

Product ST-5410
 Revision Date 08/12/2016
 Revision 3




Safety Data Sheet

SECTION 1: IDENTIFICATION

Product Name	ST-5410
Identifier Uses	Cleaner
Supplier	Clear Water Technologies, LLC 13560 Colombard Court Fontana, California 92337 Tel: 844.429.8324
Website	info@clearwatertech.com
Emergency Telephone	24-HOUR EMERGENCY TELEPHONE: INFOTRAC: 1-800-535-5053 INTERNATIONAL#: 1-352-323-3500

SECTION 2: HAZARDS IDENTIFICATION

Appearance	Purple crystals
Color	Purple
Odor	Pungent.
Pictogram(s)	
Signal Word	Warning
Hazard Statements	H315 Causes skin irritation. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary Statements	P264 Wash [*] thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P321 Specific treatment (see [*] on this label). P332 + P313 If skin irritation occurs: Get medical advice/attention. P362 Take off contaminated clothing and wash before reuse. P501 Dispose of contents/ container to [*]
Contains	sulphamidic acid 4,4'-bis(dimethylamino)benzophenone Michler's ketone
GHS Classification	
Physical and Chemical Hazards	Not classified
Human Health	Skin Irrit.2 - H315, Eye Irrit.2A - H315,
Environment	Aquatic Chronic 3 - H412
OSHA Regulatory Status	This product is Hazardous under the OSHA Hazard communication Standard.
Inhalation	Inhalation of mists may cause moderate to severe irritation to mucous membranes and respiratory tract, and possible burns. Symptoms of exposure may include nasal irritation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and pulmonary edema. Avoid contact.
Ingestion	Exposure to product may cause moderate to severe irritation and possible burns to inner linings of mouth, esophagus and gastrointestinal tract. Symptoms of exposure may include sore throat, vomiting or diarrhea. Do NOT ingest.
Skin contact	Exposure to product may cause moderate to severe irritation to skin, and possible burns.

Eye contact	Symptoms of exposure may include redness, swelling, blisters or pain. Avoid contact. Exposure to product may cause severe irritation to eyes, and possibly burns or eye damage.
Routes of Exposure	Symptoms of exposure may include redness, pain or blurred vision. Avoid contact. No Information available.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Composition Comments	Confidential business information has been removed without affecting the overall safety information on the safety data sheet.
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SECTION 4: FIRST AID MEASURES

Description of first aid measures

General Information	General first aid, rest, warmth and fresh air.
Inhalation	If this product is inhaled and symptoms occur, move the exposed person to fresh air promptly. Seek medical attention if symptoms persist.
Ingestion	Never give anything by mouth to an unconscious person. Rinse mouth thoroughly. If this product is ingested, give the exposed large amount of water and seek medical attention promptly. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
Skin contact	If the product penetrates the clothing, promptly remove the contaminated clothing or shoes, and flush the affected area as described. If this product contacts the skin, immediately flush the affected area with plenty of clean running water for at least fifteen (15) minutes.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Do not rub eye. Make sure to remove any contact lenses from the eyes before rinsing. Flush with water for 15 minutes. Seek medical attention if necessary.

Most important symptoms and effects, both acute and delayed

General Information	The severity of the symptoms described will vary dependent of the concentration and the length of exposure.
Inhalation	Inhalation of mists may cause moderate to severe irritation to mucous membranes and respiratory tract, and possible burns. Symptoms of exposure may include nasal irritation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and pulmonary edema. Avoid contact.
Ingestion	Exposure to product may cause moderate to severe irritation and possible burns to inner linings of mouth, esophagus and gastrointestinal tract. Symptoms of exposure may include sore throat, vomiting or diarrhea. Do NOT ingest.
Skin contact	Exposure to product may cause moderate to severe irritation to skin, and possible burns. Symptoms of exposure may include redness, swelling, blisters or pain. Avoid contact.
Eye contact	Exposure to product may cause severe irritation to eyes, and possibly burns or eye damage. Symptoms of exposure may include redness, pain or blurred vision. Avoid contact.
Routes of Exposure	No Information available.

Most important symptoms and effects, both acute and delayed

Notes to the Physician	Treat Symptomatically.
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SECTION 5: FIREFIGHTING MEASURES

Auto Ignition Temperature (°C)	No Information available.
Flammability Limit-Lower (%)	No Information available.
Flammability Limit-Upper (%)	No Information available.
Flashpoint	No Information available.
Extinguishing Media	Use water, foam, dry chemical or carbon dioxide to extinguish fire.
Hazardous combustion products	
Unusual Fire & Explosion Hazards	Irritating or corrosive vapors may be emitted during a fire. Do NOT breathe fumes. Contain run-off.
Special Fire Fighting Procedures	Avoid breathing fire vapors. Ventilate closed spaces before entering them. Water spray should be used to cool containers.
Protective equipment for fire-fighters	Fire fighters should wear full protective equipment, including a NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use proper personal protection (refer to Section 8).
Environmental Precautions	Do not discharge into drains, water courses or onto the ground.
Spill Clean Up Methods	Safely stop source of spill. Clean up spills immediately. Restrict non-essential personnel from the area. Wear protective clothing, goggles and respirator if ventilation is not adequate. Sweep up spilled material and place into container for reuse or disposal. Dispose of waste in accordance with local, state or federal regulations. Use vacuum or wet mop to clean up dust. Flush spill area with water. Wash thoroughly after dealing with a spillage.

SECTION 7: HANDLING AND STORAGE

Handling	Avoid prolonged or repeated contact. Do NOT ingest. Wash thoroughly after handling. Rinse container before disposal. Do not use contact lenses. Eliminate all sources of ignition. Use proper personal protection when handling (refer to Section 8).
Usage Description	Use only according to directions.
Storage Precautions	Keep upright. Store in original tightly closed container. Store in a well-ventilated place. Store in a covered, dry, climate controlled area, away from incompatibles. Keep away from Strong oxidizers, chlorine, chlorites, nitric acid, nitrates, nitrite, sulfides and alkaline materials. The recommended storage temperature is above 32°F, preferably at room temperature (70°F). The recommended shelf life is two (2) years. It is recommended that products be retested if stored for more than two (2) years. Under ideal storage conditions, the shelf life is almost indefinite.
Specific End Use(s)	The identified uses are in section 1 of this Safety Data Sheet.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**Protective Equipment**

Component	STD	TWA (8 Hrs)		STEL (15mins)	Notes
4,4'-bis(dimethylamino)benzophenone Michler's ketone	OSHA	100ppm	600mg/m3		

Ingredient Comments OSHA

Process Conditions	Provide eyewash, quick drench.
Engineering Measures	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.
Respiratory Equipment	Use of respirator protection is not generally required. However, if exposure is above the stated limits or ventilation is inadequate, use a NIOSH approved acid gas/organic vapor respirator to reduce potential for inhalation exposure. When using respirator cartridges, they must be changed frequently to assure breakthrough exposure does not occur.
Hand Protection	Use rubber or plastic gloves to minimize skin contact.
Eye Protection	Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Hygiene Measures	DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**Information on Basic Physical and Chemical Properties**

Appearance	Purple crystals
Color	Purple

Odor	Pungent.
Odor Threshold -Lower	No Information available.
Odor Threshold - Upper	No Information available.
pH-Value, Conc. Solution	1.18 (1%)
Melting point	No Information available.
Initial boiling point and boiling range	212.0 °F
Flashpoint	No Information available.
Evaporation rate	No Information available.
Flammability State	Not known.
Flammability Limit - Lower (%)	No Information available.
Flammability Limit - Upper (%)	No Information available.
Vapor pressure	No Information available.
Vapor Density (air=1)	No Information available.
Relative density	17.52 @ 68.0 °F
Bulk Density	No Information available.
Solubility	Completely soluble in water.
Decomposition temperature	No Information available.
Partition coefficient; n-octanol/water	No Information available.
Auto Ignition Temperature (°C)	No Information available.
Viscosity	No Information available.
Explosive Properties	No information available.
Oxidizing Properties	No Information available.
Molecular Weight	No Information available.
Volatile Organic Compound	No Information available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Reaction with Strong oxidizers, chlorine, chlorites, nitric acid, nitrates, nitrite, sulfides and heat. Solutions are acidic and will react with alkaline materials.
Stability	Stable under normal temperature conditions and recommended use.
Hazardous Polymerization	Hazardous polymerization is not expected to occur under normal temperatures and pressures.
Hazardous Decomposition Products	Oxides of nitrogen and sulfur.
Conditions to Avoid	Alkaline substances, heating and moisture
Materials to Avoid	Keep away from Strong oxidizers, chlorine, chlorites, nitric acid, nitrates, nitrite, sulfides and alkaline materials.

SECTION 11: TOXICOLOGICAL INFORMATION**Toxicological Information**

Acute Toxicity (Oral LD50)	>1801.00mg/kg Rat
Acute Toxicity (Dermal LD50)	~350.00mg/kg Rabbit
Acute Toxicity (Inhalation LC50)	>4307.00mg/l (vapors) Rabbit
Skin Corrosion/Irritation	No Information available.
Respiratory Sensitization	No Information available.
Skin Sensitization	No Information available.
Reproductive Toxicity:	No Information available.
Germ Cell Mutagenicity:	
Genotoxicity - In Vitro	
Genotoxicity - In Vivo	
Carcinogenicity:	
Carcinogenicity	No Information available.
NTP - Carcinogenicity	4,4'-bis(dimethylamino)benzophenone Michler's ketone: Reasonably anticipated to be a human carcinogen.
OSHA - Carcinogenicity	The product and its components are not listed.
IARC Carcinogenicity	4,4'-bis(dimethylamino)benzophenone Michler's ketone: 2B IARC Group 2B Possibly carcinogenic to humans.
Specific Target Organ Toxicity - Single Exposure:	
STOT - Single Exposure	No Information available.
Specific Target Organ Toxicity - Repeated Exposure:	
STOT - Repeated Exposure	No Information available.

Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sulphamidic acid	3160mg/kg Rat		
ethane-1,2-diol	5500mg/kg Mouse		

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

Acute Toxicity - Fish	LC50 96 Hours >2100.00ppm Onchorhynchus mykiss (Rainbow Trout)
Acute Toxicity - Aquatic Invertebrates	LC50 48 Hours >2950.00ppm Daphnia magna
Acute Toxicity - Aquatic Plants	No Information available.
Degradability	No information available.
Bioaccumulative Potential	
Mobility	Completely soluble in water.
Results of PBT and vPvB Assessment	The product does not contain any PBT or vPvB substances.
Other Adverse Effects	None known.


Name	Acute Toxicity (Fish)	Acute Toxicity (Aquatic)	Acute Toxicity (Aquatic Plants)
ethane-1,2-diol	LC50 96 Hours 41000.00mg/l Onchorhynchus mykiss (Rainbow Trout)		

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Management	When handling waste, consideration should be made to the safety precautions applying to handling of the product.
Disposal Methods	Do NOT dump into any sewers, on the ground or into any body of water. Rinse containers

before disposal. Since emptied containers contain product residue, follow label warnings even after container is emptied. Dispose in accordance with all applicable federal, state and local laws and regulations.

SECTION 14: TRANSPORT INFORMATION

UN No. (DOT/TDG)	2967 - SULPHAMIC ACID
UN No. (IMDG)	2967 - SULPHAMIC ACID
UN No. (ICAO)	2967 - Sulphamic acid
DOT Proper Shipping Name	2967 - SULPHAMIC ACID
TDG Proper Shipping Name	2967 - SULPHAMIC ACID
DOT Hazard Class	8
DOT Hazard Label	Class 8 - Corrosive
TDG Class	8
TDG Label(s)	8
IMDG Class	8
ICAO Class	8
Transport Labels	
DOT Pack Group	III
IMDG Pack Group	III
Air Pack Group	III
EMS	F-A, S-B
Environmentally Hazardous Substance/Marine Pollutant	No

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

The Following ingredients are listed ethane-1,2-diol

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

The Following ingredients are listed ethane-1,2-diol

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

The Following ingredients are listed ethane-1,2-diol

SARA 313 Emission Reporting

The Following ingredients are listed ethane-1,2-diol

CAA Accidental Release Prevention

The Following ingredients are listed ethane-1,2-diol
4,4'-bis(dimethylamino)benzophenone Michler's ketone

OSHA Highly Hazardous Chemicals

The Following ingredients are listed None Listed.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

The Following ingredients are listed 4,4'-bis(dimethylamino)benzophenone Michler's ketone

California Air Toxics "Hot Spots" (A-I)

The Following ingredients are listed None Listed.

California Air Toxics "Hot Spots" (A-li)

The Following ingredients are listed None Listed.

Massachusetts "Right To Know" List

The Following ingredients are listed ethane-1,2-diol
4,4'-bis(dimethylamino)benzophenone Michler's ketone

Rhode Island "Right To Know" List

The Following ingredients are listed ethane-1,2-diol

Minnesota "Right To Know" List

The Following ingredients are listed ethane-1,2-diol
4,4'-bis(dimethylamino)benzophenone Michler's ketone

New Jersey "Right To Know" List

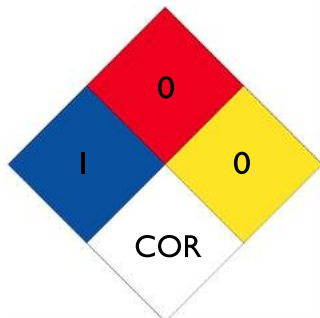
The Following ingredients are listed sulphamidic acid
ethane-1,2-diol
4,4'-bis(dimethylamino)benzophenone Michler's ketone

Pennsylvania "Right To Know" List

The Following ingredients are listed ethane-1,2-diol
4,4'-bis(dimethylamino)benzophenone Michler's ketone

SECTION 16: OTHER INFORMATION

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	E

Revision Comments

Revision Date 08/12/2016
Revision 2

Disclaimer

This information relates only 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 the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.