Company Details:

Waterwell Projects (PTY) LTD

Reg No. 2001/018862/07

Waterwell Projects (PTY) LTD
Unit 4 Megazone Park
Hertford Junction R512
Lanseria
1748

Tel: 011 300 9917/8 or 073 077 0973

Fax: 086 605 9360
Poison Centre: 021 689 5227

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

a. Identification of the substance or preparation :

1.1. Trade / Commercial Name: Waterwell Jelli Blue Gel Block (packed 140g)
1.2. Chemical Name: Gel formation of Non-ionic Polyacrylamide and cationic coagulant with acticide
1.3. Formula: Mixture – see composition
1.4. Chemical Family: Polymer Gel
1.5. Synonyms:
1.6. UN No. none allocated
1.7. CAS No.

b. Information of Distributor:

Watertronics International (PTY) LTD
PO Box 3784
Edenvale 1610
Tel: 083 626 6206 or 083 552 0738
Email: woodrich@polka.co.za

2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	% w/w	Hazard classification	Risk phrases
Polyacrylamide powder	32%	None	
Monethylene Glycol	12%		
Blue Mix / MV actcive	1%		
Water	55%	None	

3. HAZARDS IDENTIFICATION

Based on available information, not classified as hazardous according to criteria of NOHSC; NON-HAZARDOUS SUBSTANCE.
Not classified as Dangerous Goods for transport: NON-DANGEROUS GOODS.

Gel is extremely slippery when wet.

4. FIRST AID MEASURES

Swallowed
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give large amounts of

water. Never give anything by the mouth to an unconscious patient. Seek medical advice.

Eye

If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.

Skin

If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If irritation occurs, seek medical advice.

Advice to Doctor

Treat symptomatically based on judgement of doctor and individual reactions of patient.

Aggravated medical conditions caused by exposure

No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

Extinguishing Media

Not combustible, however, if material is involved in a fire use fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazards from Combustion Products

Non -combustible solid. Avoid generating dust.

Special Protective Precautions and Equipment for Fire Fighters

Clear fire area of all non emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources.

Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Flammability Conditions

Product is a non - flammable solid

.

Additional Information

Hazchem Code N/A

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:

Isolate spill or leak area immediately.

Methods and materials for containment and clean up:

Slippery when spilt. Avoid accidents, clean up immediately.

Cover with damp absorbent material (sand, clay or wood shavings). Sweep or vacuum up.

Collect and seal in properly labelled containers or drums for disposal.

7. HANDLING AND STORAGE

Safety Phrases are: S26, S36. In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre. Wear suitable protective clothing.

Storage & transport:

No special storage and transport requirements. This product has no UN classification. Observe all relevant regulations regarding sale, transport and storage of this class of product. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames, and make sure that the product does not come into contact with substances listed under "Materials to avoid" below.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls:
Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Avoid generating and breathing in dusts. Use with local exhaust ventilation or while wearing dust mask.
Keep containers closed when not in use.
Personal Protective Equipment:
The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
Orica Personal Protection Guide No. 1, 1998: E - OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, DUST MASK.
Wear overalls, safety glasses and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brillaint Blue gel.
Odour :	No odour.
Decomposes at:	not applicable
Density:	2.5 g/cm^3
Solubility in water:	Soluble
pH:	6 - 8
Vapour pressure:	not applicable

10. STABILITY AND REACTIVITY

Chemical stability:	Stable.
Conditions to avoid:	Avoid contact with foodstuffs.
	Avoid exposure to moisture.
Incompatible materials:	No information available for the product.
Hazardous decomposition products:	No information available for the product.
Hazardous reactions:	Hazardous polymerisation will not occur

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	No adverse effects expected, however large amounts may cause nausea and vomiting.
Eye contact:	May be an eye irritant.
	May cause physical irritation to the eyes.
Skin contact:	Contact with skin may be slightly irritating.
Inhalation:	Breathing in dust may result in respiratory irritation.
Long Term Effects:	No information available for the product.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Use or reuse if possible.

Disposal methods: Refer to Waste Management Authority. Normally suitable for disposal at approved land waste site.

14. TRANSPORT INFORMATION

Not classified as Dangerous Goods for transport: NON-DANGEROUS GOODS.

The information herein is given in good faith and to the best of our knowledge at the current date. The accomplishment of the instructions herein does not exempt the user from following the legal and administrative regulations relative to product, environmental safety and hygiene, which are user's own responsibility. In case of mixture with other substances, ensure that other risks are not generated.

Date of Revision: ***01 August 2014***

Company Details:

Waterwell Projects (PTY) LTD

Reg No. 2001/018862/07

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Unit 4 Megazone Park
Hertford Junction R512
Lanseria 1748

Tel: 011 300 9917/8 or 073 077 0973
Fax: 086 605 9360

Poison Centre: **+27 21 689 5227**

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

a) Identification of the substance or preparation :

1.1 Trade / Commercial Name: Waterwell Sudden Shock (packed 500g / 25kg)
1.2 Chemical Name: Sodium dichloro-s-triazinetrione / Aluminium sulfate Mixture
1.3 Formula: Mixture (see 2)
1.5 Synonyms: Dichlor shock, Dichlor oxidiser
1.6 Un No. 2465 Hazchem Code 2WE & 3077
1.7 CAS No. 2893-78-9 & 10043-01-3

b) Information of Distributor :

Waterwell Projects (PTY) LTD
Unit 4 Megazone Park
Hertford Junction R512
Lanseria 1748
Tel: 011 300 9917/8 or 073 077 0973
Fax: 086 605 9360

Alternate suppliers:

CJP Chemicals (Pty) Ltd
P. O. Box 1353
Cresta 2118
32 Tiger Moth ave
Aeroton 2190
Tel: 011 494 6700
Fax: 011 494-6701

or:

Crossmill Chemicals CC
P O Box 1272
Lonehill 2062
34 Renico Cresent Lea Glen,
Roodepoort, Gauteng 2195
Tel: 011 472 4986
Fax: 011 472 0730

2. COMPOSITION / INFORMATION ON INGREDIENTS

Dangerous ingredient	% w/w	CAS No.
Dichloroisocyanuric acid	70%	2893-78-9
Aluminium sulfate	30%	10043-01-3

3. HAZARDS IDENTIFICATION

Health Effects: Human systemic effects by ingestion include ulceration or bleeding of stomach. Other effects: gastrointestinal irritation, salivation, watering of eyes, shortness of breath, weakness, emaciation, lethargy, diarrhea, coma and (following very high dosage), death after 1-8 days, with autopsy showing irritation of stomach and gastrointestinal tract, liver dysfunction and lung congestion.

Acute Effects:

Swallowed: Data indicates the product should be considered as harmful by ingestion
Eye: Data indicates that this product should be classified as a severe eye irritant.
Skin: Data indicates that the product presents medium hazard via skin contact when moisture is present.
Inhalation: Inhalation may cause irritation of the nose and throat and cause coughing and chest discomfort.
Primary route of exposure is inhalation and skin and eye contact.

4. FIRST AID MEASURES

Swallowed Do not induce vomiting. Give a glass of water. Contact the doctor or Poisons Information Centre if symptoms of poisoning develop.

Eye Hold eyes open and wash continuously for 15 minutes with running water. Ease irritation under eyelids by occasionally lifting eyelids. Do not attempt to remove contact lenses unless trained. Transport to hospital or doctor immediately.

Skin If this product comes in contact with the skin, wash skin with soap and water for 15 minutes. Remove contaminated clothing and footwear. Ensure contaminated clothing is thoroughly washed before using again. Transport to hospital or doctor immediately.

Inhalation If fumes or combustion products are inhaled, remove to fresh air. Lay victim down and keep warm and rested. If breathing is shallow, or has stopped, ensure clear airway and apply resuscitation. Transport to hospital or doctor immediately.
Eye wash stations or baths and deluge showers should be available where product is being used.

Advice to doctor: Treat symptomatically. Note the nature of this product.

5. FIRE FIGHTING MEASURES

There is no explosion hazard for this material under normal circumstances.

Flashpoint:	Does not burn
Extinguishing Media:	Use media suited to burning materials.
Special Fire Fighting Procedures:	Firefighters should wear full protective clothing and self contained breathing apparatus when fighting fires involving this product.

Unusual Fire and Explosion Hazards: None

Stability:	Stable
Polymerisation:	Will not polymerise.
Decomposition Products:	Oxides of nitrogen, chlorine, sodium
Materials to avoid:	Water, organic/combustible materials, ammonium salts, nitrogenous materials, alkalis, urea and amines

6. ACCIDENTAL RELEASE MEASURES

Spills and disposals:
In event of a major spill, clear area of personnel. Alert fire brigade and advise nature & location of spill. Wear full protective clothing and self contained breathing apparatus,

especially in confined spaces. Prevent spillage from entering drains or water courses. Stop leak if safe to do so, and contain spill. Absorb onto vermiculite, sand, sawdust or other absorbent material. Sweep up and shovel or collect recoverable product into labeled containers for recycling or salvage.
Recycle containers wherever possible. After spills, wash area, preventing runoff from entering drains. If material enters drains, advise emergency services. This material may be suitable for landfill. Dispose of only in compliance with local, state and federal regulations. Launder all contaminated clothing before re-use.

7. HANDLING AND STORAGE

UN number is 2465 and Hazchem code is 2WE. It is classed as "Class 5.1 (Oxidising Agent)" Being a scheduled poison, the product must be stored, maintained and used in accord with relevant state poisons act.
Not to be transported with Classes 1 (Explosives), 2.1 (Flammable Gases), 2.3 (Poisonous Gases), 3 (Flammable Liquids), 4.1 (Flammable Solids), 4.2 (Spontaneously Combustible Substances), 4.3 (Dangerous When Wet Substances), 5.2 (Organic Peroxides), 6 (Toxic Substances) (Nb. when substance is capable of being ignited and burning), 7 (Radioactive Substances), 8 (Corrosives), and 9 (Miscellaneous Dangerous Substances) (Nb. when substance is capable of being ignited and burning). Observe all regulations associated with this classification when carrying by road or rail. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames, and make sure the material does not come into contact with water or acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Risk Phrases are: R8, R22, R31. Combination Risk Phrases are: R36/37. Contact with combustible material may cause fire. Harmful if swallowed. Contact with acids liberates toxic gas. Irritating to eyes and respiratory system.
Exposure Standards:
There is a blanket limit of 10mg/m3 for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use. See ingredients section on page 1 of this data sheet.
Engineering Controls:
Ventilation must be adequate to ensure that the working environment is below the TWA value. Otherwise, use respiratory protection. Some materials should only be used when respiratory protection is being worn. For information on respiratory protection, consult AS1716. See below for further information.
Personal Protection:
Respiratory Protection: A face mask or respirator should be used when this material is being used. For help in selecting suitable equipment consult AS/NZS 1715.
Protective Gloves: Rubber or PVC gloves are advised. For help in selecting suitable gloves consult AS 2161.
Eye Protection: Full face mask, safety glasses or goggles should be worn. Consult AS 1336 and AS/NZS 1337 for information about eye protection.
Clothing: Clean overalls should to be worn, preferably with an apron. All skin areas should be covered. Consult AS 2919 for advice on Industrial Clothing.
Safety Boots: Wearing safety boots would be advisory. Consult AS/NZS 2210 for advice on Occupational Protective Footwear.
Flammability Limits: Does not burn

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White, slightly hygroscopic granules/ crystalline powder.
Odour:	Chlorine odour.
Melting/softening point:	230-250°C
Boiling point and vapour pressure:	Not applicable.
Volatile materials:	Nil
Flashpoint:	Does not burn.
Specific gravity:	0.9
Solubility in water:	30% w/w at 25°C
Corrosiveness:	Not corrosive.
pH value:	5.0 to 7.0 (1% solution)

10. STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY:
Presence of incompatible materials.
Product is considered stable.
Hazardous polymerisation will not occur.
STORAGE INCOMPATIBILITY
Contact with acids produces toxic fumes
Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous
Avoid storage of dichloroisocyanurates with ammonia, urea or similar nitrogen containing compounds, inorganic reducing compounds, calcium hypochlorite, alkalis and water.
Corrosive to most metals in the presence of moisture.
Many compounds containing more than one N-halogen bond are unstable and exhibit explosive properties.
Avoid strong bases.
Avoid reaction with oxidising agents

11. TOXICOLOGICAL INFORMATION

IRRITATION DATA:
500 mg/24 hour(s) skin-rabbit mild; 500 mg skin-rabbit severe; 10 mg/24 hour(s) rinsed eyes-rabbit moderate; 100 mg/24 hour(s) eyes-rabbit mild
TOXICITY DATA:
>50 mg/l inhalation-unreported LC50 (Refco); 2000 mg/kg skin-rabbit LD50 (Refco); 735 mg/kg oral-rat LD50 (Refco); 400 mg/kg oral-guinea pig LD50 (Refco); 3570 mg/kg oral-human LDLo; 1420 mg/kg oral-rat LD50; 2500 mg/kg oral-rabbit LDLo; 3160 mg/kg skin-rabbit LDLo; 1670 mg/kg oral-mammal LD50
LOCAL EFFECTS:
Irritant: inhalation, skin, eye
ACUTE TOXICITY LEVEL:
Moderately Toxic: dermal absorption, ingestion
REPRODUCTIVE EFFECTS DATA: Not Available.
HEALTH EFFECTS:
INHALATION:

ACUTE EXPOSURE:
This material in the form as sold is not expected to produce respiratory effects. If ground or otherwise in a powdered form, effects similar to a corrosive substance may occur. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. In some cases, pulmonary edema may develop, either immediately or more often within a period of 5-72 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. Severe cases may be fatal.
CHRONIC EXPOSURE:
Depending on the concentration and duration of exposure, repeated or prolonged exposure may cause inflammatory and ulcerative changes in the upper respiratory tract.
SKIN CONTACT:
ACUTE EXPOSURE:
Direct contact with wet material or moist skin may cause severe irritation, pain, and possibly burns. This material is not considered to be skin sensitiser based on studies with guinea pigs.
CHRONIC EXPOSURE:
Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in dermatitis or effects similar to acute exposure.
EYE CONTACT:
ACUTE EXPOSURE:
Direct contact may cause severe irritation, pain and burns, possibly severe, and permanent damage including blindness. The degree of injury depends on the concentration and duration of contact.
CHRONIC EXPOSURE:
Effects depend on concentration and duration of exposure. Repeated or prolonged contact may result in conjunctivitis or effects as in acute exposure.
INGESTION:
ACUTE EXPOSURE:
Ingestion may cause immediate pain and severe burns of the mucous membranes. There may be discoloration of the tissues. Swallowing and speech may be difficult at first and then almost impossible. The effects on the esophagus and gastrointestinal tract may range from irritation to severe corrosion. Edema of the epiglottis and shock may occur.
CHRONIC EXPOSURE:
Depending on the concentration, repeated ingestion may cause effects as with acute ingestion.

12. ECOLOGICAL INFORMATION

FISH TOXICITY: This material is believed to be highly toxic to aquatic life. 0.28-2.4 mg/L 96 hour(s) LC50 Bluegill Sunfish; 0.22-0.65 mg/L 96 hour(s) LC50 Rainbow Trout
INVERTEBRATE TOXICITY: 0.11-0.28 mg/L 48 hour(s) LC50 Water flea
FATE AND TRANSPORT:
BIODEGRADATION: This material is subject to hydrolysis. Cyanuric acid produced by hydrolysis is biodegradable.
PERSISTENCE: This material is believed not to persist in the environment. Hydrolysis reaction occurs in minutes. None of the hydrolysis products are bioaccumulative or persistent. Photoreactivity of free available chlorine is 30 minutes at 30 C (pH 7). Half-life increases to as much as 8 hours in the presence of Cyanuric acid.
BIOCONCENTRATION: This material is believed not to bioaccumulate.
OTHER ECOLOGICAL INFORMATION: 1,916 mg/kg oral-Mallard duck LD50; 1,766 mg/kg oral-N.

Bobwhite LD50; >10,000 ppm inhalation-Mallard duck LC50; 7253 - >10,000 ppm inhalation-N. Bobwhite
LC50

13. DISPOSAL CONSIDERATIONS

Use or reuse if possible. This material is a registered pesticide. Dispose in accordance with all applicable regulations. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction and fire. DO NOT transport wet or damp material. Damp material should be neutralized to a non-oxidizing state. Handling and disposal of damp material. See product label for container disposal information. May be subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D003.

14. TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101:

PROPER SHIPPING NAME:	Dichloroisocyanuric acid salts
ID NUMBER:	UN2465
HAZARD CLASS OR DIVISION:	5.1
PACKING GROUP:	II
LABELING REQUIREMENTS:	5.1

15. REGULATORY INFORMATION

U.S. REGULATIONS:
CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): Not regulated.
SARA TITLE III SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355.30): Not regulated.
SARA TITLE III SARA SECTIONS 311/312 HAZARDOUS CATEGORIES (40 CFR 370.21):
ACUTE: Yes
CHRONIC: No
FIRE: Yes
REACTIVE: Yes
SUDDEN RELEASE: No
SARA TITLE III SECTION 313 (40 CFR 372.65): Not regulated.

16. ANY OTHER RELEVANT INFORMATION;

The information herein is given in good faith and to the best of our knowledge at the current date. The accomplishment of the instructions herein does not exempt the user from following the legal and administrative regulations relative to product, environmental safety and hygiene, which are user's own responsibility. In case of mixture with other substances, ensure that other risks are not generated.

Date of Revision: ***21 August 2014 (general revision)***

Company Details:

Waterwell Projects (PTY) LTD

Reg No. 2001/018862/07

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Unit 4/5 Megazone Park
Hertford Junction R512
Lanseria
1748

Tel: 011 300 9917/8 or 073 077 0973

Fax: 086 605 9360
Poison Centre: **+27 21 689 5227**

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

a) Identification of the substance or preparation :

1.1 Commercial name : **Waterwell Green Out (packed 1L, 1.5L,20L)**

1.2 Chemical name : (Active) N,N-Didecyl – N,N-dimethylammonium chloride

1.3. Chemical formula :

1.4. CAS No : 7173-51-5

1.5. EEC No :

b) Information of Distributor :

Waterwell Projects (PTY) LTD
Unit 4 Megazone Park
Hertford Junction R512
Lanseria 1748
Tel: 011 300 9917/8 or 073 077 0973
Fax: 086 605 9360

Alternate suppliers:

Hexachem (Pty) Ltd **or:**
P. O. Box 1442
Kloof 3640
Unit E31, Kyalami Industrial Park,
26 Kyalami Road, Westmead, 3610
Tel: 031-7929860
Fax: 031 -700 3086

2. MATERIAL IDENTIFICATION ;

CAS No : See Section 2 – CHEMICAL OR HAZARDOUS COMPONENTS
Molecular formula : Mixture
Chemical name : (Active) N,N-Didecyl – N,N-dimethylammonium chloride

3. CHEMICAL OR HAZARDOUS COMPONENTS ;

Chemical name	CAS No.	Approx Wt%	Exposure limit
N,N-Didecyl-N,N-dimethyl-ammonium chloride	7173-51-5	25 %	None established
Water	7732-18-5	75 %	None established

4. POTENTIAL HEALTH EFFECTS

Primary routes of entry :

Skin contact : (x) Eye contact : (x)
Inhalation : (X) Ingestion : ( )

Effects of overexposure :

Based on animal test data for this material, the following effect(s) can be anticipated : Direct skin or eye contact may produce severe irritation and/or burns and possible irreversible damage. Ingestion can cause immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx. Ingestion can cause skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and/or convulsions. May be fatal if ingested. Solvent vapours or mists of product may cause irritation of mucous membranes. Prolonged inhalation may produce drowsiness, lassitude, and inability to concentrate.

Over exposure may aggravate existing conditions :
No effects indicated.

Material listed as carcinogen

National Toxicology Programme : No
I.A.R.C. Monographs : No
O.S.H.A. : No

5. FIRST AID MEASURES

First aid :

Skin contact :

For skin contact, wash with plenty of running water, and soap if available, for 15 minutes. Remove and clean contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminate shoes before reuse.

Eye contact :

For eye contact, immediately flush eyes with running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eyes and lids with water. If physician is not available, flush for an additional 15 minutes. Get immediate medical attention.

Inhalation :

If inhaled, remove from area to fresh air. Get immediate medical attention. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available.

Ingestion : Get immediate medical attention. If swallowed, give 3-4 glasses of milk (if unavailable, water). DO **NOT** induce vomiting. If vomiting does occur, give fluids again. Get medical attention to determine if vomiting or evacuation of stomach is necessary. Do not give anything by mouth to an unconscious or convulsing person.

Medical treatment :

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, oxygen, and measures to support breathing manually or mechanically may be needed,

If persistent, convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

6. FIRE AND EXPLOSION INFORMATION

Flash point :	107 ° F Setaflash Closed Tester
Decomposition temperature :	Not known
Self ignition :	Not known
Lower explosion limit :	Not known
Upper explosion limit :	Not known

Extinguishing media

To be used :	Carbon dioxide Dry chemical Alcohol foam Water

Special fire fighting procedures :
Must wear NIOSH / MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

Unusual fire and explosion hazards:
Products of combustion are toxic. Heated solvent vapours can travel to an ignition source and flash back.

7. ACCIDENTAL RELEASE MEASURES

Measures after spillage / leakage / release
Remove all sources of ignition and ground all equipment before beginning cleanup. Floors may become slippery. Wear appropriate protective gear and NIOSH / MSHA approved respirator where mists or vapours of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and control spill with inert material (sand, earth, etc.). Transfer the solid and liquid to separate containers for recovery or disposal. Keep spill out of sewers and open bodies of water.

8. HANDLING AND STORAGE

Precautions for storage and handling :
Maximum storage temperature : 140 °F. Store containers in compliance with the most recent NFPA Code (NFPA 30). Ground all containers prior to pouring. Keep containers closed until used. Do not contaminate drinking water, food or feed by storage or disposal.

9. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation:

If mists or vapours may be generated, proper ventilation must be provided in accordance with good ventilation practices.

Respiratory protection:
In processes where mists or vapours are generated, a NIOSH / MSHA approved respirator is advised in the absence of proper environmental controls or if TWA / TLV is exceeded.

Protective gloves:
Use rubber or neoprene gloves, when needed, to prevent skin contact.

Eye Protection:
Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions.

Other protective equipment:
Eye wash; safety shower; protective clothing (long sleeves, coveralls or other), when needed, to prevent skin contact.

10. PHYSICAL AND CHEMICAL PROPERTIES

Form :	Liquid
Colour :	Colourless to pale yellow
Odour :	Ethanol-like
Changes of physical state :	
Melting point :	10 °C
Boiling point :	Not known
Density :	0.89 g / cm3 at 25 °C
Bulk density :	Not applicable
Vapour pressure :	Not known
Relative vapour density (air = 1) :	Not known
Max. percent volatile :	20%
Evaporation rate (Butyl acetates = 1) :	Not known
Viscosity	< 100 cps at 25 °C
Water solubility :	Soluble
PH – value :	6.5 – 9 at 10%

11. STABILITY AND REACTIVITY

Stability:
Stable (x) unstable ( )
Conditions to avoid : None known

Hazardous decomposition products:
Toxic organic vapours / fumes
Hydrogen chloride
Toxic vapours / fumes of amines

Oxides of carbon
Oxides of nitrogen

Dangerous polymerisation : No
Conditions to avoid: None known

Dangerous incompatibility with water: No

(Dangerous) Reactions / Incompatibility with:
Strong oxidising agents
Strong reducing agents

12. TOXICOLOGY INFORMATION

Acute oral toxicity (LD50) :
rat ; 450 mg / kg
(80% active)

Acute oral toxicity (LD50) :
rat (male) : 412 mg / kg
(50% active)

Acute oral toxicity (LD50) :
rat (female ; 292 mg / kg

Acute dermal toxicity (LD50) :
rabbit ; 3342 mg / kg
4300 mg / kg (two tests) (80% active)

Skin irritation :
rabbit : severe irritant
extreme irritation that did not clear by day 7, post dose (primary irritation index = 110).

Sensitisation :
guinea pig ; not sensitising
For a 0.2% active solution.

Mutagenicity :
Salmonella : not mutagenic
with or without metabolic activation (50% active).

not mutagenic
For Didecyldimethylammonium chloride : (Ames, CHO / HGPRT, CHO, DNA Syntheses).

rat :
No evidence of chromosomal damage in the bone marrow of rats treated with 600 mg / kg
950% active).

Reproductive toxicity :

rat : not teratogenic
Treatment with 10 to 50 mg / kg on days 6 to 15 gestation (50% active)

not teratogenic
For Didecyldimethylammonium chloride : (rat and rabbit) treatment at or below mild toxic effect levels.

rat :
For Didecyldimethylammonium chloride : no reproductive effect for treatment at or below mild toxic effects level.

Not clastogenic in Chinese hamster ovary cells with or without metabolic activiation (50% active).

Subchronic toxicity :
Dermal
rat :
Test period : 90 days
For Didecyldimethylammonium chloride : no systemic toxicity :

Chronic toxicity :
Oral dog :
Test period : 1 year
For Didecyldimethylammonium chloride : no target organ effects.

LC 50 oral :
Bobwhite quail : < 5620 ppm
(and mallard duck) ; oral dietary

Pharmacokinetic :
dog :
For Didecyldimethylammonium chloride : this material does not accumulate in body tissues.

13. ECOTOXICOLOGY AND ECOLOGY INFORMATION

Fish toxicity (LC50) :
bluegill sunfish :
Test period ; 96 hours
For Didecyldimethylammonium chloride : 0.32 mg / 1

Fish toxicity (LC50) :
Test period : 96 hours
For Didecyldimethylammonium chloride : (salmon) 1.0 mg / 1

Toxicity for Daphnia (EC50)
daphnia magna :
Test period : 48 hours
For Didecyldimethylammonium chloride : 0.94 mg / 1

Dietary Toxicity Test :

LC 50 oral : > 5620 ppm
For Didecyldimethylammonium chloride : (bobwhite quail and mallard duck).

Acute toxicity :
LD 50 oral :
Bobwhite quail : 229 mg / kg
For Didecyldimethylammonium chloride :

14. DISPOSAL CONSIDERATIONS

Disposal

Product :
Dispose of in compliance with all Federal, state and local laws and regulations. Incineration is the preferred method.

Packaging :
CONTAINER DISPOSAL ; Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

15. TRANSPORTATION

DOT hazard class : 8, PG II
Bulk only : No
Proper Shipping Name : Corrosive Liquid, Flammable N.O.S.
UN / NA No. : UN2920
DOT label(s) : CORROSIVE No.8
Flammable Liquid
Further Information : None

16. REGULATORY INFORMATION

Directions for use :
FOR MANUFACTURING, PROCESSING, OR REPACKAGING

FEDERAL LEVEL REGULATIONS
Toxic Substances Control Act (TSCA) Inventory
This product is currently listed on the EPA TSCA 8 (b) inventory list.

US EPA Regulation on Pesticides ;
This product is not an EPA registered pesticide. It cannot be used in the United States as a commercial antimicrobial agents without first obtaining an EPA FIFRA registration. It can be used commercially in non-antimicrobial applications, and for all research and development (R&D) applications including as a potential antimicrobial agent.

CERCLA
(Comprehensive Environmental Response, Compensation, and Liability Act of 1980). Requires notification of the National Response Centre (1-800-424-8802) of release of quantities of Hazardous Substances equal to or greater than the Reportable Quantities (RQs) in 40 CFR 302.4. The following components could require reporting :

None

SARA Title III ; Sections 302 / 304
(Superfund Amendments and Reauthorisation Act of 1986). Requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355. Components present in this product at a level which could require reporting under that statute are :
None
SARA Title III : Sections 311 / 312
(Superfund Amendments and Reauthorisation Act of 1986). Requires reporting under the Community Right-to-know provisions due t their inclusion in one of the five hazard categories listed in 40 CFR 370. Components present in this product which could require reporting under the statute are :
IMMEDIATE (ACUTE) HEALTH HAZARD :

Chemical Name	**CAS No**	**Concentration (max/typ)**
N,N-Didecyl-N,N-Dimethylammonium Chloride	7173-51-5	80%

DELAYED (CHRONIC) HEALTH HAZARD :
None
FIRE HAZARD

Chemical Name	**CAS No**	**Concentration (max/typ)**
Ethyl alcohol	64-17-5	10%

REACTIVITY HAZARD :
None

SARA Title III : Section 313
(Superfund Amendments and Reauthorisation Act of 1986). Requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372. This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are :
None

TSCA Section 12 (b) Export Notification
Components present in this product which, if exported, could require either annual or one-time reporting under this regulation are as follows :
None

17. FURTHER INFORMATION

No further information available.

The information herein is given in good faith and to the best of our knowledge at the current date. The accomplishment of the instructions herein does not exempt the user from following the legal and administrative regulations relative to product, environmental safety and hygiene, which are user's own responsibility. In case of mixture with other substances, ensure that other risks are not generated.

Date of Revision: ***21 August 2014 (general revision)***

Company Details:

Waterwell Projects (PTY) LTD

Reg No. 2001/018862/07

Waterwell Projects (PTY) LTD
Unit 4/5 Megazone Park
Hertford Junction R512
Lanseria 1748

Tel: 011 300 9917/8 or 073 077 0973
Fax: 086 605 9360

Poison Centre: **+27 21 689 5227**

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

a) Identification of the substance or preparation :

1.1 Trade / Commercial Name:	Waterwell Clear Blue (packed 500ml or 20L)
1.2 Chemical Name:	Organic Polyelectrolite
1.3 Chemical family :	Organic Polyelectrolite
1.4 Synonyms:	Poly-Floc 2510
1.5 Un No.	3265
1.6 CAS No.	
1.7 Hazchem code:	2 Z

b) Information of Distributor :

Waterwell Projects (PTY) LTD
Unit 4 Megazone Park
Hertford Junction R512
Lanseria 1748
Tel: 011 300 9917/8 or 073 077 0973
Fax: 086 605 9360

Alternate suppliers:

Professional Laboratory Services (PTY) LTD
160 Edison Crescent
Wesrihan Park, Unit A3
Centurion 0157
Tel: 083 240 7448 / 082 375 9734
Fax: 086 723 0178

2. COMPOSITION

Mixture of polyelectrolites in a watery solution with a pH of 2.5 - 4.0

3. HAZARDS IDENTIFICATION

Main Hazard:	Irritating to eyes, skin and gastrointestinal tract. The compound may be associated with skin sensitization in some humans. High exposure may lead to eye corrosion and skin burns.
Flammability:	Non-flammable
Chemical Hazard:	Strong Acid (pH adjusted to 2.5 - 4.0 with Hydrochloric acid)
Physical Hazards:	Extremely slippery on smooth and wet surfaces

4. FIRST AID MEASURES

Product in the eye: Flush with clean, cool water or normal saline solution for 15 minutes. See a physician, preferably an ophthalmologist for further evaluation.

Product on the skin: Wash with soap and water. See a physician if irritation occurs. Remove and wash contaminated clothing.

Product ingested: **DO NOT INDUCE VOMITING**. Rinse with copious amounts of water or milk. Irrigate the oesophagus and dilute contents by slowly giving 1 to 2 glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-comatose, comatose or convulsing, DO NOT GIVES FLUIDS by mouth. In case of internal ingestion of the product, seek medical attention immediately.

Inhalation: Remove to fresh air. If individual experiences nausea, headache, dizziness, breathing difficulties or is cyanotic, seek medical attention immediately.

Note to physician: No product specific antidote is known. Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptoms.

5. FIRE FIGHTING MEASURES

Extinguishing Media: The product is non-flammable. Dry components may ignite and burn when exposed to an open flame. Extinguish with water fog, carbon dioxide or dry chemical powder.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Spills of this product are very slippery. Spills should be scooped up or wiped up immediately and the spill area flushed with water.

Large spill: Dam area to prevent spill from spreading. Minimise adverse effects on the environment. Recover as much as possible of the pure product into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Clay, soil, or commercially available adsorbents may be used to recover any material that cannot be recovered as pure product.

Small spill: Flushing of residual material to an industrial sewer, if present at the site of a spill or leak, maybe acceptable if authorised approval is obtained. If this is the case, ensure that the product does not come into contact with incompatible materials.

Product disposal: Product is a non-hazardous waste. Dispose in an approved landfill.

7. HANDLING AND STORAGE

Handling:	Should be handled like any acidic product.
Storage:	Do not store next to alkaline products and/or oxidisers.
Precautions:	The handling precautions for this product are based on the characteristics of the neat product unless otherwise specified. Store in a cool dry place. Rubber gloves and safety goggles are required. Body protective clothing and safety shoes are required. Eyewash fountains in the work place are strongly recommended.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits:	None
Engineering Control Measures:	Provide local exhaust ventilation.
Personal Protection – Respiratory:	In case of insufficient ventilation, wear-suitable respiratory equipment.
Personal Protection – Hand:	Rubber gloves.
Personal Protection – Eye:	Safety goggles are required.
Personal Protection – Skin:	Body-protective clothing and safety shoes are recommended. Where splashing can occur, a protective face-shield is required.
Other Protection:	Eye wash fountain in the workplace is strongly recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Colour:	Light yellow / brown
Odour:	Acidic
Ph:	2.5 - 4.0
Boiling Point:	Similar to water
Density:	SG: 1.1
Freeze Thaw recovery:	Complete
Heat stability:	Stable at 40 degrees C over 24 Hour period.
Flammability:	Non-flammable.
Explosive properties:	Non-explosive.
Oxidising properties:	Non-oxidising.

10. STABILITY AND REACTIVITY

Stability:	Stable and under normal conditions.
Conditions to avoid:	Will react with, and neutralise, alkaline and caustic containing products. Corrosive to iron and ferrous metal alloys. Reacts with zinc and galvanised products to produce hydrogen gas.
Hazardous Decomposition Products:	Hazardous decomposition products at high temperatures are carbon dioxide, carbon monoxide and hydrogen chloride fumes.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	No information available.
Chronic Toxicity:	Not classified as a carcinogen.

12. ECOLOGICAL INFORMATION

Ecologically safe if used as described.

Environmental effects :	No data available.
Aquatic Toxicity :	No data available.

13. DISPOSAL CONDITIONS

Disposal Method:	Product is a non-hazardous waste. Dispose in an approved landfill. Offer empty drums for recycling or triple rinse and dispose of in an approved landfill.

14. TRANSPORT INFORMATION

DOT Shipping:	Non-hazardous
Un No.:	3265

15. REGULATORY INFORMATION

WARNING
Hazard: Harmful if inhaled or swallowed. Do not get in eyes, on skin or clothing
Wear chemical splash goggles or face shield and impervious gloves, footwear and clothing.
Wash thoroughly after handling.
Use with adequate ventilation.
In case of spill, absorb with inert material, remove, decontaminate and flush with water.
FIRST AID
Eyes: Immediately flush with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin: Immediately flush with water for 15 minutes. Remove contaminated clothing and wash before re-use.
Ingestion: Consult physician or poison control centre.
Before use, read Material Safety Data Sheet for further information including chronic health effect.

16. OTHER INFORMATION

The information herein is given in good faith and to the best of our knowledge at the current date. The accomplishment of the instructions herein does not exempt the user from following the legal and administrative regulations relative to product, environmental safety and hygiene, which are user's own responsibility. In case of mixture with other substances, ensure that other risks are not generated.

Date of Revision: **21 September 2014 (general revision)**