



SAFETY DATA SHEET

1. Company and Product Identification

- 1.1 **Product Name:** **AQUAKLER**
Chemical Name: **Proprietary Blend**
- 1.2 **Recommended Uses:** Aquatic Oxygenator
- 1.3 **Supplier:** Geoponics Corp.
3415 Radio Road #105
Naples, FL 34104
- 1.4 **Emergency Phone Number:** 800-424-9300

2. Composition/Information on Ingredients

INGREDIENTS	WT. PERCENT
Component C	> 70
Other inorganic compounds	< 30

3. Hazards Identification

Emergency Overview: Oxidizer - Contact with combustibles may cause fire. In a fire, this material decomposes, releasing oxygen which may intensify the fire.

- 3.1 **Route of Entry:** Inhalation: Yes Skin: Yes Ingestion: Yes
- 3.2 **Potential Effects of exposure:**

- Irritating to the mucous membranes, eyes and skin.
- In case of product splashing into the eyes and face, treat eyes first.
- Do not dry soiled clothing near an open flame or heat source.
- Submerge contaminated clothing in water prior to drying.

Inhalation:

- At high concentrations, nose and throat irritation with cough.
- In case of repeated or prolonged exposure, there is a risk of sore throat and nosebleeds.

Eyes:

- Severe eye irritation with watering redness, and swelling of the eyelids.
- Risk of serious or permanent eye lesions.

Skin contact: In case of prolonged contact: irritation.

Ingestion: Irritation of the mouth throat esophagus and stomach with nausea and vomiting.

Carcinogenicity: See section 11.3.

4. First-Aid Measures

General Recommendations:

- 4.1 **Inhalation:**
- Remove the subject from dusty environment. Move to fresh air.
 - Consult a physician in case of respiratory symptoms.

Eyes:

- Immediately flush eyes with running water for 15 minutes, while keeping the eyelids wide open.
- Consult an ophthalmologist in all cases.

Skin:

- Wash the affected skin with running water.
- Remove and clean clothing.
- Consult a physician in case of persistent pain or redness.

Ingestion: Consult a physician immediately in all cases.

If the subject is completely conscious:

- Rinse mouth and administer fresh water.
- Do not induce vomiting.

If the subject is unconscious:

- NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

4.2 Medical Treatment/Notes to Physician: None.

5. Fire-Fighting Measures

5.1 Flash point: Not applicable.

5.2 Auto-ignition Temperature: Not applicable.

5.3 Flammability Limits: Not applicable.

5.4 Unusual Fire and Explosion Hazards: None.

5.5 Extinguishing Methods

Common:

- Large quantities of water, water spray.
- In case of fire in close proximity, all means of extinguishing are acceptable.

Inappropriate extinguishing means: No restriction.

5.6 Fire Fighting Procedures

Specific hazards:

- Oxidizing substance.
- Oxygen released on exothermic decomposition may support combustion in case of surrounding fire.
- Pressure burst may occur due to decomposition in confined spaces/containers.
- Contact with flammables may cause fire or explosion.

Protective measures in case of intervention:

- Evacuate all non-essential personnel.
- Intervention only by capable personnel who are trained and aware of the hazards of the product.
- If safe to do so, remove unaffected product to a safe area.
- Personnel should wear full bunker gear and positive-pressure, self-contained breathing apparatus.
- Apply cooling water to sides of transport or storage vessels that are exposed to flames until fire is out. Do not approach hot vessels containing product.

6. Accidental Release Measures

6.1 Precautions:

- Observe the protection measures given in Sections 5 and 8.
- Avoid materials and products which are incompatible with the product (see Section 10).
- Avoid direct contact of the product with water.
- Immediately notify the appropriate authorities in case of reportable discharge.

6.2 Cleanup methods:

- Collect the product with a suitable means avoiding dust formation.
- All the receiving equipment should be clean, vented, dry, labeled and made of material that is compatible with the product.
- Because of the contamination risk, the collected material should be isolated in a safe place.
- Clean the area with large quantities of water.
- For disposal methods, refer to Section 13.

6.3 Precautions for protection of the environment:

- Prevent unapproved discharges into the environment (sewers, rivers, soils, etc).
- Immediately notify the appropriate authorities in case of significant discharge.

7. Handling and Storage

7.1 Handling:

- Clean and dry process piping and equipment before any operation.
- Never return unused product to storage container.

- Keep away from incompatible products.
 - Containers and equipment used to handle this product should be used exclusively for this material.
 - Avoid any contact with water or humidity.
- 7.2 **Storage:** Store in a dry ventilated area, protected from heat sources and direct sunlight.
- 7.3 **Specific Uses:** See Section 1.2.
- 7.4 **Other precautions:**
- Warn personnel about the dangers of the product.
 - Follow protective measures in Section 8.
- 7.5 **Packaging:**
- Stainless steel.
 - Plastic material.
 - Glass.

8. Exposure Controls/Personal Protection

8.1 Exposure Limit Values:

Authorized limit Values	TLV [®] ACGIH [®] -USA (2000)	OSHA PEL	NIOSH REL (1994)
Component A	5 mg/m ³ TWA	Total dust-15 mg/m ³ TWA Resp. fraction-5 mg/m ³ TWA	5 mg/m ³ TWA
Component B	10 mg/m ³ TWA	Total dust-15 mg/m ³ TWA Resp. fraction-5 mg/m ³ TWA	Total dust-10 mg/m ³ TWA Resp. fraction-5 mg/m ³ TWA
Component C			

8.2 Exposure Controls:

- Premises ventilation.
 - Maintain employee exposures to levels below the applicable exposure limits.
 - Follow the protective measures given in section 7.
- #### 8.2.1 Occupational Exposure Controls:
- 8.2.1.1 **Ventilation:** Provide local ventilation suitable for the emission risk.
- 8.2.1.2 **Respiratory protection:** For many conditions, no respiratory protection may be needed; however, in dusty or unknown atmospheres use a NIOSH-approved dust respirator.
- 8.2.1.3 **Hand protection:** Impervious protective gloves made of PVC natural rubber or neoprene.
- 8.2.1.4 **Eye protection:** Dust proof chemical goggles are mandatory.
- 8.2.1.5 **Skin protection:**
- For brief contact, few precautions other than clean body-covering clothing should be needed.
 - When prolonged or frequently repeated contact could occur, use protective, full body clothing impervious to this material.
- ### 8.3 Other precautions:
- Safety shower and eyewash stations.
 - Consult your industrial hygienist or safety manager for the selection of personal protective equipment suitable for the working conditions.
- ### 8.4 Other information:
- Use good hygiene practices when handling this product including changing work clothes after use.
 - Do not eat, drink or smoke in areas where this material is handled.

9. Physical and Chemical Properties

- 9.1 **Appearance:** Granules.
Color: Pale yellow.
Odor: Odorless.
- 9.2 **Important Health, Safety and Environmental information:**
pH: 11-13 (saturated solution).
Change of state:
 Melting point: Not applicable.
 Decomposition Temperature: > 698°F (> 370°C).
Flash Point: Not applicable.
Flammability: Not applicable.
(solid, gas)
Explosive Properties: Non-explosive.
Oxidizing Properties: Oxidizer.
Vapor Pressure: Not applicable.
Bulk Density:
 Specific gravity (H₂O=1): 0.5 ± 0.075 g/mL (loose method).

Solubility:

Water: 1.65 g/L @ 20°C (68°F) for Component A; < 0.01% for Component C

Partition coefficient: P (n-octanol/water): Not applicable.

Viscosity: Not applicable.

Vapor Density (air=1): Not applicable.

Evaporation Rate: Not applicable.

10. Stability and Reactivity

Stability: Stable under certain conditions.

10.1 Conditions to avoid: Heat and moisture.

10.2 Materials and substances to avoid:

- Water.
- Acids.
- Bases.
- Salts of heavy metals.
- Reducing agents.
- Organic materials.
- Flammable or combustible substances.

10.3 Hazardous decomposition products:

- Oxygen.
- Hydrogen peroxide.
- Steam.
- Heat.

10.4 Hazardous Polymerization: Does not occur.

10.5 Other information: None.

11. Toxicological Information

11.1 Acute toxicity:

- **Inhalation:** LC50, rat, > 5000 mg/m³ (Powder 35%).
- **Oral:** LD50, rat, > 2000 mg/kg (Powder 50%).
- **Dermal:** LD50, rat, > 2000 mg/kg (Powder 50%).
- **Irritation:** Rabbit (eyes), severe irritation.
- **Sensitization:** No data.

11.2 Chronic toxicity:

- In vitro, no mutagenic effect (Powder 50%).
- Target organ effects: eyes and respiratory passages.

11.3 Carcinogenic Designation: None.

12. Ecological Information

12.1 Acute ecotoxicity:

- 10 mg Component A /L: pH = 9.0; 100 mg Component A/L: pH = 10.6.
- Fish, Cyprinus carpio, LC50, 48 hours, 160 mg/L powder 50%.
- Crustaceans, Daphnia magna, EC50, 24 hours: 25.6 mg/L (powder 16%).

12.2 Chronic ecotoxicity: No data.

12.3 Mobility: Low solubility and mobility.

12.4 Degradation

Abiotic: Water-slow hydrolysis.

Degradation products: calcium hydroxide.

Water/Soil - complexation/precipitation.

Carbonates/sulfates present at environmental concentrations.

Degradation products: carbonates/sulfates sparingly soluble.

Biotic: Not applicable (inorganic compound).

12.5 Potential for bioaccumulation: Not applicable (ionizable inorganic compound).

12.6 Other adverse effects /Comments:

- Observed effects are related to alkaline properties of the product.
- Hazard for the environment is limited due to the product properties of: no bioaccumulation; weak solubility and precipitation as carbonate or sulfate in aquatic environment.
- Diluted product is rapidly neutralized at environmental pH.

13. Disposal Considerations

- 13.1 Waste treatment:** Consult current federal, state and local regulations regarding the proper disposal of this material.
- 13.2 Packaging treatment:** Consult current federal, state and local regulations regarding the proper disposal of emptied containers.
- 13.3 RCRA Hazardous Waste:** Listed as D001 (Ignitability).

14. Transport Information

Mode	DOT	IMDG	IATA
UN Number	1457	1457	1457
Class (Subsidiary)	5.1	5.1	5.1
Proper Shipping Name	Calcium Peroxide	Calcium Peroxide	Calcium Peroxide
Hazard label (Subsidiary)	Oxidizer 5.1	Oxidizing Agent	Oxidizer
Placard (Subsidiary)	5.1		
Packing Group	II	II	II
Reportable Quantity	100 lbs.		
Emergency Info	ERG: 140	EmS: F-G, S-Q	ERG Code: 5L
STCC #	4918717		

15. Regulatory Information

National Regulations (US)

TSCA Inventory 8(b): Yes

SARA Title III Sec. 302/303 Extremely Hazardous Substances (40 CFR 355): No.

SARA Title III Sec. 311/312 (40 CFR 370):

Hazard Category: Immediate health hazard; fire hazard.

Threshold planning quantity: 10,000 lbs.

SARA Title III Sec. 313 Toxic Chemical Emissions Reporting (40 CFR 372): No.

CERCLA Hazardous Substance (40 CFR Part 302)

Listed substance: No.

Unlisted Substance: Yes.

Reportable Quantity 100 lbs.

Characteristic: Ignitability (D001).

WHMIS Classification: C - Oxidizing material.

D2B - Poisonous and infectious material, material causing other toxic effects - eye and skin irritant.

<u>Category</u>	<u>ID</u>	<u>Phrase</u>
Symbols	O	Oxidizing
	Xi	Irritant
Phrases R	8	Contact with combustible material may cause fire.
	38	Irritant to skin.
	41	Risk of serious damage to eyes.
Phrases S	3	Keep in cool place
	8	Keep container dry.
	17	Keep away from combustible material.
	24/25	Avoid contact with skin and eyes
	26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
	39	Wear eye/face protection.

16. Other Information

16.1 Ratings:

NFPA (NATIONAL FIRE PROTECTION ASSOCIATION)

Health = 2 Flammability = 0 Instability = 1 Special = OX

HMIS (HAZARDOUS MATERIAL INFORMATION SYSTEM)

Health = 2 Fire = 0 Reactivity = 1 PPE = Supplied by User; dependent on local conditions

16.2 Other Information:

The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product).

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