

SECTION 1: Identification of the substance/mixture and of the supplier/undertaking

1.1. GHS product identifier

Product form	: Substance
Trade name	: Sodium Chlorite 31 %
Chemical name	: Sodium chlorite
Substance type	: Mono-constituent
EC-No.	: 231-836-6
CAS-No.	: 7758-19-2
UN-No. (ADR)	: 1908
Product code	: SUDKLOR E
Product group	: Trade product

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended uses and restrictions	: Cooling water treatment – biocide, oxidizing Product for industrial use only
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1.4. Supplier's details

ImproChem(Pty) Ltd T/A AECI Water
1 Wharhirst Road
Umbogintwini – Kwa Zulu Natal
South Africa
T +27(31) 949 8200

1.5. Emergency phone number

Emergency number	: 0800 SPILLS or 0800 774557
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SECTION 2: Hazard identification

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 2	H310
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects	: Harmful if swallowed, Causes severe skin burns and eye damage, Causes serious eye damage, Very toxic to aquatic life, May damage fertility or the unborn child, May cause damage to organs through prolonged or repeated exposure.
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2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



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Signal word (GHS-ZA)	: Danger
Hazard statements (GHS ZA)	: H302 - Harmful if swallowed H310 - Fatal in contact with skin H314 - Causes severe skin burns and eye damage H373 - May cause damage to organs through prolonged or repeated exposure H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (GHS ZA)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P260 - Do not breathe dusts or mists. P262 - Do not get in eyes, on skin, or on clothing. P264 - Wash ... thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.

2.3. Other hazards which do not result in classification or are not covered by the GHS

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Substance type	: Mono-constituent
Name	: SUDKLOR E
CAS-No.	: 7758-19-2
EC-No.	: 231-836-6
Chemical name	: Sodium chlorite
Product identifiers:	See section 1.1

Name	Product identifier	%	Classification according to the United Nations GHS
SODIUM CHLORITE 80%	CAS-No.: 7758-19-2	20 – 35	Ox. Liq. 1, H271 Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Skin Corr. 1, H314 STOT RE 2, H373 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Get immediate medical advice/attention.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms/effect, acute and delayed

Symptoms/effects	: Cough. Harmful if swallowed. Causes serious eye damage.
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

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4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: Non combustible.
Hazardous decomposition products in case of fire	: Hydrogen chloride.

5.3. Special protective actions for fire-fighters

Precautionary measures fire	: To avoid the risk of fire, do not allow this product to dry out on cloth or clothing . Oxidation can cause a fire hazard.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Prevent runoff from entering water courses, sewers and basements.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Absorb spillage to prevent material damage. Evacuate area. Ventilate area. Remove ignition sources. Spilled material may present a slipping hazard. This product may represent an explosion hazard, in the form of explosive chlorine dioxide gas if it contacts acid or chlorine. To avoid the risk of fire, do not allow this product to dry out on cloth or clothing . Oxidation can cause a fire hazard.
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6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Protective goggles. Protective clothing. Wear suitable respiratory equipment in case of insufficient ventilation. Safety boots.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Do not add the product to any dispensing device containing residuals of other products. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter. Dried material can ignite upon contact with combustibles. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Protect against physical damage. Store locked up. Store in a well-ventilated place. Keep cool.
Storage area	: Keep out of direct sunlight. Keep only in the original container.
Incompatible materials	: Do not add the product to any dispensing device containing residuals of other products. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter. Dried material can ignite upon contact with combustibles.
Heat and ignition sources	: Keep away from ignition sources.
Packaging materials	: Keep only in the original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
Environmental exposure controls	: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection	: Protective gloves
Eye protection	: Protective goggles. Face shield. Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

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SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Molecular mass	: 90.44 g/mol Source: HSDB
Colour	: Clear to slightly yellow or green. Clear to slightly yellow or green
Odour	: chlorine-like. chlorine-like
Odour threshold	: No data available
pH	: 12 – 13
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: -9 °C Not applicable
Freezing point	: -9 °C
Boiling point	: 106 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: 180 – 200 °C Source: ECHA
Flammability	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50°C	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: 1.21
Relative density of saturated gas/air mixture	: No data available
Density	: 1.2 – 1.23
Relative gas density	: No data available
Solubility	: Soluble in water. Water: 39 g/100ml at 17°C Source: ICSC
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available
Lower explosion limit	: No data available
Upper explosion limit	: No data available
Physical state	: Liquid
Appearance	: No data available

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and Reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Contact with acids liberates very toxic gas.

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10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Do not add the product to any dispensing device containing residuals of other products. Contamination may start a chemical reaction with generation of heat, liberation of hazardous gases (chlorine dioxide a poisonous, explosive gas), and possible fire and explosion. Do not contaminate with acids, reducing agents, combustible materials, oxidizing materials, hypochlorite, organic solvents and compounds, garbage, dirt, organic matter, household products, chemicals, soap products, paint products, vinegar, beverages, oils, pine oil, dirty rags, sulfur-containing rubber, or any other foreign matter. Dried material can ignite upon contact with combustibles. Acids.

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

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Fatal in contact with skin.
Acute toxicity (inhalation)	: Not classified

Sodium Chlorite 31 % (7758-19-2)	
LD50 oral rat	1136 mg/kg
LD50 dermal rabbit	100 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	0.23 mg/l Source: ChemIDplus

SODIUM CHLORITE 80% (7758-19-2)	
LD50 oral rat	140 mg/kg Source: NCIS
LD50 dermal rabbit	100 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	0.23 mg/l Source: ChemIDplus

Skin corrosion/irritation	: Causes severe skin burns. pH: 12 – 13
Serious eye damage/irritation	: Causes serious eye damage. pH: 12 – 13
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
IARC group	: 3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.

SODIUM CHLORITE 80% (7758-19-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

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Sodium Chlorite 31 % (7758-19-2)	
LC50 - Fish [1]	290 mg/l (as Sodium Chlorite 80 %)
LC50 - Fish [2]	310 mg/l (as Sodium Chlorite 80 %)
EC50 - Crustacea [1]	0.29 mg/l (as Sodium Chlorite 80 %)
EC50 72h - Algae [1]	21.5 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	5.76 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

SODIUM CHLORITE 80% (7758-19-2)	
EC50 72h - Algae [1]	21.5 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	5.76 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

Sodium Chlorite 31 % (7758-19-2)	
Persistence and degradability	Contains non readily biodegradable component(s).

12.3. Bioaccumulative potential

Sodium Chlorite 31 % (7758-19-2)	
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Sodium Chlorite 31 % (7758-19-2)	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

SECTION 13: Disposal Considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of in accordance with relevant local regulations. Dispose of contents/container in accordance with licensed collector's sorting instructions.
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SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
Not applicable	1908	1908
14.2. UN Proper Shipping Name		
Not applicable	CHLORITE SOLUTION	Sodium chlorite
14.3. Transport hazard class(es)		
Not applicable	8	5.1

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SANS	IMDG	IATA
		
14.4. Packing group, if applicable		
Not applicable	II	II
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

No data available

IMDG

Special provisions (IMDG)	: 274, 352
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP2, TP24
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: B
Segregation (IMDG)	: SGG5, SG6, SG8, SG10, SG12, SG20
Properties and observations (IMDG)	: Colourless liquid. In contact with acids, evolves very irritating and corrosive gases. Oxidizing solution. May cause fire in contact with organic materials such as wood, cotton or straw. Mildly corrosive to most metals. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
ERG code (IATA)	: 5L

14.7. Transport in bulk according to IMO instructions

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

No additional information available

SECTION 16: Other information

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Abbreviations and acronyms

: ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE - Acute Toxicity Estimate
BCF - Bioconcentration factor
BLV - Biological limit value
BOD - Biochemical oxygen demand (BOD)
COD - Chemical oxygen demand (COD)
DMEL - Derived Minimal Effect level
DNEL - Derived-No Effect Level
EC-No. - European Community number
EC50 - Median effective concentration
EN - European Standard
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IMDG - International Maritime Dangerous Goods
LC50 - Median lethal concentration
LD50 - Median lethal dose
LOAEL - Lowest Observed Adverse Effect Level
NOAEC - No-Observed Adverse Effect Concentration
NOAEL - No-Observed Adverse Effect Level
NOEC - No-Observed Effect Concentration
OECD - Organisation for Economic Co-operation and Development
OEL - Occupational Exposure Limit
PBT - Persistent Bioaccumulative Toxic
PNEC - Predicted No-Effect Concentration
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS - Safety Data Sheet
STP - Sewage treatment plant
ThOD - Theoretical oxygen demand (ThOD)
TLM - Median Tolerance Limit
VOC - Volatile Organic Compounds
CAS-No. - Chemical Abstract Service number
N.O.S. - Not Otherwise Specified
vPvB - Very Persistent and Very Bioaccumulative
ED - Endocrine disrupting properties

Full text of H-statements:

H271	May cause fire or explosion; strong oxidiser
H301	Toxic if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

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