239804 **Material Safety Data Sheet**

Section I. Chemical Product and Company Identification		
Product Name	**Sodium Metasilicate, anhydrous**	Revision Date: July 12, 2006
Alternate Product Names	Anhydrous Metasilicate; Sodium Metasilicate anhydrous	
Supplier	**Aquatic Eco-Systems, Inc.** **1767 Benbow Court** **Apopka, FL 32707**	**INFORMATION: (407)-886-3939** **EMERGENCY: (407) 886-3939** **FAX NUMBER: (407) 886-1811**
Material Uses	Cleaner, detergent/soap	

Section II. Composition and Information on Ingredients

Name	CAS #	% by Weight
Sodium Metasilicate	6834-92-0	95.0-99.5
Water	7732-18-5	0-4

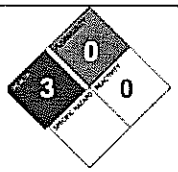
Section III. Hazards Identification	
Emergency overview	Color: white Physical Form: solid Odor: odorless Signal Word: danger Major Health Hazards: Corrosive. Causes burns to the respiratory tract, skin, eyes and gastrointestinal tract. May cause permanent eye damage.
Potential Health Effects	Inhalation: Short term exposure: irritation (possibly severe), burns Long term exposure: ulcers Skin Contact: Short Term Exposure: irritation (possibly severe), burns Long Term Exposure: dermatitis Eye Contact: Short Term Exposure: irritation (possibly severe), burns, eye damage, blindness Long Term Exposure: eye damage, blindness Eye Contact: Short Term Exposure: irritation (possibly severe), burns, nausea, vomiting Long Term Exposure: irritation, possible ulcers
Carcinogen Status	OSHA: No NTP: No IARC: No
Inhalation	
Ingestion	
Potential Health Effects	
Section IV. First Aid Measures	
Eye Contact	Immediately flush eyes with a directed stream of water for at least 15 minutes, lifting the upper and lower eyelids intermittently. Washing eyes within several seconds is essential to achieve maximum effectiveness. Get medical attention immediately.
Skin Contact	Immediately flush contaminated areas with water. Remove contaminated clothing, jewelry, and shoes immediately. Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing and shoes before reuse. Get medical attention immediately.
Inhalation	If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer Basic Life Support and call for emergency services immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Get medical attention immediately.
Notes to Medical Doctor	The absence of visible signs or symptoms of burns does not reliably exclude the presence of actual tissue damage.
Section V. Fire and Explosion Data	
Flash Point	Not flammable
Fire and Explosion Hazards	Negligible fire hazard.
Fire Fighting Media	Use extinguishing agents appropriate for surrounding fire.
Fire Fighting	Move container from fire area if it can be done without risk. Avoid inhalation of material or

Procedures	combustion by-products. Stay upwind and keep out of low areas. Wear appropriate personal protective equipment recommended in Section VIII of the MSDS.
Sensitivity to Impact	None
Sensitivity to Static Discharge	None
Section VI. Accidental Release Measures	
Personal Precautions	Refer to Section VII Exposure Controls / Personal Protection
Containment	Prevent large quantities of this product from contacting vegetation or waterways; large spills could kill vegetation and fish.
Clean-up	Shovel dry material into suitable container. Wear appropriate personal protective equipment recommended in Section VIII of the MSDS. Flush spill area with water, if appropriate. Liquid material may be removed with a vacuum truck. Wet material is slippery under foot. This material is alkaline and may raise the pH of surface waters with low buffering capacity.
Notification Requirements	Releases should be reported, if required, to appropriate agencies.
Section VII. Handling and Storage	
Handling	Use methods to minimize dust. Avoid breathing dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling.
Storage	Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Material may cake with prolonged storage in him conditions. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see Section 10 of the MSDS).
Section VIII. Exposure Controls / Personal Protection	
Ventilation	Provide local exhaust where dust or mist may be generated. Ensure compliance with applicable exposure limits.
Protective Gloves	Wear suitable gloves. Discard contaminated leather goods. When wet mixing, wear chemical resistant gloves such as butyl rubber, natural rubber, neoprene or nitrile.
Eye Protection	Wear safety goggles with side shields. If eye contact is likely, wear chemical resistant safety goggles. When wet mixing, wear splash resistant safety goggles with a faceshield. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Respiratory Protection	A NIOSH approved respirator with N95 (dust, fume, mist) filters may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits, or when symptoms have been observed that are indicative of overexposure. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.
Other Protective Equipment	Wear protective clothing to minimize skin contact. When potential for contact with wet material exists, wear Tychem® SL or similar chemical protective suit. When potential for contact with dry material exists, wear disposable coveralls such as Tyvek®.
Section IX. Physical and Chemical Properties	
Physical State and Appearance	Granular solid — odor: Odorless; color: White
Melting Point	1990°F (1088°F)
Boiling Point	Not applicable
Evaporation Rate	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Volatility	Not applicable
Water Solubility	16%
Specific Gravity	Not applicable (water = 1)
Bulk density (lb/ft^3)	54 – 62 (loose)
pH	12.7 (1% solution)
Section X. Stability and Reactivity Data	
Stability	Stable at normal temperatures and pressure. Prolonged contact with incompatible metals may produce flammable hydrogen gas.
Incompatibility	Acids, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

Conditions to Avoid	Contact with acids will cause evolution of heat. Carbon monoxide gas may form upon contact with reducing sugars or food and beverage products in enclosed spaces.
Hazardous Decomposition Products	Thermal decomposition products: none known.
Polymerization	Will not polymerize.
Section XI. Toxicological Information	
Irritation Data	250 mg/24 hour(s) skin-human sever; 250 mg/24 hour(s) skin-rabbit sever; 250 mg/24 hour(s) skin-guinea pig moderate
Toxicology Results	1153 mg/kg oral-rat LD50; 770 mg/kg oral-mouse LD50
Local Effects	Corrosive: inhalation, skin, eye, ingestion
Acute Toxicity Level	Moderately Toxic: ingestion
Chronic Effects from Overexposure	Respiratory disorders, skin disorders and allergies
Acute Exposure: Inhalation	Inhalation of dusts may cause irritation of the upper respiratory tract with sore throat, coughing and shortness of breath. Upon contact with moist mucous membranes, sodium metasilicate is highly alkaline and may cause corrosive damage. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema and/or pneumonia may develop, either immediately or more often with 72 hours. The symptoms may include tightness in the chest, dyspnea, frothy sputum, cyanosis and dizziness. Physical findings may include moist rales, low blood pressure and high pulse pressure.
Chronic Exposure: Inhalation	Depending on concentration and duration of exposure, repeated or prolonged exposure to corrosive substances may cause inflammatory and ulcerative changes in the nose, sinuses and bronchial regions.
Acute Exposure: Skin Contact	Dusts may cause skin irritation. Upon contact with moist skin, material may cause strong irritation with erythema, pain and blistering.
Chronic Exposure: Skin Contact	Effects depend on concentration and duration of exposure. Dermatitis may occur.
Acute Exposure: Eye Contact	Dust may cause severe irritation, pain and corneal burns (possibly leading to blindness). The full extent of the injury may not be immediately apparent.
Chronic Exposure: Eye Contact	Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in conjunctivitis, lens damage or other effects including blindness.
Acute Exposure: Ingestion	May cause immediate pain and severe burns of the esophagus and gastrointestinal tract with vomiting, nausea, and diarrhea. Edema of the epiglottis and shock may occur.
Chronic Exposure: Ingestion	Repeated or prolonged ingestion may result in chronic irritation and possible ulcers.

Section XII. Ecological Information	
Fish Toxicity	This material has exhibited moderate toxicity to aquatic orgranisms.
Biodegration	This material is inorganic and not subject to biodegradation.
Persistence	This material is believed to persist in the environment.
Bioconcentration	This material is believed not to bioaccumulate.
Other Ecological Information	This material has exhibited slight toxicity to terrestrial organisms.
Section XIII. Disposal Considerations	
Disposal Method	Reuse or reprocess if possible. Dispose in accordance with all applicable regulations. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002 (corrosive).
Section XIV. Transport Information	
U.S. Department of Transportation (DOT) 49 CFR 172.101	Proper Shipping Name: Corrosive, solid, basic, inorganic, n.o.s. (sodijm metasilicate) Primary Hazard Class / Division: 8 ID Number: UN3262 Labeling Requirements: 8 Packing Group: II
Section XV. Other Regulatory Information and Pictograms	

United States	SARA Title III (Superfund Amendments and Reauthoriztion Act) Section 302 Extrmemly Hazardous Substances (40 CFR 355, Appendix A): Not regulated Section 311/312 Hazard Categories (40 CFR 370.21): Acute: Yes Chronic: No Fire: No Reactive: No Sudden Release: No Section 313 Reportable Ingredients (40 CFR 372): Not regulated CERCLA (Comprehensive Environmental Response Compensation and Liabliaty Act) Cercla Designation & Reportabl Quantities (Q) (40 CFR 302.4): Not regulated OSHA Process Safety (29CFR1910.119): Not regulated FDA: Sodium Silicates have Generally Recognized as Safe (GRAS) status under specific FDA regulations. Refer to the Code of Federal Register 21 CFR 173, 175, 176, 177, 182 and 184, which is accessible on the FDA's website.
State Regulations	California Proposition 65: This product is not listed, but it may contain contaminants known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. New Jersey Workeer and Community Right to Know: Reporting Requirement: Sodium MEtasilicate 6834-92-0 95-99.5% Right to know Hazardous Substance List: Not regulated. Special Health hazard Substance List: Not regulated. Pennslyvania Rght to Know: Reporting Requirement: Sodium Metasilicate 6834-92-0 95-99.5%; Water 7732-18-5 0-4% Hazardous Substance List: Not regulated. Environmental Hazardous Substance List: Not regulated.
Canada	Controlled Products Regulations (CPR): This product has been classified in accordance with the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR. WHMIS (Workplace Hazardous Materials Information System): Product Identification Number: E
National Inventory Status	U.S. Inventory (TSCA): Listed on inventory. TSCA 12(b) Export Notification: Not listed Canada Inventory (DSL/NDSL): All components of this product are listed on the DSL.
Comments	Clean Water Act (CWA) - Section 307 / 311 Not listed as a hazardous pollutant (40 CFR 116), nor as a toxic pollutant (40 CFR 401.15) Clean Air Act (CAA) – Section 112 Not regulated under the chemical accident prevention provisions (40 CFR 68)

HMIS (U.S.A.)	3 HEALTH 0 FLAMMABILITY 0 REACTIVITY B PROTECTIVE EQUIPMENT	National Fire Protection Association (U.S.A.)	Health Reactivity Specific Hazard	 Fire Hazard

Section XVI. Other Information

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