

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

Issue date: 7/13/2021 Revision date: 7/13/2024

Version: 1.1

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

1.1. Product identifier

Product form	: Mixture
Trade name	: SUDKOR Z20
Product code	: SUDKOR Z20
Synonyms	: Corrosion Inhibitor
Product group	: Trade product

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

1.2.1. Relevant identified uses

Main use category	: Industrial use
-------------------	------------------

1.2.2. Uses advised against

Restrictions on use	: Keep out of the reach of children, Product for industrial use only
---------------------	--

1.3. Details of the supplier of the safety data sheet

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

1.4. Emergency telephone number

Emergency number	: 0800 SPILLS or 0800 774557
------------------	------------------------------

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Harmful if swallowed. May cause respiratory irritation. Causes severe skin burns and eye damage. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazardous ingredients

: HYDROCHLORIC ACID 33% SOLN; ZINC CHLORIDE 58% SOLN

Hazard statements (CLP)

: H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H335 - May cause respiratory irritation.
H410 - Very toxic to aquatic life with long lasting effects.

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

Precautionary statements (CLP)

: P280 - Wear goggles, gloves, clothing and respiratory protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).

Labelling according to Directive 67/548/EEC or 1999/45/EC

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ZINC CHLORIDE 58% SOLN	(CAS-No.) 7646-85-7 (EC-No.) 231-592-0 (EC Index-No.) 030-003-00-2 (REACH-no) 01-2119472431-44	10 – 25	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
HYDROCHLORIC ACID 33% SOLN	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-00-2 (REACH-no) 01-2119484862-27	5 – 20	Acute Tox. 3 (Oral), H301 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
ZINC CHLORIDE 58% SOLN	(CAS-No.) 7646-85-7 (EC-No.) 231-592-0 (EC Index-No.) 030-003-00-2 (REACH-no) 01-2119472431-44	(5 ≤C < 100) STOT SE 3, H335

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of 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. Call a poison center or a doctor if you feel unwell.
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 and effects, both acute and delayed

Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

5.2. Special hazards arising from the substance or mixture

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. Advice for firefighters

Precautionary measures fire	: Evacuate area. Eliminate all ignition sources if safe to do so.
Firefighting instructions	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Eliminate all ignition sources if safe to do so. Evacuate area.
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	: Avoid contact with skin and eyes. Clean up any spills as soon as possible, using an absorbent material to collect it. Do not handle until all safety precautions have been read and understood. Eliminate every possible source of ignition. Evacuate area.
------------------	---

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. 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.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Contain and/or absorb spill with inert material (sand), then place in suitable container. Do not discharge into drains or the environment.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures	: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Facilities: shower, eye shower. Ensure adequate ventilation, especially in confined areas.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Incompatible products	: Oxidizing agent.
Heat and ignition sources	: Keep away from heat and direct sunlight. Keep away from ignition sources.
Storage area	: Keep container in a well-ventilated place. Keep only in the original container. Keep out of direct sunlight. Store in a dark area.
Special rules on packaging	: Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

HYDROCHLORIC ACID 33% SOLN (7647-01-0)

Germany - Occupational Exposure Limits (TRGS 900)

TRGS 900 Local name	Hydrogenchlorid
Occupational exposure limit value (mg/m ³)	3 mg/m ³
Occupational exposure limit value (ppm)	2 ppm
TRGS 900 Remark	DFG,EU,Y

United Kingdom - Occupational Exposure Limits

Local name	Hydrogen chloride
WEL TWA (mg/m ³)	2 mg/m ³ (gas and aerosol mists)
WEL TWA (ppm)	1 ppm (gas and aerosol mists)
WEL STEL (mg/m ³)	8 mg/m ³ (gas and aerosol mists)
WEL STEL (OEL STEL) [ppm]	5 ppm (gas and aerosol mists)

ZINC CHLORIDE 58% SOLN (7646-85-7)

United Kingdom - Occupational Exposure Limits

Local name	Zinc chloride
WEL TWA (mg/m ³)	1 mg/m ³ fume
WEL STEL (mg/m ³)	2 mg/m ³ fume

HYDROCHLORIC ACID 33% SOLN (7647-01-0)

Germany	TRGS 900 Local name	Hydrogenchlorid
Germany	Occupational exposure limit value (mg/m ³)	3 mg/m ³
Germany	Occupational exposure limit value (ppm)	2 ppm
Germany	TRGS 900 Remark	DFG,EU,Y
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (mg/m ³)	2 mg/m ³ (gas and aerosol mists)
United Kingdom	WEL TWA (ppm)	1 ppm (gas and aerosol mists)
United Kingdom	WEL STEL (mg/m ³)	8 mg/m ³ (gas and aerosol mists)
United Kingdom	WEL STEL (OEL STEL) [ppm]	5 ppm (gas and aerosol mists)

ZINC CHLORIDE 58% SOLN (7646-85-7)

United Kingdom	Local name	Zinc chloride
United Kingdom	WEL TWA (mg/m ³)	1 mg/m ³ fume
United Kingdom	WEL STEL (mg/m ³)	2 mg/m ³ fume

8.2. Exposure controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Personal protective equipment : Protective goggles. Protective clothing. Gloves, shoulder length. Safety Boots. Insufficient ventilation: wear respiratory protection.
- Hand protection : Wear chemically resistant protective gloves.
- Eye protection : Protective goggles
- Skin and body protection : Wear suitable protective clothing
- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment



- Environmental exposure controls : Avoid release to the environment.

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: clear. Straw to yellow.
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
pH solution	: 1 (1.5 – 2.5) @ 25 C
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 1.139 – 1.15 g/cm ³ @ 25 c
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: 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

9.2. Other information

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.

10.4. Conditions to avoid

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

10.5. Incompatible materials

oxidizing materials.

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 : Harmful if swallowed.

ATE CLP (oral)	1392.464 mg/kg bodyweight
----------------	---------------------------

HYDROCHLORIC ACID 33% SOLN (7647-01-0)

LD50 oral rat	238 – 277 mg/kg
---------------	-----------------

LD50 dermal rabbit	> 5010 mg/kg
--------------------	--------------

LC50 Inhalation - Rat [ppm]	3124 ppm/1h
-----------------------------	-------------

ZINC CHLORIDE 58% SOLN (7646-85-7)

LD50 oral	700 mg/kg bodyweight
-----------	----------------------

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

ZINC CHLORIDE 58% SOLN (7646-85-7)

LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 600 mg/m ³

Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Assumed to cause serious eye damage
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

HYDROCHLORIC ACID 33% SOLN (7647-01-0)

LC50 fish 1	3.25 mg/l Bluegill (48 hours)
LC50 fish 2	282 mg/l Mosquito fish
EC50 other aquatic organisms 1	4.92 mg/l EC50 waterflea (48 h)
EC50 other aquatic organisms 2	4.5 mg/l IC50 algae (72 h) mg/l

ZINC CHLORIDE 58% SOLN (7646-85-7)

LC50 fish 1	6.2 mg/l Static Renewal Bioassay 96 hours (Fathead minnow)
LC50 fish 2	2.4 mg/l Static Renewal Bioassay 96 hours (Rainbow trout)
EC50 Daphnia 1	7.4 mg/l Static Renewal Bioassay 48 hours
EC50 other aquatic organisms 1	0.67 mg/l EC50 waterflea (48 h)
EC50 other aquatic organisms 2	0.027 mg/l IC50 algae (72 h) mg/l

12.2. Persistence and degradability

HYDROCHLORIC ACID 33% SOLN (7647-01-0)

Persistence and degradability : Not biodegradable.

ZINC CHLORIDE 58% SOLN (7646-85-7)

Persistence and degradability : Contains non readily biodegradable component(s).

12.3. Bioaccumulative potential

ZINC CHLORIDE 58% SOLN (7646-85-7)

Bioaccumulative potential : Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 1760
UN-No. (IMDG)	: 1760
UN-No. (IATA)	: 1760

14.2. UN proper shipping name

Proper Shipping Name (ADR) : CORROSIVE LIQUID, N.O.S.

SUDKOR Z20

Safety Data Sheet

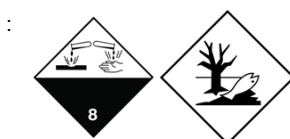
according to Regulation (EU) 2015/830

Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, N.O.S.
Proper Shipping Name (IATA)	: Corrosive liquid, n.o.s.
Transport document description (ADR)	: UN 1760 CORROSIVE LIQUID, N.O.S. ((Zinc Chloride , Hydrochloric Acid)), 8, II, (E), ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 1760 CORROSIVE LIQUID, N.O.S. ((Zinc Chloride , Hydrochloric Acid)), 8, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 1760 Corrosive liquid, n.o.s. ((Zinc Chloride , Hydrochloric Acid)), 8, II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

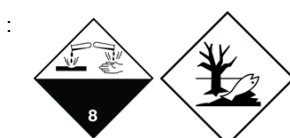
ADR

Transport hazard class(es) (ADR)	: 8
Danger labels (ADR)	: 8



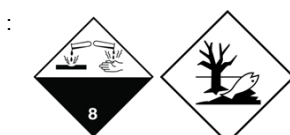
IMDG

Transport hazard class(es) (IMDG)	: 8
Danger labels (IMDG)	: 8



IATA

Transport hazard class(es) (IATA)	: 8
Danger labels (IATA)	: 8



14.4. Packing group

Packing group (ADR)	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

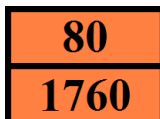
Classification code (ADR)	: C9
Special provisions (ADR)	: 274
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T11

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

Portable tank and bulk container special provisions (ADR)	: TP2, TP27
Tank code (ADR)	: L4BN
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Hazard identification number (Kemler No.)	: 80
Orange plates	:



Tunnel restriction code (ADR)	: E
EAC code	: 2X
APP code	: B

- Transport by sea

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
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

- Air transport

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
ERG code (IATA)	: 8L

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

Regulatory reference	: WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SUDKOR Z20

Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

SDS ImproChem Test

"DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. IMPROCHEM 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 ImproChem'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 ImproChem product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate ImproChem product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. ImproChem 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, ImproChem 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 ImproChem."