164m

For Product(s): 160

Material Safety Data Sheet

Rev. 1/10/97

Identity

Wide Range pH Test Solution

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information,
please contact your regional
Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
No hazardous ingredients 1% or greater or 0.1% for carcinogens	NA	NA	NA	-

• Physical/Chemical Characteristics

Boiling Point	NA	**Specific Gravity (H_2O = 1)**	0.994
Vapor Pressure (mm Hg.)	NA	**Melting Point**	NA
Vapor Density (Air = 1)	NA	**Evaporation Rate (Butyl Acetate = 1)**	NA
Solubility in Water	Soluble		
Appearance and Odor	Extremely dark solution with slight odor		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	NA	**Flammable Limits**	**LEL**	NA	**UEL** NA
Extinguishing Media	Use appropriate media to fight underlying fire				
Special Firefighting Procedures	NA				
Unusual Fire and Explosion Hazards	NA				

• Reactivity Data

Stability	**Unstable** ☐	**Conditions to Avoid** NA
	Stable ☒	
Incompatibility (Materials to Avoid)	NA	
Hazardous Decomposition or Byproducts	NA	
Hazardous Polymerization	**May Occur** ☐	**Conditions to Avoid** NA
	Will Not Occur ☒	

• Health Hazard Data

Route(s) of Entry:	**Inhalation?** ☐		**Skin?** ☒		**Ingestion?** ☒
Health Hazards (Acute & Chronic)	Not considered hazardous				
Carcinogenicity	**NTP?** ☐		**IARC?** ☐		**OSHA?** ☐
Signs & Symptoms of Exposure	May stain skin or clothes				
Medical Conditions Generally Aggravated By Exposure	NA				
Emergency and First Aid Procedures	Eye Contact - flush with water for at least 15 minutes. Contact a physician if condition persists. Skin Contact - Wash with soap and water Ingestion - Contact physician or poison control center				

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Contain spill. Absorb and place in sealable container
Waste Disposal Method	Dispose of according to federal, state and local regulations
Precautions to Be Taken in Handling and Storing	Store in original container. Keep out of reach of children.
Other Precautions	Wash with soap and water after handling.

• Control Measures

Respiratory Protection	NA
Ventilation	NA
Protective Gloves	Recommended to prevent staining skin
Eye Protection	Safety Glasses
Other Protective Clothing or Equipment	NA
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)

For Product(s): 162

Material Safety Data Sheet

Rev. 04/15/03

Identity

Pond Care Ammonia Test Solution #1

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information, please contact your regional Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
Sodium Salicylate CAS# 54-21-7	NA	NA	NA	~10

• Physical/Chemical Characteristics

Boiling Point	Not determined	**Specific Gravity (H_2O = 1)**	Not determined
Vapor Pressure (mm Hg.)	Not determined	**Melting Point**	Not determined
Vapor Density (Air = 1)	Not determined	**Evaporation Rate (Butyl Acetate = 1)**	Not determined
Solubility in Water	Freely soluble		
Appearance and Odor	Yellow liquid with mild odor.		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	Not determined	**Flammable Limits**	**LEL** NA	**UEL** NA

Extinguishing Media	Apply Alcohol type or all purpose type foam by manufacturers tecommended technique for large fires. Use carbon dioxide or dry chemical media for small fires.
Special Firefighting Procedures	Use self contained breathing apparatus and protective clothing.
Unusual Fire and Explosion Hazards	NA

• Reactivity Data

Stability	**Unstable** ☐	**Conditions to Avoid** NA
	Stable ☒	

Incompatibility (Materials to Avoid)	Sodium salicylate is incompatible with ferric salts, iodine, lime water, mineral acids, oxidizers, lead acetate, spirit nitrous ether, silver nitrate and sodium phosphate.
Hazardous Decomposition or Byproducts	Carbon dioxide, carbon monoxide, sodium oxide and toxic oxides of carbon.

Hazardous	**May Occur** ☐	**Conditions to Avoid**	NA
Polymerization	**Will Not Occur** ☒		

• Health Hazard Data

Route(s) of Entry:	**Inhalation?** ☐	**Skin?** ☒	**Ingestion?** ☒

Health Hazards (Acute & Chronic)

Inhalation: No data found
Skin Contact: May cause irritation and sensitization with rashes and skin eruptions. May be absorded through the skin. Repeated and prolonged contact may cause sensitization dermitis and symptoms of ingestion. Eye contact: May cause irritation, pain and temporary corneal injury.
Ingestion: May be harmful if ingested.

Carcinogenicity	**NTP?** ☐	**IARC?** ☐	**OSHA?** ☐

Signs & Symptoms of Exposure	See Health Hazards
Medical Conditions Generally Aggravated By Exposure	None found
Emergency and First Aid Procedures	Eyes: Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice. Skin: Flush immediately with plenty of water for at least 15 minutes. Remove any contaminated clothing. Inhalation: Remove to fresh air. Ingestion: Call a physician immediately.

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Contain spill. Pick up with absorbent material.
Waste Disposal Method	Dispose of absorbed material according to Federal, State and Local regulations.
Precautions to Be Taken in Handling and Storing	Keep container tightly closed. Store in original container. Keep out of the reach of children.
Other Precautions	None Known

• Control Measures

Respiratory Protection	Not necessary in a well ventilated area.
Ventilation	Use in a well ventilated area.
Protective Gloves	Appropriate gloves to prevent contact
Eye Protection	Splash proof glasses or goggles.
Other Protective Clothing or Equipment	As necessary to prevent contact
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)

For Product(s): 162

Material Safety Data Sheet

Rev. 04/15/03

Identity

Pond Care Ammonia Test Solution #2

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information,
please contact your regional
Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
Sodium Hydroxide CAS# 1310-73-2	2 mg/m3	2 mg/m3	-	<10
Sodium Hypochlorite CAS# 7681-52-9	NA	NA	-	<1

• Physical/Chemical Characteristics

Boiling Point	Not determined	**Specific Gravity (H_2O = 1)**	Not determined
Vapor Pressure (mm Hg.)	Not determined	**Melting Point**	Not determined
Vapor Density (Air = 1)	Not determined	**Evaporation Rate (Butyl Acetate = 1)**	Not determined
Solubility in Water	Freely soluble		
Appearance and Odor	Clear liquid with chlorine odor		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	Not Determined	**Flammable Limits**	**LEL** NA	**UEL** NA
Extinguishing Media	Not expected to be flammable. Use appropriate media to fight underlying fire			
Special Firefighting Procedures	Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a SCBA to prevent contact with thermal decomposition products.			
Unusual Fire and Explosion Hazards	Sodium Hypochlorite solutions decompose when heated. Decomposition products may cause containers to rupture or explode.			

• Reactivity Data

Stability	**Unstable** ☐	**Conditions to Avoid** NA
	Stable ☒	
Incompatibility (Materials to Avoid)	Heavy metals, reducing agents, organics, ether, ammonia, acids	
Hazardous Decomposition or Byproducts	Vigorous reactoin possible with organic materials or oxidizing agents.	
Hazardous	**May Occur** ☐	**Conditions to Avoid** NA

Polymerization	Will Not Occur ☒

• Health Hazard Data

Route(s) of Entry:	Inhalation? ☒	Skin? ☒	Ingestion? ☒

Health Hazards (Acute & Chronic)	Eye contact: Causes severe eye burns. Skin contact: Causes skin irritation and burns. Inhalation: Causes irritation of upper respiratory tract. Ingestion: Harmful if swallowed. Causes mouth and gastrointestinal tract burns, severe pain, nausea, vomiting, diarrhea and shock.

Carcinogenicity	NTP? ☐	IARC? ☐	OSHA? ☐

Signs & Symptoms of Exposure	See Health Hazards.
Medical Conditions Generally Aggravated By Exposure	None known
Emergency and First Aid Procedures	Eyes: Rinse immediately with plenty of water for at least 15 minutes. Seek medical advice. Skin: Flush immediately with plenty of water for at least 15 minutes. Remove any contaminated clothing. Inhalation: Remove to fresh air. Ingestion: DO NOT INDUCE VOMITING. If conscious, give victim 2-4 cups of milk or water. Call a physician immediately.

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Contain spill. Pick up with absorbent material.
Waste Disposal Method	Dispose of absorbed material according to Federal, State and Local regulations.
Precautions to Be Taken in Handling and Storing	Keep container tightly closed. Store in original container. Keep out of the reach of children.
Other Precautions	None known.

• Control Measures

Respiratory Protection	None required if used in a well ventilated area.
Ventilation	Use in well ventilated area
Protective Gloves	Appropriate gloves to prevent contact
Eye Protection	Splash proof glasses or goggles.
Other Protective Clothing or Equipment	As necessary to prevent contact.
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)

For Product(s): 161

Material Safety Data Sheet

Rev. 10/14/98

Identity

Freshwater Nitrite Test Solution

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information,
please contact your regional
Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
Hydrochloric Acid CAS# 7647-01-0	NA	NA	NA	-

• Physical/Chemical Characteristics

Boiling Point	NA	**Specific Gravity (H_2O = 1)**	NA
Vapor Pressure (mm Hg.)	NA	**Melting Point**	NA
Vapor Density (Air = 1)	NA	**Evaporation Rate (Butyl Acetate = 1)**	NA
Solubility in Water	Soluble		
Appearance and Odor	Light amber colored solution with no odor		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	NA	**Flammable Limits**	**LEL**	NA	**UEL** NA
Extinguishing Media	Use appropriate media to fight underlying fire				
Special Firefighting Procedures	NA				
Unusual Fire and Explosion Hazards	None known				

• Reactivity Data

Stability	**Unstable** ☐	**Conditions to Avoid**	NA
	Stable ☒		
Incompatibility (Materials to Avoid)	None known		
Hazardous Decomposition or Byproducts	None known		
Hazardous Polymerization	**May Occur** ☐	**Conditions to Avoid**	NA
	Will Not Occur ☒		

• Health Hazard Data

Route(s) of Entry:	**Inhalation?** ☐	**Skin?** ☒	**Ingestion?** ☒
Health Hazards (Acute & Chronic)	Test solution contains hydrochloric acid. May cause skin and eye irritation. No chronic effects known.		
Carcinogenicity	**NTP?** ☐	**IARC?** ☐	**OSHA?** ☐
Signs & Symptoms of Exposure	Skin and eye irritation		
Medical Conditions Generally Aggravated By Exposure	None known		
Emergency and First Aid Procedures	Eyes: Flush with large amounts of water. Skin: Wash thoroughly with soap and water. Ingestion: May be harmful: seek medical attention immediately.		

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Absorb spill with chemically absorbant materials and place in waste container.
Waste Disposal Method	Dispose of absorbant material at an approved landfill. Federal, State and Local regulations take precedence.
Precautions to Be Taken in Handling and Storing	Store in original container and place in locked storage area. Keep out of reach of children.
Other Precautions	Wash with soap and water after handling.

• Control Measures

Respiratory Protection	Not required
Ventilation	NA
Protective Gloves	Impervious
Eye Protection	Safety glasses
Other Protective Clothing or Equipment	NA
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)

For Product(s): 163

Material Safety Data Sheet

Rev. 1/17/97

Identity

Salt Level Test Solution #1

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information, please contact your regional Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
This ingredient is being withheld as a trade secret	NA	NA	(mist) 10 mg/m3 ACGIH TWA	-

• Physical/Chemical Characteristics

Boiling Point	~554° F 290° C	**Specific Gravity (H_2O = 1)**	~1.2607 @25°C
Vapor Pressure (mm Hg.)	<1.0 @ 20°C	**Melting Point**	NA
Vapor Density (Air = 1)	~3.1	**Evaporation Rate (Butyl Acetate = 1)**	NA
Solubility in Water	Miscible		
Appearance and Odor	Water white liquid		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	~390°F 199°C	**Flammable Limits**	**LEL** NA	**UEL** NA
Extinguishing Media	Water fog, alcohol-resistant foam, CO2, dry chemical			
Special Firefighting Procedures	Wear positive pressure self-contained breathing apparatus.			
Unusual Fire and Explosion Hazards	Autoignition temperature ~698°F 370°C			

• Reactivity Data

Stability	**Unstable**	☒	**Conditions to Avoid**	Avoid strong oxidizing agents
	Stable	☐		
Incompatibility (Materials to Avoid)	Avoid oxidizing agents (such as sodium hypochlorite, hypochlorous acid)			
Hazardous Decomposition or Byproducts	Acrolein			
Hazardous	**May Occur**	☐	**Conditions to Avoid**	NA
Polymerization	**Will Not Occur**	☒		

• Health Hazard Data

Route(s) of Entry: **Inhalation?** ☐ **Skin?** ☒ **Ingestion?** ☒

Health Hazards (Acute & Chronic)

Eye: may cause slight transient (temporary) eye irritation. Corneal injury is unlikely.
Skin: prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The LD50 for skin absorption in rabbits is >10000 mg/kg. Repeated exposures may cause flaking and softening of skin. May be absorbed in potentially harmful amounts when applied in large quantities to severe burns (second or third degree) over large areas of the body as a part of a

	cream or other topical application. Absorption under such circumstances can elevate serum osmolality and may result in osmotic shock. Ingestion: single dose oral toxicity is low. The oral LD50 for rats is 17000 to 27200 mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury. Swallowing amounts larger than that may cause injury. Signs and symptoms of exposure may be central nervous system effects and increased blood sugar levels. Inhalation: At room temperature, vapors are minimal due to physical properties. If heated or sprayed as an aerosol, airborne material may cause upper respiratory irritation. The LC50 for 6 hours in rats was >4mg/liter. Systemic Effects: Repeated excessive exposures may cause increased fat levels in blood. Observations in animals include kidney, liver and gastrointestinal effects with very large oral dose. Did not cause cancer in long term animal studies. Developmental/Reproductive: birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus. Reporductive effects seen in female animals are believed to be due to altered nutritional status resulting from extremely high doses in their diets. Similar effects have been seen in animals fed synthetic diets. Mutagenicity: in vitro mutagenic studies were negative.
Carcinogenicity **NTP?** ☐ **IARC?** ☐ **OSHA?** ☐	
Signs & Symptoms of Exposure	See Health Hazards
Medical Conditions Generally Aggravated By Exposure	None Known
Emergency and First Aid Procedures	Eyes: Flush eyes with plenty of water Skin: Wash off in flowing water or shower. Ingestion: Induce vomiting if large amounts are ingested. Consult medical personnel. Inhalation: Remove to fresh air if effects occur. Note to Physician: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Small Spills: Cover with absorbent material, soak up and sweep into a drum. Large Spills: Dike around spill and pump into suitable containers.
Waste Disposal Method	Reprocess, incinerate or dispose of in accordance with all local, state and federal requirements.
Precautions to Be Taken in Handling and Storing	Store in original container. Keep out of reach of children. Practice reasonable care and caution.
Other Precautions	NA

• Control Measures

Respiratory Protection	For most conditions, no respiratory protection should be needed, however if the material is heated or sprayed, use an approved air-purifying respirator.
Ventilation	Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.
Protective Gloves	Recommended
Eye Protection	Safety Glasses
Other Protective Clothing or Equipment	NA
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)

For Product(s): 163

Material Safety Data Sheet

Rev. 2/4/97

Identity

Salt Level Test Solution #2

Aquarium Pharmaceuticals, Inc.
50 E Hamilton Street
P.O. Box 218
Chalfont PA 18914

General Info. (215)822-8181
For Poison Control Information, please contact your regional Poison Control Center

• Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV	Other Limits	%
Mercuric Nitrate Monohydrate CAS# 7783-34-8	NA	0.1 mg(Hg)/m^3	NIOSH 0.05 mg (Hg)/m^3	-
Nitric Acid CAS# 7697-37-2	2 ppm; 5 mg/m^3	2 ppm; 5.2 mg/m^3; 4 ppm STEL; 10 mg/m^3 STEL	2 ppm; 5 mg/m^3, 4 ppm STEL; 10 mg/m^3 STEL	

• Physical/Chemical Characteristics

Boiling Point	NA	**Specific Gravity (H_2O = 1)**	NA
Vapor Pressure (mm Hg.)	NA	**Melting Point**	NA
Vapor Density (Air = 1)	NA	**Evaporation Rate (Butyl Acetate = 1)**	NA
Solubility in Water	Freely Soluble		
Appearance and Odor	Clear liquid with no odor		

• Fire and Explosion Hazard Data

Flash Point (Method Used)	NA	**Flammable Limits**	**LEL**	NA	**UEL** NA
Extinguishing Media	Water-spray, Carbon Dioxide, Dry Chemical				
Special Firefighting Procedures	Wear SCBA				
Unusual Fire and Explosion Hazards	None Known				

• Reactivity Data

Stability	**Unstable** ☐	**Conditions to Avoid**	Mercuric Nitrate forms sensitive explosive product with acetylene, ethanol and phosphine.
	Stable ☒		
Incompatibility (Materials to Avoid)		Nitric acid reacts with over 150 chemical combinations. Refer to NFPA Fire Protection Guide for specifics. Reacts explosively with organic materials and combustibles. Mercuric Nitrate reacts violently with hydrophosphoric acid, unsaturates, aromatics and Phosphites. Vigorous reaction with petroleum hydrocarbons. KCN, isobutene	
Hazardous Decomposition or Byproducts		When Mercuric Nitrate is heated to decomposition it emits Hg and NOx. Nitric acid forms nitrogen oxides and nitrogen.	
Hazardous	**May Occur** ☐	**Conditions to Avoid**	NA
Polymerization	**Will Not Occur** ☒		

• Health Hazard Data

Route(s) of Entry:	**Inhalation?**	☐	**Skin?**	☒ **Ingestion?**	☒

Health Hazards (Acute & Chronic)	This product has not been tested as a whole. Mercuric Nitrate LD50 oral (rat) = 26 mg/kg Poisonous by ingestion, skin contact, intraperitoneal and subcutaneous routes. Inorganic mercury compounds are a general protoplasmic poison; after absorption it circulates in the blood and is stored in the liver, kidneys, spleen and bone. In industrial poisoning, the principal effect is upon the CNS and upon the mouth and gums. In slow poisoning, the salivation may be absent and the only complaint dryness of the throat and mouth. Tremor and psychic disturbances commonly seen in the slow form of poisoning. Severe skin and eye irritant. Corrosive to skin and eyes. Probably a mucous membrane irritant. Nitric Acid LD50 oral (rat) = 90 ml/kg Danger! Strong oxidizer. Contact with other material may cause a fire. Corrosive. Causes severe eye and skin burns. Causes severe digestive and respiratory tract burns. Causes severe eye burns. May cause irreversible eye injury. May cause severe skin irritation. Causes skin burns. May cause deep penetrating ulcers of the skin. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. May be fatal if inhaled. Effects may be delayed. may cause irritaiton or the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Prolonged skin contact may cause dermatitis. Prolonged or repeated inhalation may cause nosebleeds, nasal congestion, erosion of the teeth, perforation of the nasal septum, chest pain and bronchitis. Prolonged or repeated eye contact may cause conjunctivitis.

Carcinogenicity	**NTP?**	☐	**IARC?**	☐ **OSHA?**	☐

Signs & Symptoms of Exposure	see Health Hazards
Medical Conditions Generally Aggravated By Exposure	NA
Emergency and First Aid Procedures	Ingestion - If victim is conscious and alert, give 2-4 cupfuls of milk or water. DO NOT induce vomiting. Get medical attention immediately. Skin Contact - Flush with soap and water for at least 15 minutes while removing contaminated clothing and shoes. destroy contaminated shoes. Get medical attention. Eye Contact - Flush with plenty of water for at least 15 minutes occasionally lifting the upper and lower lids. Get medical attention. Do not allow vicitm to rub or keep eyes closed Inhalation - Get medical attention immediately.

• Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	Absorb spill with inert material then place into a chemical waste container.
Waste Disposal Method	Dispose of in accordance with federal, state and local regulations.
Precautions to Be Taken in Handling and Storing	Store in original container. Keep out of reach of children. Wash thoroughly after handling.
Other Precautions	NA

• Control Measures

Respiratory Protection	NA
Ventilation	NA
Protective Gloves	Impervious
Eye Protection	Safety glasses or more splash protection if necessary
Other Protective Clothing or Equipment	NA
Work/Hygienic Practices	Practice good sanitary habits after handling (ie wash hands)