



SUPERTABS: CONTROLLED BACTERIAL PRESSURE REDUCTION

The SuperTab is a new development of a product that has been used in many applications (including aquaculture) for many years.

SuperTab is an oxidant in tablet form. It increases the redox potential of water, but more importantly, the anaerobic bacteria are strongly suppressed. The SuperTab is a highly selective oxidant and easy to use.

CAUTION: The SuperTab is an oxidising product. Always read the Product Safety Sheet.

Before using this product, carefully read all of the information provided. If you are unsure about the contents of this manual/information brochure or the use of the product, do not use this product. If there is anything you do not understand, please ask in the store where you purchased the product.

Once you remove the foil from the tablets, you confirm having read and understood all of the information.

This product is distributed by:

Air-Aqua BV, The Netherlands.

Purpose of this product:

The purpose of this product is to reduce the bacterial pressure of water by means of oxidation.

SAFETY FIRST: Read the Product Safety Sheet before using this product or opening the packaging of the tablets!

CAUTION: Keep out of reach of children. Only suitable for people who are aware of the potential hazards of this product.

LIABILITY PROVISIONS:

CAUTION: By using this product you agree to the following liability provisions.

- If the product is used for purposes other than the purpose described in this manual it is done entirely at your own responsibility, in terms of damage to both the product and to other materials. We exclude all liability for any application not expressly confirmed by us in writing.
- The use of the product in aquaculture may not be combined with the use of other additives, medicinal products or pesticides.

Each user bears the sole responsibility for the correct use of this product. This manual does not relieve you from your obligation to ensure the safe application and use of this product. By using this manual, you acknowledge that under no circumstances the manufacturer can be held liable for damages and/or personal injury and/or consequential damages resulting from the use of this product. This applies in particular to damages resulting from improper and/or unsafe actions, such as direct inhalation of concentrated chlorine dioxide and failure to comply with the requirements as described in the product safety sheet.

3. We expressly exclude any form of consequential damage and emphasise that the guarantee is limited to the product itself. We will not take responsibility for any additional damage or consequential damage occurring.

- 4. Upon receipt, the customer MUST inspect the product for damage and/or shortcomings.
- 5. Any liability resulting from improper handling and use of the product by the customer or third parties will be excluded. This applies, in particular, to the influence of thermal, chemical, or external influences, as well as the non-compliance with the instructions in the user manual and the product safety sheet.
- 6. Claims due to defects of the product shall expire six months after delivery to the customer. The same applies to claims for damages, regardless of nature or legal ground.

PROPERTIES OF SUPERTAB

SuperTab consists of a mixture of sodium chlorite and additives. If a tablet is added to water, chlorine dioxide (ClO2) is formed. Chlorine dioxide should not be compared to or confused with chlorine!

In the case of chlorine dioxide, the oxygen atoms/electron transfer causes the oxidation. The chloride ion (as in sodium chloride (=salt)) does not take an active part in the reaction. The pungent smell of chlorine can therefore not be detected in the water when using chlorine dioxide.

Chlorine dioxide is very effective in killing pathogens such as fungi, bacteria and viruses. Chlorine dioxide is a very selective oxidant and reacts mainly with organic substances. The major advantage of chlorine dioxide, in comparison with other oxidants (hydrogen peroxide, ozone and chlorine), is its low oxidation power, in combination with a high oxidation capacity.

Low oxidation power:

The more powerful the oxidant, the more dangerous it is for living organisms. Because of its power and potential harmful effects on, for example fish, no free ozone may be present in the water.

Oxygen is a very weak oxidant: as much oxygen as possible should be present in the water to prevent pathogens and to neutralise harmful (reducing) substances.

Chlorine dioxide lies above oxygen, but far below ozone with regard to its oxidation power. A fixed low concentration will therefore not result in any problems for fish or other living organisms.

High oxidation capacity:

To neutralise the same amount of dirt 2.5 times the amount of other oxidants is needed compared to chlorine dioxide. In other words, the concentration of chlorine dioxide only needs to be 40% of that of other oxidants to kill anaerobic bacteria or to neutralise organic material.

The combination of low oxidation power and high oxidation capacity makes this product very suitable for relatively safe and easy use in aquaculture.

Contrary to many other oxidants, chlorine dioxide is also very effective at low temperatures and high pH values. Unlike chlorine, chlorine dioxide does not affect the pH value.

Chlorine dioxide is a lot less effective in the dark, which reduces the adverse effects on biological filters to a minimum. Also due to the low oxidation power, bacteria, which provide the conversion process of proteins/ammonia/nitrite to nitrate, are hardly affected by low concentrations of CIO2. Because anaerobic bacteria (pathogens) have a very thin skin, they are already killed at very low concentrations. Anaerobic bacteria cannot become resistant to chlorine dioxide because, unlike UV or antibiotics, the cell wall is destroyed.

PRACTICAL APPLICATION OF THE SUPERTAB

The SuperTab is very soluble in water (an effervescent tablet). Depending on the amount of water to which the SuperTab is added, a certain concentration of ClO2 in the water is reached. Tables 2 and 3 show the concentrations resulting from the use of the SuperTab. Only use SuperTab at pH-levels above 7.

At a concentration of about 0.04 mg ClO2/l, the bacterial pressure is greatly reduced without having a negative effect on the biology and aquaculture in the water.

From a concentration of 0.1 mg/l, the ammonia and nitrite levels should be measured regularly.

At higher concentrations (from 0.2 mg/l to 0.5 mg/l) ClO2 is very capable of significantly reducing and/or solving bacterial problems in fish. The fish will react slightly irritated at higher concentrations. The functioning of the biological filter may also be (significantly) reduced. According to the German drinking water standard (TrinkwV2001), a concentration of 0.4 mg of chlorine dioxide/l is allowed.

APPLICATION EXAMPLES (see also Table 4):

(Koi) ponds with fish:

- Initial dose and maintenance during the season:

For the Koi Keeper it is important not to let the bacterial pressure increase and to keep it well-controlled. A concentration of 0.04 mg/l is required for maintenance doses in the pond. This means 1 SuperTab per 50.000 litre water. If you have a 10.000 litre pond, you can dissolve 1 SuperTab in a 1-litre container and then use a dose of 200 ml (*also see Summary Table 2*) in order to get a concentration of 0.04 mg/l (0.000004%).

At the time of applying a dose, the chlorine dioxide will be 'consumed'. The UV lamp will also slowly break down the product. After one week, a further dose will be required to maintain the concentration.

When the organic load in the pond is high (i.e. when first using the product), the quantity dispensed will be 'consumed' much quicker. In this case, it is advisable to apply a dose every other day, 4 times in succession. Then apply a dose twice per week for 4 weeks.

Also, the organic load is much higher in the summer than it is in the winter. Therefore, as the water temperature decreases, it is advisable to use less every week (approximately 25% at water temperatures of 6-10 °C and 50% at temperatures of 10-15 °C).

The pond's organic load can also be kept at very low levels by using high-quality filter technology, using feed sparingly, etc. In these instances it is also recommended that you only use 25-50% of the recommended values specified in Table 4.

Be careful (avoid) using SuperTab at pH-levels below 7. Oxidising products react much stronger at low pH-levels.

In addition to the reduction of the bacterial pressure, much of the organic material will disappear from the walls and the interior of the piping after prolonged use. Your pond will gradually become visibly cleaner.

- High bacterial pressure

If the bacterial pressure in the pond is very high, the dose should be increased to 1 SuperTab per 20.000 litres or even 1 SuperTab per 10.000 litres. If this dosage is repeated every day for a week, the bacterial pressure will drop considerably. Caution: at dosages higher than 0.1 mg/l per week, the behaviour of the fish should be carefully monitored. The ammonia and nitrite levels should also be measured daily as there is a chance that biology is slightly affected by a higher dose. If high levels of ammonia and/or nitrite are present, some water should be changed during the treatment, or the maintenance doses should be suspended until the biological filter has recovered.

(Swimming) ponds without fish:

For swimming ponds without fish, a higher dosage of 0.1 - 0.2 mg/l is recommended.

The product has no chlorine smell and is therefore especially suitable to strongly reduce bacterial pressure. Over time, a layer of silt forms in a swimming pond. This can often cause the bacterial pressure to reach unacceptable levels. At low levels, chlorine dioxide will have no harmful effects on the plants. The SuperTab also reduces the specific swimming pond smell: when using the SuperTab, the water will smell considerably fresher.

Cleaning surfaces, rinsing and disinfecting systems:

Surfaces, piping and water basins can be disinfected using a concentration of 0.4 mg/l in clean (!) tap water. This will also remove biofilm.

USER MANUAL:

Among other ingredients, the SuperTab contains disodium peroxodisulphate and sodium chloride. Never use the SuperTab in combination with other water treatment products and/or medicinal products.

Before using the SuperTab, always read the Product Safety Sheet (see the following chapter)

- Use a dark container filled with fresh (tap) water (use at least 1 litre of water).
 In 1 litre of water, the concentration will be 2.000 mg/l, with 5 litres of water 400 mg/l.
 Do not use an open bottle or bucket.
- Determine the temperature of the water (ideally around 20 °C).
- Add 1 SuperTab. Do not smell the concentrated solution! (Concentrated) CIO2 gas is harmful.
- Close the container.
- Avoid shaking the container. Furthermore, do not stir as the tablet dissolves. Keep to the
 waiting times indicated in Table 1, so the SuperTab will be dissolved completely and properly.
- Only after completion of the reaction time gently shake the bottle.
- Be aware of CLO2 vapour when pouring the concentrated solution!
- If you only use part of the solution, store the remaining solution in a cold, dark and well-ventilated place. The solution will then last for 6 weeks.
- Keep the solution and tablets out of reach of children.

TABEL 1: REA	REACTION TIME FOR DISSOLVING SUPERTAB		
WATER TEMPERATURE	FULL REACTION TIME	COMMENTS	
10°C	> 60 minutes (up to 6 hours)	long reaction time	
20°C	< 30 minutes	ideal temperature	
30°C	< 20 minutes		
40°C	< 10 minutes	maximum temperature	

TABEL 2:	SUPERTAB SOLUTION	
WATER (L)	SOLUTION (MG/L)	SOLUTION (%)
1	2.000	0.2
2	1.000	0.1
5	400	0.04
10	200	0.02
20	100	0.01
100	20	0.002
200	10	0.001
1.000	2	0.0002
2.000	1	0.0001
10.000	0.2	0.0002
20.000	0.1	0.00001
50.000	0.04	0.000004

TABEL 3:	1L SOLUTION SUP	ERTAB: 2000 MG/L	
SIZE OF BASIN	DOSE IN	ML FOR A CONCENTRA	TION OF
(LITRE)	0.04 MG/L	0.1 MG/L	0.2 MG/L
100	2	5	10
250	5	12.5	25
500	10	25	50
1.000	20	50	100
2.000	40	100	200
5.000	100	250	500
10.000	200	500	1000
15.000	300	750	1500
20.000	400	1000	2000
25.000	500	1250	2500
30.000	600	1500	3000
40.000	800	2000	4000
50.000	1000	2500	5000

TABEL 4:	APPLICATI	ONS PH>7	
APPLICATION	RECOMMENDED CON- CENTRATION (mg/l)	FREQUENCY OF Dosing	COMMENTS
Koi pond starting dose Koi pond maintenance dose	0.04	every other day for 1 week weekly	
Koi pond contaminated	0.1	every other day for 1 week	Daily measurement of ammonia and nitrite. In case of higher levels, stop dosing until levels return to normal.
Koi pond bacterial problems	0.1 - 0.2	daily for 1 week	Daily measurement of ammonia and nitrite. In case of higher levels, renew water. Monitor the reaction of the fish. In case of doubt, stop dosing until levels return to normal.
Quarantine bacterial problems	0.2 - 0.4	daily for 1 week	Daily measurement of ammonia and nitrite. Renew at least 30% water daily (preferably 50%). Monitor the reaction of the fish. In case of doubt, stop dosing until levels return to normal.
High level of occupancy (used for sales)	0.1	2 à 3x per week	Daily measurement of ammonia and nitrite. In case of higher levels, stop dosing until levels return to normal.
Swimming pond with fish	0.04 - 0.1	weekly	
Swimming pond without fish	0.1 - 0.2	weekly	

SECTION 1: Identification of the substance/mixture and of the company/undertaking		
1.1 Product Indentifier		
Product name:	SuperTab	
Product code:	40064/40066/40068	
Product description:	Not available.	
Product type:	Solid.	
Other means of identification:	Not available .	
1.2 Relevant identified uses of t	the substance or mixture and uses advised against	
Not available	a cofety data aboat	
Lis Details of the supplier of the	Air Agus BV	
	All-Aqua BV	
	7051 SK Stanhorst	
	The Netherlands	
	T: +31 522 468963	
	E: info@air-agua.com	
E-mail address of person		
responsible for this SDS:	info@air-agua.com	
1.4 Emergency telephone numb	er	
Telephone number:	+31 522 468963	
Hours of operation:	08.00 AM - 17.00 PM	
SECTION 2: Hazards identification		
2.1 Classification of the substan	hce or mixture	
Product definition:	Mixture.	
Classification according to Reg	julation (EC) No. 1272/2008 [CLP/GHS].	
UX. SOI. 2, H2/2		
Acute Tox. 4, H302		
Acute IOX. 3, H311 Skin Corr 1B H214		
Eve Dam 1 H318		
STOT BE 2 H373		
Aquatic Acute 1 H400		
Classification according to Dire	ective 1999/45/EC [DPD]	
The product is classified as dang	erous according to Directive 1999/45/EC and its amendments.	
Classification:	0; R8	
	C; R34	
Physical/chemical hazards:	Contact with combustible material may cause fire.	
Human health hazards:	Causes burns.	
See Section 16 for the full text of the K phrases or H statements declared above. See Section 11 for more detailed information on health effects and symptoms		

2.2 Label elements	
Hazard pictograms:	
Signal word:	Danger
Hazard statements:	H272 - May intensify fire; oxidiser.
	H311 - Toxic in contact with skin.
	H302 - Harmful if swallowed.
	H314 - Causes severe skin burns and eye damage.
	H3/3 - May cause damage to organs through prolonged
	01 repeated exposure.
Precautionary statements	
General:	Not applicable
Prevention:	P280 - Wear protective gloves. Wear eye or face protection.
	Wear protective clothing.
	P210 - Keep away from heat No smoking.
	P220 - Keep away from clothing, incompatible materials
	273 - Avoid release to the environment
	P260 - Do not breathe dust
Response:	P304 + P340 + P310 - IF INHALED: Remove victim to fresh
	air and keep at rest in a position comfortable for breathing.
	Immediately call a POISON CENTRE or physician.
	P301 + P310 + P331 - IF SWALLOWED: Immediately call
	a POISON GENTRE OF PHYSICIAN. DO NOT INDUCE VOMITING.
	Take off immediately all contaminated clothing. Rinse skin
	with water or shower. Immediately call a POISON CENTRE
	or physician.
	P305 + P310 - IF IN EYES: Immediately call a POISON
•	CENTRE or physician.
Storage:	P405 - Store locked up.
Disposal	with all local regional national and international regulations
Hazard symbol or symbols.	
Indication of danger:	Oxidising, Corrosive.
KISK phrases:	R8- Contact with combustible material may cause fire.
Hazardous ingredients:	Sodium Chlorite
านะนานขึ้นอากฎกรณิธาเอ.	outum onionte.

Supplemental label elements:	Not applicable.
Annex XVII - Restrictions on the	
manufacture, placing on the	
market and use of certain	
dangerous substances,	
mixtures and articles:	Not applicable.
Special packaging requirement	S
Containers to be fitted with	
child-resistant fastenings:	Not applicable.
Tactile warning of danger:	Not applicable.
2.3 Other hazards	
Other hazards which do	
not result in classification:	Not available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Mixtures Product/ingredient Identifiers % Clasification Regulation (EC) No. 67/548/EEC Type name 1272/2008 [CLP] Sodium >=35 - <50 Xi: R41 [1] REACH #: Eye Dam. 1, H318 Hvdrogensulphate 01-2119552465-36 FC: 231-665-7 CAS: 7681-38-1 Index: 016-046-00-X >=20 - <25 0: R8 Sodium Chlorite FC: 231-836-6 Ox. Sol. 1. H271 CAS: 7758-19-2 Xn: R22 Acute Tox. 3, H301 C: R34 Acute Tox 2 H310 R32 Skin Corr. 1B. H314 Eye Dam. 1, H318 STOT BE 2 H373 Aquatic Acute 1. H400 Aquatic Chronic 3, H412 Disodium Carbonate FC: 239-707-6 >=1 - <5 0: R8 [1] Compound with CAS: 15630-89-4 Xi; R36/38 Ox. Sol. 3. H272 Hydrogen Acute Tox. 4, H302 Peroxide (2:3) Eve Dam. 1. H318

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs or vPvBs or have been assigned a workplace exposure limit and hence require reporting in this section.

Туре

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8. See Section 16 for the full text of the R-phrases declared above. See Section 16 for the full text of the H statements declared above.

SECTION 4: FIRST AID MEASURES 4.1 Description of first aid measures Eve contact: Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower evelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical hurns must be treated promptly by a physician. Inhalation. Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-tomouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie. belt or waisthand Skin contact. Get medical attention immediately. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse. Ingestion: Get medical attention immediately. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous.

Protection of first-aiders:	Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to- mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
4.2 Most important symptoms a	ind effects, both acute and delayed
Potential acute health effects	
Eye contact:	Corrosive to eyes. Causes burns.
Innalation:	May give off gas, vapor or dust that is very irritating or
Chin contract	corrosive to the respiratory system.
Skin contact:	Corrosive to the skin. Gauses burns.
Ingestion:	may cause burns to mouth, throat and stomach.
Over-exposure signs/symptom	S Advarge symptome may include the following:
Eye contact:	Adverse symptoms may include the following:
Inholation	pain, watering, reuness
Skin contact:	Advarsa symptoms may include the following:
Skill collact.	Auverse symptoms may include the following.
Induction	Advarsa symptoms may include the following:
ingestion.	stomach pains
A 3 Indication of any immediat	a medical attention and special treatment needed
Notes to physician.	Treat symptomatically. Contact poison treatment specialist
	immediately if large quantities have been ingested or
	inhaled
Specific treatments:	No specific treatment.
	· · · · · · · · · · · · · · · · · · ·
SECTION 5:	
FIREFIGHTING MEASURES	
5.1 Extinguishing media	
Suitable extinguishing	Use an extinguishing agent suitable for
media:	the surrounding fire.
Unsuitable extinguishing	None known.
media:	

5.2 Special hazards arising from	n the substance or mixture
Hazards from the substance or mixture: Hazardous thermal decomposition products:	Contact with combustible material may cause fire. This material increases the risk of fire and may aid combustion. Decomposition products may include the following materials: carbon dioxide carbon monoxide sulfur oxides halogenated compounds metal oxide/oxides
5.3 Advice for firefighters	
Special protective actions for fire-fighters:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures		
For non-emergency:	No action shall be taken involving any personal risk or without	
personnel	suitable training. Evacuate surrounding areas. Keep unneces-	
	sary and unprotected personnel from entering. Do not touch	
	or walk through spilt material. Shut off all ignition sources.	
	No flares, smoking or flames in hazard area. Provide adequate	
	ventilation. Wear appropriate respirat or when ventilation is	
	inadequate. Put on appropriate personal protective equipment.	
For emergency responders:	If specialised clothing is required to deal with the spillage,	
	take note of any information in Section 8 on suitable and	
	unsuitable materials. See also Section 8 for additional	
	information on hygiene measures.	

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up		
Spill:	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor.	

6.4 Reference to other sections

See Section 1 for emergency contact information.

See Section 8 for information on appropriate personal protective equipment.

See Section 13 for additional waste treatment information.

SECTION 7: HANDLING AND STORAGE

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling		
Protective measures:	Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from combustible material. Empty containers retain product residue and can be hazardous. Do not reuse container	
Advice on general occupational hygiene:	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.	
7.2 Conditions for safe storage,	including any incompatibilities	

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from reducing agents and combustible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Category		Notification and	Safety report
H2: Acute toxicity 2 any route of entry or Acute toxicity 3		50	200
Inhalation/Dermal route of entry P8: Oxidising liquids and solids 50 200 E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1		50 100	200 200
C3: Oxidising		50	200
Recommendations: Industrial sector specific solutions:	Not available. Not available.		
SECTION 8: EXPOSURE CONTROLS/PERSO	NAL PROTECTION		
The information in this section c based on typical anticipated use for bulk handling or other uses t environmental releases.	and guidance. Info ional measures mig increase worker or	rmation is provided ght be required exposure or	
8.1 Control parameters			
Occupational exposure limits: Recommended monitoring procedures: DNELs/DMELs: DNELs/DMELs:	No exposure limit value known. If this product contains ingredients with exposure limits personal, workplace atmosphere or biological monitorin may be required to determine the effectiveness of the ventilation or other control measures and/or the necess to use respiratory protective equipment. Reference show be made to monitoring standards, such as the following European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documn for methods for the determination of hazardous substar will also be required. No DNELs/DMELs available.		exposure limits, ogical monitoring veness of the d/or the necessity Reference should as the following: atmospheres - e by inhalation to it values and ard EN 14042 application and exposure to n Standard EN 482 irements for leasurement of uidance documents ardous substances

8.2 Exposure controls	
Appropriate engineering:	If user operations generate dust, fumes, gas, vapour or mist, use process controls enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
Individual protection measures	
Hygiene measures: Eye/face protection:	Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contami- nated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. If contact is possible, the following protection should be work unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
Skin protection	
Hand protection:	Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Body protection:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection:	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection:	Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Environmental exposure controls:	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.
SECTION 9: Physical and chemical Pr	OPERTIES
9.1 Information on basic physic	al and chemical properties
Appearance	
Physical state:	Solid. [Tablet.]
Odour:	Wille. Odourloop to plight phloripp odour
Odour threshold:	Not available
nH·	6 [100g/]]
Melting/freezing point:	Not available
Initial boiling point and:	Not available.
boiling range	
Flash point:	Not applicable.
Evaporation rate:	Not available.
Flammability (solid, gas):	Flammable in the presence of the following materials or
	conditions: heat, combustible materials and moisture.
Upper/lower flammability	Not available.
or explosive limits:	
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	Not available.
Partition coefficient:	Not available
n-octanol/water	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Explosive properties:	Not available.
Oxidising properties:	Not available.
9.2 Other information	

No additional information.

SECTION 10:

STABILITY AND REACTIVITY

10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

The product is stable

10.3 Possibility of hazardous reactions

Hazardous reactions or instability may occur under certain conditions of storage or use.

Conditions may include the following: contact with combustible materials

Reactions may include the following: risk of causing or intensifying fire

10.4 Conditions to avoid

No specific data.

10.5 Incompatible materials

Reactive or incompatible with the following materials: oxidising materials, reducing materials, organic materials, metals, acids and alkalis.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11:

TOXICOLOGICAL INFORMATION

11.1 Information	on toxicological effects
A contract of the Market of the State	

Acute toxicity				
Product/ingredient name	Result	Species	Dose	Exposure
Sodium bisulphate	LD50 Oral	Rat	2800 mg/kg	-
Sodium chlorite	LC50 Inhalation Vapour	Rat	230 mg/m3	4hours
	LD50 Oral	Rat	165 mg/kg	-
Sodium percarbonate	LD50 Oral	Rat	2400 mg/kg	-
Acute toxicity estimates				
Route	ATE Value			
Oral	660.3 mg/kg			
Dermal	208.3 mg/kg			
Irritation/Corrosion				
There is no data available.				
Sensitisation				
There is no data available.				
Carcinogenicity				
There is no data available.				
Specific target organ toxicity (single exposure)				
There is no data available.				
Specific target organ toxicity (repeated exposure)				
There is no data available.				
Aspiration hazard				

There is no data available.

Information on the likely routes of exposure:	Routes of entry anticipated: Oral, Dermal, Inhalation.
Potential acute health effects	
Eye contact: Inhalation:	Corrosive to eyes. Causes burns. May give off gas, vapor or dust that is very irritating or
Skin contact: Ingestion:	Corrosive to the respiratory system. Corrosive to the skin. Causes burns. May cause burns to mouth, throat and stomach.
Symptoms related to the physi	cal, chemical and toxicological characteristics
Eye contact:	Adverse symptoms may include the following: - pain - watering - redness
Inhalation:	No known significant effects or critical hazards.
Skin contact:	Adverse symptoms may include the following:
	- nain or irritation
	- redness
	- blistering may occur
Indestion.	Adverse symptoms may include the following:
ingootion.	- stomach pains
Delayed and immediate effects	and also chronic effects from short and long term exposure
Short term exposure	
Potential immediate: Potential delayed:	No known significant effects or critical hazards effects No known significant effects or critical hazards effects
Long term exposure	
Potential immediate:	No known significant effects or critical hazards effects
Potential delayed:	No known significant effects or critical hazards effects
Potential chronic health effect	S
General:	No known significant effects or critical hazards
Carcinogenicity:	No known significant effects or critical hazards
Mutagenicity:	No known significant effects or critical hazards
Teratogenicity:	No known significant effects or critical hazards
Developmental effects:	No known significant effects or critical hazards
Fertility effects:	No known significant effects or critical hazards
Other information:	Not available.

SECTION 12: ECOLOGICAL INFORMATION					
12.1 Toxicity					
Product/ingredient name	Result		Species		Exposure
Chlorine Dioxide in	LC50 1	00 to 2000 mg/L	Fish		96 hours
tablets	Acute I Fresh v	EC50 1.32 ppm water	Algae - Pseudokirchneriella subcapitata		4 days
Sodium chlorite	Acute I	EC50 0.025 ppm	Daphnia - Daphnia m	agna	48 hours
	Fresh water		Fish - Ptychocheilus oregonensis -		96 hours
	Acute LC50 0.08 mg/L		Juvenile (Fledgling,		
	Fresh water		Hatchling, Weanling)		
12.2 Persistence and degradability					
There is no data available.					
12.3 Bioaccumulative p	ootentia	l			
Product/ingredient name LogP		BCF	Potential		
Sodium chlorite		< -2.7	-	low	
12.4 Mobility in soil					
Soil/water partition coefficient (K _{oc}):		Not available.			
Mobility:		Not available.	Not available.		
12.5 Results of PBT and vPvB assessment					
PBT:		Not applicable.	Not applicable.		
vPvB:		Not applicable.			
12.6 Other adverse effects:					

No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods	
Product	
Methods of disposal:	The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste:	The classification of the product may meet the criteria for a hazardous waste.
Packaging	
Methods of disposal:	The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
Special precautions:	This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	ADN	IMDG	IATA
14.1	UN3085	UN3085	UN3085	UN3085
UN number				
14.2	OXIDISING SOLID,	OXIDISING SOLID,	OXIDISING SOLID,	OXIDISING SOLID,
UN proper	CORROSIVE,	CORROSIVE,	CORROSIVE,	CORROSIVE,
shipping name	N.O.S. (Sodium	N.O.S. (Sodium	N.O.S. (Sodium	N.O.S. (Sodium
	Chlorite, Sodium	Chlorite, Sodium	Chlorite, Sodium	Chlorite, Sodium
	Hydrogensulphate)	Hydrogensulphate)	Hydrogensulphate)	Hydrogensulphate)
14.3	5.1 (8)	5.1 (8)	5.1 (8)	5.1 (8)
Transport hazard				
class(es)	\vee \vee \vee			
14.4	11	11	11	II
Packing group				
14.5	Yes.	Yes.	Yes.	No.
Environmental				
hazards				
Additional				
information				
44.0.0	and an a family and			

14.6 Special precautions for user

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

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SALETT SHEET SOLEHTAD			
SECTION 15: Regulatory information	N		
15.1 Safety, health and envir	onmental regulations/legislation specific for		
the substance or mixtur	е		
EU Regulation (EC) No. 1907/	2006 (REACH)		
Annex XIV - List of substand	es subject to authorisation		
Annex XIV			
None of the components are	listed.		
Substances of very high co	icern		
None of the components are	listed.		
Annex XVII - Restrictions or dangerous substances, mix Not applicable.	the manufacture, placing on the market and use of certain tures and articles		
Other EU Regulations			
Europe inventory: All compo	nents are listed or exempted.		
Seveso II Directive: This pro	duct is controlled under the Seveso II Directive.		
Danger criteria			
	Category		
H2 Acute toxicity 2 any route of entry or Acute toxicity 3 Inhalation/Dermal route of entry			
P8 Oxidising liquids and solids			
E1 Hazardous to the aquatic environment - Acute 1 or Chronic 1			
C3 Oxidising			
15.2 Chemical Safety Asses	sment		
This product contains substan	ces for which Chemical Safety Assessments are still required.		
SECTION 16: Other information			
Abbreviations and acronyms			
ATE	Acute Toxicity Estimate		
CLP	Classification, Labelling and Packaging Regulation		
	[Regulation (EC) No.1272/2008]		
DMEL	MEL Derived Minimal Effect Level		
DNEL	NEL Derived No Effect Level		
UH statement CLP-specific Hazard statement			
PBT	Persistent, Bioaccumulative and Toxic		

- PNEC Predicted No Effect Concentration
- RRN **REACH Registration Number** vPvB
 - Very Persistent and Very Bioaccumulative

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Ox. Sol. 2, H272

Acute Tox. 4, H302

Acute Tox. 3, H311

Skin Corr. 1B, H314				
Eye Dam. 1, H318				
STOT RE 2, H373				
Aquatic Acute 1, H400	Procedure used to de	erive the classification according to		
Regulation (EC) NO. 127	/2/2008 [GLP/GHS]:	Justification		
Ov. Sol. 2. H272 Aguto Tr	ov 4	JUSTITICATION Export judgmont		
UX. 501. 2, HZ72 ACULE 10 H202 Acuto Toy 2 H211	UX. 4,	Expert judginent		
Skin Corr 1B H21/		Calculation method		
Evo Dom 1 H219		Calculation method		
STOT RF 2 H373		Calculation method		
Aquatic Acute 1 H/00		Calculation method		
Full text of abbreviated	H statements:	Calculation method		
H271	H271 May cause fire	or explosion: strong oxidiser		
H272	H272 May intensify fi	re oxidiser		
H301 (oral)	H301 (oral) Toxic if s	vallowed		
H302 (oral)	H302 (oral) Harmful i	f swallowed.		
H310 (dermal)	H310 (dermal) Fatal i	n contact with skin.		
H311 (dermal)	H311 (dermal) Toxic i	n contact with skin.		
H314	H314 Causes severe	H314 Causes severe skin burns and eve damage.		
H318	H318 Causes serious eve damage.			
H373	H373 May cause damage to organs through prolonged or			
	repeated exposure.			
H400	H400 Very toxic to aquatic life.			
H412	H412 Harmful to aqua	atic life with long lasting effects.		
Full text of classifications [CLP/GHS]:				
Acute Tox. 2, H310	ACUTE TOXICITY (dermal) - Category 2			
Acute Tox. 3, H301	ACUTE TOXICITY (or	al) - Category 3		
Acute Tox. 3, H311	ACUTE TOXICITY (dermal) - Category 3			
Acute Tox. 4, H302	ACUTE TOXICITY (or	ACUTE TOXICITY (oral) - Category 4		
Aquatic Acute 1, H400	ACUTE AQUATIC HAZ	ZARD - Category 1		
Aquatic Chronic 3, H412	LONG-TERM AQUAT	C HAZARD - Category 3		
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1			
Ox. Sol. 1, H271	OXIDISING SOLIDS -	Category 1		
0x. Sol. 2, H272	OXIDISING SOLIDS - Category 2			
0x. Sol. 3, H272	OXIDISING SOLIDS - Category 3			
SKIN COTT. 1B, H314	SKIN CURRUSIUN/IF	RELATION - Category IB		
5101 KE 2, H373	SPECIFIC TARGET UKGAN TUXICITY			
Full text of abbreviated B nbrases:				
R8- Contact with combustible material may cause fire				
R22- Harmful if swallowed.				
R34- Causes burns.				
R41- Risk of serious damage to eyes.				
har - hisk of schous damage to eyes.				

R36/38- Irritating to eyes and skin. R32- Contact with acids liberates very toxic gas	
Full text of classifications [DSD/DPD]:	
15/01/2015	
1	
Not applicable	
Not applicable.	

Notice to reader:

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