Trade name: Lake Guard™ Blue

SECTION 1: Identification

Product identifier used on the label:
Product Name: **Lake Guard™ Blue**

Other means of identification:

Product Code Number:

Recommended use of the chemical and restrictions on use:

Recommended use: Algaecide, biocide.
Recommended restrictions: Uses other than as recommended above.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party:

Company Name: BlueGreen Water Technologies Ltd.
Company Address: 43 Brodezki st.
Tel Aviv
POB 39995
Israel, 6139803.
Company Telephone: +972-3-6427111

Company Contact Email: info@bgtechs.com

Emergency phone number: **+1-800-255-3924**

SECTION 2: Hazard(s) identification

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

Physical hazards
No physical hazards under OSHA paragraph (d) of §1910.1200

Health hazards
Acute Toxicity, Oral, Category 4.
Serious eye damage, Category 1.

Environmental hazards
Not adopted under OSHA paragraph (d) of §1910.1200

GHS Signal word: **DANGER.**

GHS Hazard statement(s): Harmful if swallowed.
Causes serious eye damage.

GHS Hazard symbol(s):

GHS Precautionary statement(s):

Prevention:

- Wash 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/doctor if you feel unwell.
- 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/doctor.
- Rinse mouth.
- Collect spillage.

Storage:

- No storage precautionary statements required.

Disposal:

- Dispose of contents/containers to an approved disposal site in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC):
None known.

Percentage of ingredient(s) of unknown acute toxicity:
5% of the mixture consists of ingredients of unknown acute toxicity (oral).
5% of the mixture consists of ingredients of unknown acute toxicity (dermal).
100% of the mixture consists of ingredients of unknown acute toxicity (inhalation).

SECTION 3: Composition/information on ingredients

Mixture:

Chemical name	CAS#	Concentration (weight %)
Copper sulfate pentahydrate	7758-99-8	95%
Other ingredients*	N/A	5%

*Note: The exact concentration has been withheld as a trade secret.
The balance of the ingredients is not classified as hazardous or are below the concentration limit to be classified as hazardous, under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SECTION 4: First-aid measures

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin and eye contact, and ingestion:

Inhalation: Not a hazard under normal use and conditions. Supply fresh air; consult doctor in case of symptoms.

Skin contact: Remove heavily contaminated clothing. Wash skin with water. Get medical attention if irritation occurs.

Eye contact: In case of eye contact, remove contact lenses and rinse immediately with plenty of water, including under the eyelids, for at least 15 mins. Get medical attention immediately.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

Most important symptoms/effects, acute and delayed: Harmful if swallowed. Causes serious eye damage.

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

SECTION 5: Fire-fighting measures

Suitable (and unsuitable) extinguishing media:
Suitable extinguishing media: Use water spray / jet, dry chemical or carbon dioxide as suitable for surrounding materials. This material is not flammable.
Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):
During a fire, irritating and toxic gases may be generated by thermal decomposition or combustion. Hazardous combustion products: None known.

Special protective equipment and precautions for fire-fighters:
Wear self-contained breathing apparatus and protective clothing. Fight fire from a protected location. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Keep unnecessary and unprotected personnel from entering. Wear appropriate personal protective equipment, such as gloves, goggles and protective clothing, as conditions warrant (see Section 8). Ensure adequate ventilation. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Materials can enter waterways through drainage systems.

Methods and materials for containment and cleaning up:
Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Collect material in specially marked, tightly closing containers. Dispose of waste in accordance to local, state and federal regulations.

SECTION 7: Handling and storage

Precautions for safe handling: Avoid contact with eyes. Do not eat, drink, or smoke while working. Wash thoroughly after handling. Wear appropriate protective equipment, such as gloves, goggles and protective clothing, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Conditions for safe storage, including any incompatibles: Store the product in secure, well ventilated building or warehouse, away from foodstuffs and animal feed. Store under cool and dry conditions. Keep containers tightly closed. Avoid extreme temperatures. Keep away from incompatible materials (see Section 10). Protect container(s) against physical damage, heat and moisture. Do not allow material to contaminate ground water system. Prevent product from entering drains.

SECTION 8: Exposure controls/personal protection

OSHA permissible exposure limit (PEL), American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure limit used or recommended by the chemical manufacturer, importer, or employer preparing the safety data sheet, where available.

US OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200) (Table Z-1 Limits for Air Contaminants):		
Substance	**PEL-TWA (8 hour)**	**PEL-STEL (15 min)**
Copper sulfate pentahydrate	n/a	n/a

US ACGIH Threshold Limit Values		
Substance	**TLV-TWA (8 hour)**	**TLV-STEL (15 min)**
Copper sulfate pentahydrate	1 mg/m3 (as copper)	n/a

Appropriate engineering controls: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Individual protection measures, such as personal protective equipment:

Eye/face protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH(US).

Skin and hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Wear impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US).
Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

General hygiene considerations: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9: Physical and chemical properties

Appearance (physical state, color, etc.):
Physical state: Solid. (Crystals.)
Color: Blue

Odor:	Odorless
pH:	3.5-4.5 (dissolution of 10%, 20ºC)
Melting point/freezing point:	Not available
Initial boiling point and boiling range:	Decomposes without melting at 110ºC
Flash point:	Not applicable to an inorganic solid

Evaporation rate:	Not applicable to an inorganic solid
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits	
Flammability limit – lower %):	Not applicable
Flammability limit – upper (%):	Not applicable
Explosive limit – lower (%):	Not applicable
Explosive limit – upper (%):	Not applicable
Vapor pressure:	Not applicable to inorganic solid at environmentally relevant temperatures
Vapor density:	Not applicable to inorganic solid at environmentally relevant temperatures
Relative density (Specific Gravity):	2.23 g/cm^3
Solubility (ies):	Slow releasing within 6-12 hours.
Partition coefficient (n-octanol/water):	Not available
Auto-ignition temperature:	No auto-ignition
Decomposition temperature:	>110 ºC
Viscosity (dynamic):	Not available

SECTION 10: Stability and reactivity

Reactivity:	Not reactive.
Chemical stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	Hazardous reactions are not expected under normal temperature and pressures.
Conditions to avoid:	Avoid extreme temperatures.
Incompatible materials:	No data of incompatible materials known.
Hazardous decomposition Products:	None, when stored and handled appropriately. Formation of toxic gases is possible in case of fire.

SECTION 11: Toxicological information

Information on likely routes of exposure:

Inhalation:	Not expected to be a route of entry.
Ingestion:	Expected to be a route of entry.
Skin:	Expected to be a route of entry.
Eyes:	Expected to be a route of entry.
Target Organs:	None known.

Symptoms related to the physical, chemical, and toxicological characteristics:
Harmful if swallowed. Causes serious eye damage.

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

Numerical measures of toxicity (such as acute toxicity estimates):

Ingredient Information:

Substance	Test Type (species)	Value
Copper sulfate pentahydrate	LD_{50} Oral (Rat)	481 mg/kg
	LD_{50} Dermal (Rat)	> 2000 mg/kg
	LC_{50} Inhalation (Rat)	No data available

Skin corrosion/irritation: Not expected to cause skin corrosion/irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

Respiratory sensitization: Not expected.

Skin sensitization: Not expected to cause skin sensitization.

Germ cell mutagenicity: Not expected to cause germ cell mutagenicity.

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable. possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Not expected to cause reproductive toxicity.

Specific target organ toxicity-Single exposure: Not expected to cause Specific target organ toxicity after a single exposure.

Specific target organ toxicity-Repeat exposure: Not expected to cause Specific target organ toxicity after repeated exposure.

Aspiration hazard: Not expected to be an aspiration hazard.

SECTION 12: Ecological information

Ecotoxicity (aquatic and terrestrial, where available):

Product data: No data available

Ingredient Information:

Substance	Test Type	Species	Value
Copper sulfate pentahydrate	LC_{50}	Fish - Pimephales promelas (fathead minnow)	0.230 mg/L – 96 h
	EC_{50}	Daphnia magna (water flea)	0.007-0.2 mg/L – 48 h
	EC_{50}	Algae - Pseudokirchneriella subcapitata	0.032 mg/L – 7 d

Persistence and Degradability: Not established.

Bioaccumulative Potential: Not established.

Mobility in Soil: Not established.

Other adverse effects (such as hazardous to the ozone layer): Very toxic to aquatic organisms.

SECTION 13: Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

Product - Contact your supplier or a licensed contractor for detailed recommendations. Follow applicable Federal, state, and local regulations.
Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous waste.

Contaminated packaging - Contaminated packaging may contain residues of product.
Dispose of in the same manner as product. Comply with applicable local, state or international regulations concerning solid or hazardous waste disposal and/or container disposal.

SECTION 14: Transport Information

US Department of Transportation Classification (49CFR)
UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9, III.

Canada TDG
UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9, III.

IMDG (Transport by sea)
UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. 9, III.

IATA (Transport by air)

UN3077, Environmentally hazardous substance, solid, n.o.s. 9, III.

Environmental hazards
Marine pollutant: Yes

Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)
No further relevant information available.

Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.
No data available.

SECTION 15: Regulatory Information

USA:

United States Federal Regulations: This SDS complies with the OSHA, 29 CFR 1910.1200. The product is hazardous under OSHA.

Toxic Substances Control Act (TSCA) – All the ingredients are listed/registered or exempted on the U.S. EPA TSCA Inventory List.

STATE REGULATIONS:

This SDS does not contain specific health and safety data that is applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

SARA 302 Components:
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:
The following components are subject to reporting levels established by SARA Title III, Section 313:
Copper sulfate pentahydrate CAS-No. 7758-99-8

SARA 311/312 Hazards:
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components:
Copper sulfate pentahydrate CAS-No. 7758-99-8

Pennsylvania Right To Know Components:
Copper sulfate pentahydrate CAS-No. 7758-99-8

New Jersey Right To Know Components:
Copper sulfate pentahydrate CAS-No. 7758-99-8

California Proposition 65 (California Safe Drinking Water and Toxic Enforcement Act of 1986) Components:
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16: Other Information

Revision Date: Feb. 5, 2019

DISCLAIMER:
ATTENTION: These Safety Data Sheets are provided for general information only.
This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness.
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