1. Section 1: Identification of the substance/mixture and the company/undertaking.

1.1 Product identifier.

Product name:	Essentials Spa Non Chlorine Shock
Product code:	20 86 556 010 – Essentials Spa Non Chlorine Shock 1kg

1.2 Relevant identified uses of the substance or mixture and uses advised against.

This product may be used as a biocidal active substance in accordance with Regulation (EU) 518/2012, if the appropriate local authorisations have been obtained.

Water treatment chemical.

1.3 Details of the supplier of the safety data sheet.

Name of supplier:	Golden Coast Ltd
Address of supplier:	Fishleigh Road, Roundswell Commercial Park West, Barnstaple, Devon. EX31 3UA
Phone number:	01271 378 100
Responsible person:	Jamie Adams
Email:	swimmer@goldenc.com
Web address:	www.goldenc.com

1.4 Emergency phone number: **01271 378 100 (office hours)**

2. Section 2: Hazards identification.

2.1 Classification of the substance or mixture.

Classification according to Regulation (EC) No 1272/2008

Hazard Class

Skin Corrosion 1A	H314
Acute Tox 4	H302
Aquatic Chronic 3	H412

For the full text of the H statements mentioned in this section see Section 16.

Most important adverse effects

Human Health:	See section 11 for toxicological information
Physical & Chemical Hazards:	See section 9 for physicochemical information
Potential environmental effects:	See section 12 to environmental information

2.2 Label elements.

Labelling according to Regulation (EC) No 1272/2008

Hazard Symbols:

Signal word: Danger

Hazard statement's:	H314	Causes severe skin burns and eye damage
	H302	Harmful if swallowed
	H412	Harmful to aquatic life with long lasting effects
Additional Labelling:	Contains:	Dipotassium peroxodisulphate
	EUH208:	May produce an allergic reaction
Precautionary statements:	P102:	Keep out of the reach of children
	P273:	Avoid release to the environment
	P280:	Wear protective gloves/protective clothing/eye protection/face protection
	P301+P361+P353:	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
	P303+361+353:	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water.
	P305+351+338:	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do so- continue rinsing.
	P310:	Immediately call a poison centre
	P405:	Store locked up
	P501:	Dispose of contents/container in accordance with local regulations. Use biocides safely. Always read the label and product information before use.

Special labelling: Contains: Dipotassium peroxodisulphate. May produce an allergic reaction.

2.3 Other hazards.

PBT and vPvB assessment: PBT: Not applicable vPvB: Not applicable

3. Section 3: Composition/information on ingredients.

3.1 Mixtures.

CAS-No	EINECS	%	Hazards
Pentapotassium bis(peroxymonosulphate)bis(sulphate)			
70693-62-8	274-778-7	>=86 - <=96%	Acute Tox. 4, H302: Skin Corr.1B; H314: Eye Dam.1; H318: Aquatic Chronic 3; H412
Dipotassium peroxodisulphate			
77727-21-1	231-781-8	>=0 - <=2%	Ox.Sol/3; H272 Acute Tox 4 H302; Skin Irrit 2; H315 Eye Irrit 2; H315: Resp.Sens1; H334: Skin Sens.1; H3017, STOT SE3; H335; Aquatic Chronic 2; H312
Tetra[carbonato(2)]dihyroxypentamagnesium			
-	-	>=1 - <=2%	

For the full text of the H statements mentioned in this section see Section 16

4. Section 4: First aid measures.

4.1 Description of first aid measures.

General advice:	Never give anything by mouth to an unconscious person. Remove from exposure, lie down. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)
If inhaled:	In case of accident by inhalation; remove the casualty to fresh air and keep at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician immediately.
In case of skin contact:	Immediately flush skin with large amounts of water. Remove contaminated Clothing and shoes. Wash contaminated clothing before re-use. Consult a physician.
In case of eye contact:	Rinse immediately with plenty of water, also under eyelids for at least 15 minutes. Remove contact lenses. Consult an eye specialist immediately. Go to an ophthalmic hospital if possible.
If swallowed:	Do NOT induce vomiting. If person vomits when lying on his back, place him in the recovery position. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician.

4.2 Most important symptoms and effects, both acute and delayed.

Symptoms: May provoke the following symptoms:

Inhalation:	Nose bleed, irritation, cough, discomfort
Skin contact:	Severe irritation, Erythema, Burn, Rash, Discomfort
Eye contact:	Corrosion, Irritation, Discomfort, lachrymation, Blurred vision, Ulceration
Ingestion:	Inflammation of the stomach (gastritis)

4.3 Indication of any immediate medical attention and special treatment needed.

Treatment:	Treat symptomatically

5. Section 5: Firefighting measures.

5.1 Extinguishing media.

Suitable media:	Use extinguishing measures that are appropriate to local circumstances and the environment.
Unsuitable media:	Carbon dioxide (CO2). High volume water jet.

5.2 Special hazards arising from the substance or mixture.

Specific Hazards:	The product itself does not burn.

5.3 Advice for firefighters.

Special equipment:	In the event of fire, wear self-contained breathing apparatus and protective suit.
Further information:	Cool containers/ tanks with water spray. Do not allow run-off from fire fighting to enter drains or water courses.

6. Section 6: Accidental release measures.

6.1 Personal precautions, protective equipment and emergency procedures.

Personal precautions:	Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental precautions.

Environmental precautions:	Should not be released into the environment. Prevent material from entering sewers, waterways, or low area. Do not contaminate water.

6.3 Methods and material for containment and cleaning up.

Cleaning up:	Sweep up and shovel into suitable containers for disposal. Avoid dust formation. After cleaning, flush away traces with water.
Further information:	Dispose of in accordance with local regulations.

6.4 Reference to other sections.

See Section 8 for personal protective information

7. Section 7: Handling and storage.

7.1 Precautions for safe handling.

Advice on safe handling:	Use only in well-ventilated areas. Do not breathe dust. Avoid dust formation in confined areas. Avoid contact with skin and eyes. Keep away from heat and flame.

7.2 Conditions for safe storage, including any incompatibilities.

Storage:	Keep in a dry, cool and well ventilated place. Protect from contamination.
Containers	Store only in original containers.
Common storage:	Keep away from: Combustible material. Never allow product to get in contact with water during storage.
Other information:	Stable under recommended storage conditions

7.3 Specific end use(s).

Specific use(s)	No information available.
Further information	Protect from humidity and water.

8. Section 8: Exposure controls/personal protection.

8.1 Control parameters.

If sub-section is empty then no values are applicable

Pentapotassium bis(peroxymonosulphate)bis(sulphate)

Use	Exposure Route	Health Affect	Value
Workers	Skin contact	Acute – systematic effects	80 mg/kg body weight (bw) /day
Workers	Inhalation	Acute – systematic effects	50 mg/m3
Workers	Skin contact	Acute – local effects	0.449 mg/cm2
Workers	Inhalation	Acute – local effects	50 mg/m3
Workers	Skin contact	Long-term – systematic effects	0.28 mg/m3
Workers	Inhalation	Long-term – systematic effects	0.28 mg/m3
Consumers	Skin contact	Acute – systematic effects	80 mg/kg body weight (bw) /day
Consumers	Inhalation	Acute – systematic effects	25 mg/m3
Consumers	Ingestion	Acute – systematic effects	10mg/kg body weight (bw) /day
Consumers	Skin contact	Acute – local effects	0.224 mg/cm2
Consumers	Inhalation	Acute – local effects	25 mg/m3
Consumers	Skin contact	Long term - systematic effects	10 mg/kg body weight (bw) /day
Consumers	Inhalation	Long term – systematic effects	0.14 mg/m3
Consumers	Ingestion	Long term – systematic effects	10 mg/kg body weight (bw) /day
Consumers	Inhalation	Effect: Long-term – local effects	0.14 mg/m3

Predicted No Effect Concentration (PNEC)

Pentapotassium bis(peroxymonosulphate)bis(sulphate)

Compartment	Value	
Fresh water	0.022	Mg/l
Marine water	0.002	Mg/l
Intermitent use/release	0.0109	Mg/l
Fresh water sediment	0.017	Mg/l
Fresh water sediment	0.017	Mg/l
Marine sediment	0.00174	Mg/l
Soil	0.885	Mg/l
Sewage treatment plants	108	Mg/l

8.2 Exposure controls.

Engineering measures: Ensure adequate ventilation, especially in confined area.

Eye protection: Wear safety glasses or coverall chemical splash goggles.

Hand protection:	Wear protective gloves Material: Butyl-rubber Break through time: >=8 h Glove thickness: 0.5mm
Skin and body protection:	Where there is potential for skin contact, have available and wear as appropriate, impervious gloves, apron, pants, jacket, hood and boots. Remove and wash contaminated clothing before re-use.
Protective measures:	When using do not eat or drink. Do not breathe dust.
Hygiene measures:	Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing. Handle In accordance with good industrial hygiene and safety practice.
Respiratory protection:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

9. Section 9: Physical and chemical properties.

9.1 Information on basic physical and chemical properties.

Form:	Solid form, granular
Colour:	White
Odour:	None
pH @ 20°C	2.1 at 30 g/l (20°C)
Melting point:	Decomposes before melting
Boiling point:	Not applicable
Flash point:	Does not flash
Flammability (solid, gas)	Product is not flammable
Oxidizing properties:	The substance or mixture is not classified as oxidizing
Explosive properties:	Product does not present an explosion hazard
Vapour pressure:	< 0.0000017 hPa
Relative density:	2.35 at 20°C
Water solubility:	297 – 357 g/l at 22°C
Density @ 20°:	Not determined
Water solubility:	Soluble
Viscosity, dynamic	No data available

9.2 Other Information

No further information available

10. Section 10: Stability and reactivity.

10.1 Reactivity.

Reactivity	Stable under recommended storage conditions

10.2 Chemical stability.

Chemical stability	Stable under normal conditions

10.3 Possibility of hazardous reactions.

Possibility of haz. reactions	No information available

10.4 Conditions to avoid.

Conditions to avoid	Temperature : > 50°C Avoid extreme heat

10.5 Incompatible materials.

Incompatible materials	Halogentated compounds	Cyanides	Heavy metal salts

10.6 Hazardous decomposition products.

Haz. Decomp. products	No data available

11. Section 11: Toxicological information.

11.1 Information on toxicological effects.

Acute oral toxicity

Acute toxicity estimate: 506.88 mg/kg Method: Calculation method

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

LD50	Rat	500 mg/kg	Method: OECD Test Guideline 423

Dipotassium peroxodisulphate

LD50	Rat	1,130 mg/kg	OECD Test Guideline 401

Tetra[carbonato(2-)]dihydroxypentamagnesium

LD50	Rat	> 2,000 mg/kg	Fixed Dose Method

Information given is based on data obtained from similar substances

Acute inhalation toxicity

LC50	4 h Rat	> 5 mg/l

Pentapotassium bis(peroxymonosulphate) bis (sulphate)

LC50:	4 h Rat	>5 mg/l	Method: OECD Test Guideline 403

Dipotassium peroxodisulphate

LC50:	4 h Rat	>5 mg/l	Respiratory tract irritation Dust

Acute dermal toxicity

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

LD50:	Rat	>2,000 mg/kg	Method: Directive 67/548/EEC, Annex V, B.3.

Dipotassium peroxodisulphate
LD50: Rabbit >10,000 mg/kg

Skin irritation
Rabbit Result: Causes burns

	Classification	Result	Method
Pentapotassium bis(peroxymonosulphate) bis(sulphate)			
Rabbit	Corrosive	Causes burns	OECD Test Guideline 404
Dipotassium peroxodisulphate			
Rabbit	Irritating to skin	Skin irritation	OECD Test Guideline 404
Tetra[carbonato(2-)]dihydroxypentamagnesium			
(RhE)*	Not classified as irritant	No skin irritant	OECD Test Guideline 431

Information given is based on data obtained from similar substances
**reconstructed human epidermis*

Eye irritation
Rabbit Result: Severe eye irritation

Pentapotassium bis(peroxymonosulphate) bis(sulphate)			
Rabbit	Causes severe burns	Corrosive	OECD Test Guideline 404
Tetra[carbonato(2-)]dihydroxypentamagnesium			
Rabbit	Not classified as irritant	No eye irritation	OECD Test Guideline 405

Information given is based on data obtained from similar substance

Sensitisation
Guinea Pig
Result: Did not cause sensitisation on laboratory animals
Classification: Not a sensitizer by inhalation

Pentapotassium bis(peroxymonosulphate) bis(sulphate)
Guinea Pig
Classification: Does not cause skin sensitisation
Result: Does not cause skin sensitisation
Human
Classification: Does not cause skin sensitisation
Result: Does not cause respiratory sensitisation
Dipotassium peroxodisulphate
Human
Classification: May cause sensitisation by inhalation
Result: May cause sensitisation by inhalation

Mouse Local lymph node test
Classification: May cause sensitisation by skin contact
Result: May cause sensitisation by skin contact
Method: OECD Test Guideline 429

Repeated dose toxicity
LC50 4 h Rat >5 mg/l

Dipotassium peroxodisulphate
Oral Rat
NOAEL: 131.5 mg/kg
Method: OECD Test Guideline 407
No toxicologically significant effects were found
Tetra[carbonato(2-)]dihydroxypentamagnesium
Oral Rat
Exposure time: 90d
NOAEL: 1,531 mg/kg
Method: OECD Test Guideline 408
No toxicologically significant effects were found
Information given is based on data obtained from similar substances

Mutagenicity assessment

Pentpotassium bid(peroxymonosulphate) bis(sulphate)
Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Tests on mammalian cell cultures showed mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals.
Dipotassium peroxodisulphate
Animal testing did not show any mutagenic effects. Did not cause genetic damage in cultured bacterial cells. Tests on mammalian cell cultures showed mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals.
Tetra[carbonato(2-)]dihydroxypentamagnesium
Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Evidence suggests this substance does not cause genetic damage in animals. Information given is based on data obtained from similar substance.

Carcinogenicity assessment

Dipotassium peroxodisulphate
Not classifiable as a human carcinogen. Animal testing showed no reproductive toxicity. Information given is based on data obtained from similar substances

Tetra[carbonato(2-)dihydroxypentamagnesium
Not classifiable as a human carcinogen. Information given is based on data obtained from similar substances. Animal testing did not show any carcinogenic effects.

Toxicity to reproduction assessment

Dipotassium peroxodisulphate
No toxicity to reproduction. Animal testing showed no reproductive toxicity. Information given is based on data obtained from similar substances
Tetra[carbonato(2-)dihydroxypentamagnesium
No toxicity to reproduction. Information given is based on data obtained from similar substances. Animal testing showed no reproductive toxicity.

Assesment teratogenicity

Pentapotassium bis(peroxymonosulphate) bis(sulphate)
Animal testing showed no developmental toxicity
Dipotassium peroxodisulphate
Animal testing showed no developmental toxicity. Information given is based on data obtained from similar substances.
Tetra[carbonato(2-)dihydroxypentamagnesium
Information given is based on data obtained from similar substances. Animal testing showed no developmental toxicity.

Human experience

Excessive exposures may affect human health, as follows:

Inhalation:	Discomfort, Cough, Nose bleeding
Skin contact:	Irritation, Burn, Erythema
Eye contact:	Corrosion
Ingestion:	Stomach: Gastrointestinal disturbance, Inflammation

12. Section 12: Ecological information.

12.1 Toxicity.

Toxicity to fish

Pentapotassium bis(peroxymonosulphate) bis(sulphate)

LC50/96h	Cyprinodon variegatus (sheepshead minnow):	1.09 mg/l
Method:	Directive 67/548/EEC, Annex V, C.1	

Dipotassium peroxodisulphate

LC50/96h	Oncorhynchus mykiss (rainbow trout):	76.3 mg/l
Method:	US EPA Test Guideline OPP 72-1	

Information given is based on data obtained from similar substances

Tetra[carbonato(2-)]dihydroxypentamagnesium
LC50/96h Pimephales promelas (fathead minnow): 2,120 mg/l
Information given is based on data obtained from similar substances.

Toxicity to aquatic plants
Pentapotassium bis(peroxymonosulphate) bis(sulphate)
ErC50/96h Selenastrum capricornutum (green algae): >1 mg/l
Method: OECD Test Guideline 201
NOEC/72h Selenastrum capricornutum (green algae) 0.5 mg/l
Dipotassium peroxodisulphate
NOEC/72h Pseudokirchneriella subcapitata (green algae) 39.2 mg/l
Method: OECD Test Guideline 201
Information given is based on data obtained from similar substances
Tetra[carbonato(2-)]dihydroxypentamagnesium
EC50/72h Desmodesmus subspicatus (green algae) >100 mg/l
Method: OECD Test Guideline 201
Information given is based on data obtained from similar substances
NOEC/72h Desmodesmus subspicatus (green algae) >100 mg/l
Method: OECD Test Guideline 201
Information given is based on data obtained from similar substances

Toxicity to aquatic invertebrates
Pentapotassium bis(peroxymonosulphate) bis(sulphate)
EC50/48h Daphnia Magna (Water flea): 3.5 mg/l
Method: OECD Test Guideline 202
Dipotassium peroxodisulphate
EC50/48h Daphnia Magna (Water flea) 120 mg/l
Method: US EPA Test Guideline OPP 72-2
Information given is based on data obtained from similar substances.
Tetra[carbonato(2-)]dihydroxypentamagnesium
EC50/48h Daphnia Magna (water flea) 140 mg/l
Information given in based on data obtained from similar substances.

Chronic toxicity to fish
Pentapotassium bis(peroxymonosulphate) bis(sulphate)
NOEC/37d Cyprinodon variegatus (sheepshead minnow): 0.22 mg/l

Chronic toxicity to aquatic Invertebrates
Pentapotassium bis(peroxymonosulphate) bis(sulphate)
NOEC/28d Americamysis bahia (mysid shrimp) 0.267 mg/l

12.2 Persistence and degradability.

Biodegradability:	Pentapotassium bis(peroxymonosulphate) bis(sulphate) Biodegradability Dipotassium peroxodisulphate Readily biodegradable Tetra[carbonato(2-)]dihydroxypentamagnesium The methods for determining biodegradability are not applicable to inorganic substances.
Physico-chemical removability	Hydrolyses

12.3 Bioaccumulation potential.

Bioaccumlative potential: No data available

12.4 Mobility in soil.

Mobility in soil: No data available

12.5 Results of PBT and vPvB assessment.

PBT and PvB: Contains no substance considered to be persistent, bioaccumulating and toxic (PBT)
Contains no substance considered to be very persistent and very bioaccumulating (vPvB)

12.6 Other adverse effects.

Other adverse effects: No data available

13. Section 13: Disposal considerations.

13.1 Waste treatment methods.

Product: Dispose of as hazardous waste in compliance with local and national regulations

Contaminating packaging: If recycling is not practicable, dispose of in compliance with local regulations.

Classification

Waste Codes in accordance with the European Waste Catalogue (EWC) are origin-defined. Since this product is used in several industries, no Waste Code can be provided by the supplier. The Waste Code should be determined in arrangement with you waste disposal partner or the responsible authority.

14. Section 14: Transport information.

ADR

14.1 UN number.

3260

14.2 UN proper shipping name.
CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Monopersulfate Compound)

14.3 Transport hazard class(es).
8

14.4 Packing group.
II

14.5 Environmental hazards.
For further information see section 12

14.6 Special precautions for user.
Tunnel restriction code: (E)

IATA_C/IMDG

14.1 UN number.
3260

14.2 UN proper shipping name.
CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Monopersulfate Compound)

14.3 Transport hazard class(es).
8

14.4 Packing group.
II

14.5 Environmental hazards.
For further information see section 12

14.6 Special precautions for user.
No data available

14.7 Transport in bulk according to annex II of MARPOL 73/78 and the IBC code.

15. Section 15: Regulatory information.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture.
Other regulations: Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

15.2 Chemical safety assessment.
A Chemical Safety Assessment has been carried out for the substance

16. Section 16: Other information.

Full text of H-statements referred to under sections 2 and 3
H272: May intensify fire; oxidizer
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H318: Causes serious eye damage
H319: Causes serious eye irritation

Restricted to professional users. Attention – Avoid exposure – obtain special instructions before use

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