #1 @ 20 rpm @ 70ºF.
Other information	
Bulk density:	9.05 lbs per gal (Water @20C = 8.33).
VOC:	50 g/L – 0.42 lbs/gal

SECTION 10: Stability and Reactivity

Reactivity: Stable.
Chemical stability: Stable in normal use.
Possibility of hazardous reactions: Material is not known to polymerize.
Conditions to avoid: High temperatures (Greater than 200ºF). Corrosive to Copper, copper alloys, galvanized iron. Can react with aluminum, especially at higher temperatures.
Incompatible materials: Bases, Oxidizing agents, Reducing agents, Strong acids, Iron, Copper, Brass, Rubber.
Hazardous decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides (NOx), Copper oxides.

SECTION 11: Toxicological information

Information on likely routes of exposure

Inhalation: May cause irritation to upper respiratory tract as evidenced by sneezing and coughing.
Ingestion: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. Could result in some corrosive action to the mouth, throat, esophagus, and stomach tissue.
Skin: Corrosive. Prolonged and repeated contact may lead to dermatitis.
Eye: Corrosive. This product causes irritation, pain, severe burns and possible permanent corneal damage which could result in blindness.

Symptoms related to the physical, chemical, and toxicological characteristics: None known.

Delayed and immediate effects and chronic effects from short or long-term exposure: None known.

Acute toxicity:

Product data:

Ingredient Information:

Substance	Test Type (species)	Value
Copper hydroxide	LD_{50} Oral (Human)	200 mg/kg
	LD_{50} Dermal (Rabbit)	> 3160 mg/kg
	LC_{50} Inhalation, Dust (Rat)	0.451 mg/l
Monoethanolamine	LD_{50} Oral (Rat)	1,020 mg/kg
	LD_{50} Dermal (Rabbit)	1,025 mg/kg
	LC_{50} Inhalation, Vapor (Rat)	>1.3 mg/l
Proprietary Acid	LD_{50} Oral (Rat)	10080 mg/kg
	LD_{50} Dermal (Rabbit)	> 5000 mg/kg
	LC_{50} Inhalation, Vapor (Rat)	Not available

Product Acute Toxicity Estimates:
Oral (rat): 1113 mg/kg
Dermal (rat): > 5427 mg/kg
Inhalation (rat): > 2.08 mg/l

Skin corrosion/irritation: May be corrosive to skin and cause irritations and burns.

Serious eye damage/eye irritation: Corrosive to eyes causing serious burns and possible permanent damage.

Respiratory sensitization: Based upon information available on the known components, the product is not anticipated to be a respiratory sensitizer.

Skin sensitization: Based upon information available on the known components, the product is not anticipated to be a skin sensitizer.

Germ cell mutagenicity: Based upon information available on the known components, the product is not anticipated to be a mutagen.

Carcinogenicity: Based upon information available on the known components, the product is not anticipated to be a carcinogen.

Reproductive toxicity: Based upon information available on the known components, the product is not anticipated to have reproductive toxicity.

Specific target organ toxicity-Single exposure: Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after single exposure.

Specific target organ toxicity-Repeat exposure: Based upon information available on the known components, the product is not anticipated to cause specific target organ toxicity after repeated or prolonged exposure.

Aspiration hazard: Based upon information available on the known components, the product is not anticipated to be an aspiration hazard.

Further information: Not available.

SECTION 12: Ecological information

Ecotoxicity:

Product data: None available.

Ingredient Information:

Substance	Test Type	Species	Value
Copper hydroxide	LC_{50}	Fish	Not available
	EC_{50}	Invertebrate	Not available

	LC_{50}	Algae	Not available
Monoethanolamine	LC_{50} Pimephales promelas (fathead minnow)	Fish	227 mg/l - 96 h
	EC_{50} Daphnia magna (Water flea)	Invertebrate	65 mg/l - 48 h
	LC_{50} Desmodesmus subspicatus (green algae)	Algae	15 mg/l - 72 h
Proprietary Acid	LC_{50} Lepomis macrochirus (Bluegill sunfish)	Fish	22 mg/l – 96h
	EC_{50}	Invertebrate	Not available
	EC_{50} Pseudokirchneriella subcapitata (green algae)	Algae	31 mg/l – 72h

Persistence and degradability: Not available.
Bioaccumulative potential: Not available.
Mobility in soil: Not available.
Mobility in general: Not available.
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: Disposal considerations

Disposal instructions:
Wastes resulting from the use of this product may be disposed of at an approved waste disposal facility in accordance with all Federal, State, and local regulations.

SECTION 14: Transport Information

DOT: UN2927, Toxic Liquid, Corrosive, Organic, n.o.s., (contains copper hydroxide, ethanolamine) 6.1 (8), PG 1.
IATA: UN2927, Toxic Liquid, Corrosive, Organic, n.o.s., (contains copper hydroxide, ethanolamine) 6.1 (8), PG 1.
IMDG: UN2927, Toxic Liquid, Corrosive, Organic, n.o.s., (contains copper hydroxide, ethanolamine) 6.1 (8), PG 1.

Special precautions during transport: Not available.

Bill of Lading: Preservatives, Wood, N.O.I., Liquid, NMFC 161490, sub 2.

SECTION 15: Regulatory Information

USA:

FIFRA: Pesticide Registration:
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.
Following is the hazard information as required on the pesticide label:

DANGER
Harmful if swallowed.
Corrosive. Causes skin burns.
Corrosive. Causes irreversible eye damage.
This pesticide is toxic to fish and aquatic invertebrates.

United States Federal Regulations: SDS complies with the OSHA, 29 CFR 1910.1200.

SARA Superfund and Reauthorization Act of 1986 Title III sections 302, 311,312 and 313:
Section 302 – None of the chemicals are EPCRA hazards.

CERCLA/Superfund, 40 CFR 117, 302: Not listed.

CHEMICAL	C.A.S. Number	Weight %	Section 311/312
Copper Hydroxide	20427-59-2	5 - 10 %	Acute Health Hazard, Chronic Health Hazard.
Monoethanolamine	141-43-5	18 - 30 %	Fire Hazard, Acute Health Hazard, Chronic Health Hazard.
Proprietary Acid	Proprietary	20 - 30%	Acute Health Hazard.

Section 313 – List of Toxic Chemicals (40CFC 372): This product contains Copper dihydroxide (at level of 1% or greater) -found on the 313 list of Toxic Chemicals.

Toxic Substance Control Act (TSCA): All components are TSCA listed.

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15 (formerly section 307) 40 CFR 116 (formerly section 311): This product does not contain listed chemicals.

STATE REGULATIONS:

This SDS contains specific health and safety data is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

California Proposition 65: Chemicals in this product are not on the list.

New Jersey Right to Know: All the components of this product are listed.

Pennsylvania Right to Know: All the components of this product are listed.

INTERNATIONAL REGULATIONS:

Canadian Regulations Class E: Corrosive material. Class D-2B: Material causing other toxic effects (Toxic).

Canadian Controlled Products Regulations (WHMIS): This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations.*

SECTION 16: Other Information

Revision Date: April 30, 2021

The information in this Safety Data Sheet is provided in good faith and is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance and is not to be considered a warranty or quality specification. User is responsible to evaluate all available information when using product for any particular use, including, if necessary, conducting any tests needed to determine the suitability of the product for a particular use. User is also responsible for compliance with all Federal, State, Provincial and Local laws and regulations. ISK Biocides, Inc. assumes no responsibility for injury, damage or loss resulting from the use of the material. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, INCLUDING THAT THE INFORMATION OR PRODUCT MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.