Safety Data Sheet: CHEM-AQUA 18102

Supercedes Date 02/19/2009 **Issuing Date** 04/25/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 18102
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA
253 ORENDA ROAD
BRAMPTON ONT L6T 1E6

Product Code 0884
Chemical nature Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Colorless - Yellow **Physical State** Liquid **Odor** Amine

GHS Classification

Physical Hazards

Flammable liquids	Category 4
Substances/mixtures corrosive to metal	Category 1

Health Hazard

Aspiration Toxicity	Category 1
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Skin Sensitization	Category 1
Specific target organ systemic toxicity (single exposure)	Category 3
Specific target organ systemic toxicity (repeated exposure)	Category 2

Other hazards
None

Labeling
Signal Word
DANGER

Hazard Statements
H227 - Combustible liquid
H314 - Causes severe skin burns and eye damage
H317 - May cause an allergic skin reaction
H336 - May cause drowsiness or dizziness
H304 - May be fatal if swallowed and enters airways
H373 - May cause damage to organs through prolonged or repeated exposure
H290 - May be corrosive to metals

Precautionary Statements
P210 - Keep away from heat, sparks, open flames or hot surfaces.
P280 - Wear protective gloves, protective clothing, eye protection and face protection.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace
P260 - Do not breathe vapors or mists
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P333 + P313 - If skin irritation or rash occurs, get medical attention
P362 - Take off contaminated clothing and wash before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a physician
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a physician if unwell.
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P403 + P235 - Store in a well-ventilated place. Keep cool
P406 - Store in a corrosion-resistant container.
P390 - Absorb spillage to prevent damage
P501 - Dispose of contents and container in accordance with applicable regulations.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
2-Diethylaminoethanol	100-37-8	30-60

4. FIRST AID MEASURES

General advice Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Flash Point 186 °F / 86 °C **Method** Seta closed cup

Flammability Limits in Air % Hydrogen, by reaction with metals. **Upper** 75 **Lower** 4

Suitable Extinguishing Media

Water spray. Carbon dioxide (CO2). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Combustible Liquid. Vapors may ignite and explode. Solvent vapors are heavier than air and may spread along floors. Contact with metals may evolve flammable hydrogen gas. Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA **Health** 3 **Flammability** 2 **Instability** 0

HMIS **Health** 3 **Flammability** 2 **Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature **Minimum** 5 °F / -15 °C **Maximum** 100 °F / 38 °C

Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
2-Diethylaminoethanol	TWA: 2 ppm Skin	TWA: 10 ppm TWA: 50 mg/m^3 Skin	100 ppm TWA: 10 ppm TWA: 50 mg/m^3

Engineering Measures Use with local exhaust ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Impervious gloves, Wear suitable protective clothing.

Respiratory Protection Use NIOSH approved respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. In case of insufficient ventilation wear suitable respiratory equipment.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Colorless - Yellow	**Odor**	Amine
Odor Threshold	Not applicable	**Appearance**	Transparent
pH	11.5	**Specific Gravity**	0.980
Evaporation Rate	0.42 (Butyl acetate=1)	**Percent Volatile (Volume)**	100
VOC Content (%)	40	**VOC Content (g/L)**	392
Vapor Pressure	16.3 mmHg @ 70°F	**Vapor Density**	0.7 (Air = 1.0)
Solubility	Completely soluble	**n-Octanol/Water Partition**	No data available
Melting Point/Range	No data available	**Decomposition Temperature**	No data available
Boiling Point/Range	210 °F / 99 °C	**Flammability (solid, gas)**	No data available
Flash Point	186 °F / 86 °C	**Method**	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Hydrogen, by reaction with metals.	**Upper** 75 **Lower** 4	

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions. Hazardous polymerization does not occur.

Conditions to Avoid Keep away from open flames, hot surfaces, and sources of ignition

Incompatible Products Strong oxidizing agents, Strong acids, Halogenated compounds, Acid chlorides.

Hazardous Decomposition Products Carbon oxides, Nitrogen oxides (NOx), Ammonia, Hydrogen, by reaction with metals.

Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50 No information available

Dermal LD50 No information available

Inhalation LC50

Gas No information available

Mist No information available

Vapor No information available

Principle Route of Exposure Skin contact, Eye contact, Inhalation.

Primary Routes of Entry Skin Absorption

Acute Effects

Eyes Causes eye burns.

Skin Causes skin burns. May cause allergic skin reaction. May be absorbed through the skin in harmful amounts.

Inhalation Harmful by inhalation. Causes burns. Inhalation may cause central nervous system effects. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Ingestion If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Causes headache, drowsiness or other effects to the central nervous system. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.

Chronic Toxicity Prolonged skin contact may defat the skin and produce dermatitis. May cause sensitization by skin contact. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Target Organ Effects Skin, Eyes, Respiratory system, Immune system, Central nervous system.

Aggravated Medical Conditions Skin disorders, Respiratory disorders.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
2-Diethylaminoethanol	= 1300 mg/kg (Rat)	= 1260 µL/kg (Rabbit)	no data available	no data available	no data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
2-Diethylaminoethanol	no data available	skin sensitization	no data available	no data available	eyes, respiratory system, skin, immune

					system

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
2-Diethylaminoethanol	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information — No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
2-Diethylaminoethanol	EC50 = 30 mg/L Desmodesmus subspicatus 72 h	LC50 100 - 220 mg/L Leuciscus idus 96 h LC50 1660 - 1920 mg/L Pimephales promelas 96 h	no data available	83.6: 48 h Daphnia magna Straus mg/L EC50	0.21

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name 2-Diethylaminoethanol Solution
Hazard Class 8
Subsidiary Hazard Class 3
UN-No UN2686
Packing Group II
Description UN2686, 2-Diethylaminoethanol Solution ,8,(3),PG II

TDG

Proper shipping name 2-Diethylaminoethanol (Solution)
Hazard Class 8
Subsidiary Hazard Class 3
UN-No UN2686
Packing Group II

ICAO

UN-No UN2686
Proper Shipping Name Diethylaminoethanol Solution
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group II
Shipping Description UN2686, Diethylaminoethanol Solution,8(3),PG II,

IATA

UN-No UN2686
Proper Shipping Name 2-Diethylaminoethanol Solution
Hazard Class 8
Subsidiary Hazard Class 3
Packing Group II
ERG Code 8F
Shipping Description UN2686,2-Diethylaminoethanol Solution,8(3),PG II

IMDG/IMO

Proper Shipping Name 2-Diethylaminoethanol Solution
Hazard Class 8
Subsidiary Hazard Class 3
UN-No UN2686
Packing Group II
EmS No. F-E, S-C
Shipping Description UN2686, 2-Diethylaminoethanol Solution,8(3),PG II

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL	Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
2-Diethylaminoethanol	Not applicable	Not applicable

16. OTHER INFORMATION

Prepared By	Patricia Sosa
Supercedes Date	02/19/2009
Issuing Date	04/25/2014
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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