

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

1.1. GHS product identifier

Product form	: Mixture
Trade name	: COOL-D38
UN-No. (ADR)	: 3266
Product code	: COOL-D38
Product group	: Trade product

1.2. Other means of identification

COOL-D38 combines the biocidal properties and effectiveness of chlorine dioxide and free chlorine

1.3. Recommended use of the chemical and restrictions on use

Recommended uses and restrictions	: NSF-certified in conformance to the requirements of NSF/ANSI/CAN 60 for Drinking Water Treatment Chemicals, with an MUL of 100 mg/l.
-----------------------------------	--

1.4. Supplier's details

Improchem (Pty) Ltd T/A AECI Water
1 Wharhirst Road
Umbogintwini
South Africa
T +27 (031) 949 8200

1.5. Emergency phone number

Emergency number	: 0800 SPILLS OR 0800 774557
------------------	------------------------------

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

Corrosive to metals, Category 1	H290
Acute toxicity (dermal), Category 4	H312
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
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	: May be corrosive to metals,Harmful in contact with skin,Causes severe skin burns and eye damage,Causes serious eye damage,Very toxic to aquatic life with long lasting effects.
---	---

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA)

: Danger

Hazardous ingredients

: SODIUM HYPOCHLORITE 12-15%; Sodium Chlorite 31 %

Hazard statements (GHS ZA)

: H290 - May be corrosive to metals
H312 - Harmful in contact with skin
H314 - Causes severe skin burns and eye damage
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.

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

P273 - Avoid release to the environment.

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/....

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

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
Sodium Chlorite 31 %	CAS-No.: 7758-19-2	20 – 50	Acute Tox. 3 (Oral), H301 Acute Tox. 2 (Dermal), H310 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT RE 2, H373 Aquatic Chronic 1, H410
SODIUM HYPOCHLORITE 12-15%	CAS-No.: 7681-52-9	5 – 35	Met. Corr. 1, H290 Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Comments : IN SITU Chlorine Dioxide generated from sodium chlorite oxidation : 0.00017 % (based on a similar product)

SECTION 4: First aid measures

4.1. Description of necessary first aid measures

First-aid measures general : Treat symptomatically. Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Treat symptomatically.

First-aid measures after skin contact : Remove contaminated clothing and shoes. Contaminated clothing and shoes should be discarded or washed and decontaminated before reuse. . 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 after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).

Symptoms/effects after skin contact : Burns.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after ingestion : Burns.

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

Treat symptomatically.

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

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	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Precautionary measures fire	: Evacuate area. Eliminate all ignition sources if safe to do so.
Firefighting instructions	: Evacuate area. Eliminate all ignition sources if safe to do so. Cool tanks/drums with water spray/remove them into safety.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Do not handle until all safety precautions have been read and understood. Evacuate area. Avoid contact with skin, eyes and clothing. Eliminate every possible source of ignition. Clean up any spills as soon as possible, using an absorbent material to collect it.
------------------	---

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. Avoid discharge to the environment. Avoid contact with skin, eyes and clothing. Do not breathe dust/fume/gas/mist/vapours/spray.

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".
Emergency procedures	: Evacuate unnecessary personnel. Cover spill with non combustible material, e.g.: sand/earth. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Dam up the liquid spill. Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Contain and/or absorb spill with inert material (sand), then place in suitable container.
Other information	: Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Wear recommended personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid inhalation of vapour and spray mist. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray.
-------------------------------	---

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed	: Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Facilities: shower, eye shower. Ensure adequate ventilation, especially in confined areas.
Storage conditions	: Protect from sunlight. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Keep dry. Store in corrosive resistant container with a resistant inner liner. Keep only in original container. Store locked up. Store in a well-ventilated place. Keep cool.
Storage area	: Keep container in a well-ventilated place. Keep only in the original container. Keep out of direct sunlight. Store in a cool area.
Incompatible products	: Strong oxidizing agents. Strong reducing agents. Strong acids.
Incompatible materials	: combustible materials. Metals.
Heat and ignition sources	: Keep away from heat and direct sunlight. Keep away from ignition sources.

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	: Shoulder-length gloves - EN 388, EN 374, EN 374-3, PVC C400
Eye protection	: Spoggles (not safety glasses) - EN166, UVEX, Pyramex Capstone . Face shield. Safety glasses
Skin and body protection	: Full conti-suit/overall (Jacket and pants) - Acid resistant and flame retardant with reflective stripes - SANS 434, EN 471, EN 469, EN 533. Chemical resistant apron
Respiratory protection	: In case of insufficient ventilation, wear suitable respiratory equipment

Device	Filter type	Condition	Standard

Personal protective equipment symbol(s)



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: Clear to slightly hazy. Yellow. Clear to slightly hazy Yellow
Odour	: Pungent. Pungent
Odour threshold	: No data available
pH	: 12 – 14 @ 25 C
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

Relative evaporation rate (ether=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: $\geq 93^{\circ}\text{C}$
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
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	: No data available
Relative density of saturated gas/air mixture	: No data available
Density	: $1.095 - 1.105 \text{ g/cm}^3 @ 25^{\circ}\text{C}$
Relative gas density	: No data available
Solubility	: Soluble in water.
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 toxic gas.

10.4. Conditions to avoid

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

10.5. Incompatible materials

metals. 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)	: Not classified
Acute toxicity (dermal)	: Harmful in contact with skin.
Acute toxicity (inhalation)	: Not classified

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

COOL-D38

ATE ZA (Dermal)	1100 mg/kg bodyweight
-----------------	-----------------------

SODIUM HYPOCHLORITE 12-15% (7681-52-9)

LD50 oral	8910 mg/kg bodyweight
LD50 dermal	> 20000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 10500 mg/m ³

Sodium Chlorite 31 % (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
ATE ZA (oral)	140 mg/kg bodyweight
ATE ZA (Dermal)	100 mg/kg bodyweight
ATE ZA (dust, mist)	0.23 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns. pH: 12 – 14 @ 25 C
Serious eye damage/irritation	: Causes serious eye damage. pH: 12 – 14 @ 25 C
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

Sodium Chlorite 31 % (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	: Toxic to aquatic life with long lasting effects. Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

SODIUM HYPOCHLORITE 12-15% (7681-52-9)

LC50 - Fish [1]	2.1 mg/l
EC50 - Other aquatic organisms [1]	0.141 mg/l
EC50 - Other aquatic organisms [2]	IC50 alga (72 h) mg/l

Sodium Chlorite 31 % (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)

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

12.2. Persistence and degradability

COOL-D38

Persistence and degradability	No additional information available
-------------------------------	-------------------------------------

12.3. Bioaccumulative potential

COOL-D38

Bioaccumulative potential	No additional information available
---------------------------	-------------------------------------

SODIUM HYPOCHLORITE 12-15% (7681-52-9)

Partition coefficient n-octanol/water (Log Kow)	-3.42
---	-------

12.4. Mobility in soil

COOL-D38

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

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3266	3266	3266
14.2. UN Proper Shipping Name		
CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (((Contains Sodium Hydroxide , Sodium Hypochlorite)),)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. ((Sodium Hypochlorite , Sodium chlorite , mixture))	Corrosive liquid, basic, inorganic, n.o.s. ((Sodium Hypochlorite , Sodium chlorite , mixture))
14.3. Transport hazard class(es)		
8	8	8
 The image shows two diamond-shaped hazard pictograms. The left one is labeled 'C' and shows a liquid dripping from a test tube onto a hand and a metal surface. The right one is labeled 'E' and shows a dead tree and a dead fish.	 The image shows two diamond-shaped hazard pictograms. The left one is labeled 'C' and shows a liquid dripping from a test tube onto a hand and a metal surface. The right one is labeled 'E' and shows a dead tree and a dead fish.	 The image shows two diamond-shaped hazard pictograms. The left one is labeled 'C' and shows a liquid dripping from a test tube onto a hand and a metal surface. The right one is labeled 'E' and shows a dead tree and a dead fish.
14.4. Packing group, if applicable		
II	II	II

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

SANS	IMDG	IATA
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

Special provisions (SANS)	: 274
Limited quantities (SANS)	: 1 L
Limited quantities (SANS)	: 1 L
Packagings, large packagings and IBCs Packing instructions (SANS)	: P001, IBC02
Portable tank and bulk containers instructions (SANS)	: T11
Portable tank and bulk container special provisions (SANS)	: TP2, TP27

IMDG

Special provisions (IMDG)	: 274
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T11
Tank special provisions (IMDG)	: TP2, TP27
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
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Reacts violently with acids. Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y840
PCA limited quantity max net quantity (IATA)	: 0.5L
PCA packing instructions (IATA)	: 851
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 855
CAO max net quantity (IATA)	: 30L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

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

Issue date	: 19/05/2025
Revision date	: 19/05/2028

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

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:

H290	May be corrosive to metals
H301	Toxic if swallowed
H310	Fatal in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
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

Safety Data Sheet (SDS), South Africa (HCA)

COOL-D38

Safety Data Sheet

According to Regulations for Hazardous Chemical Agents, 2021 and United Nations GHS revision 9

"DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued IMPROCHEM T/A AECl Water MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether AECl Water's product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of the AECl Water product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate AECl Water product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. AECl Water provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, AECl Water makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from AECl Water."