

SUDGEN

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 7/7/2025 Revision date: 7/7/2028

Version: 1.4

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

1.1. Product identifier

Product form	: Substance
Trade name	: SUDGEN
Chemical name	: Acids
EC Index-No.	: 017-002-00-2
EC-No.	: 231-595-7
CAS-No.	: 7647-01-0
REACH registration No.	: 01-2119484862-27
Product code	: SUDGEN
Type of product	: Acids
Product group	: Trade product

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

1.2.1. Relevant identified uses

Use of the substance/mixture	: Water Treatment
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1.2.2. Uses advised against

Restrictions on use	: Keep out of the reach of children
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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
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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 3	H301
Skin corrosion/irritation, Category 1, Sub-Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Toxic if inhaled. Causes severe skin burns and eye damage. Permanent eye damage including blindness could result. Causes burns to mucous membranes. Harmful if swallowed.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) : Danger

Hazard statements (CLP) :
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.
H318 - Causes serious eye damage.
H335 - May cause respiratory irritation.

Precautionary statements (CLP) :
P280 - Wear goggles, gloves, clothing and respiratory protection
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water/shower.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
P310 - Immediately call a POISON CENTER or doctor.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
HYDROCHLORIC ACID	(CAS-No.) 7647-01-0 (EC-No.) 231-595-7 (EC Index-No.) 017-002-00-2 (REACH-no) 01-2119484862-27	28 - 32

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

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 doctor.
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	: Causes severe skin burns and eye damage. Harmful if swallowed. Irritation of the respiratory tract.
Symptoms/effects after inhalation	: Irritation of the respiratory tract.
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.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non combustible.
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	: Eliminate all ignition sources if safe to do so. Evacuate area. Do not approach fire except upwind and only with proper skin and respiratory protection (supplied air only).
Firefighting instructions	: Cool laterally with water containers exposed to flames, even after the fire is extinguished. Do not enter fire area without proper protective equipment, including respiratory protection. Evacuate area. Eliminate all ignition sources if safe to do so. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Limit access only to the necessary cleaning personnel. Ventilate area.

6.1.1. For non-emergency personnel

Protective equipment : Protective clothing. Protective goggles. Safety boots. Wear suitable respiratory equipment in case of insufficient ventilation.

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 : Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill.

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

Additional hazards when processed : DO NOT add water to acids . Always add acid to water while stirring to prevent release of heat, fumes and steam .

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 : Ensure adequate ventilation, especially in confined areas. Facilities: shower, eye shower.

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Incompatible products : Bases, Amines, Metals, Permanganates, fluorine, Metal acetylides, hexalithium disilicide.

Incompatible materials : Metals.

Heat and ignition sources : Keep away from ignition sources.

Storage area : Keep container in a well-ventilated place. Keep only in the original container. Store in a cool area.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HYDROCHLORIC ACID (7647-01-0)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	Hydrogen chloride
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IOEL TWA	8 mg/m ³
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IOEL TWA [ppm]	5 ppm
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IOEL STEL	15 mg/m ³
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IOEL STEL [ppm]	10 ppm
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United Kingdom - Occupational Exposure Limits

Local name	Hydrogen chloride
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WEL TWA (OEL TWA) [1]	2 mg/m ³ (gas and aerosol mists)
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WEL TWA (OEL TWA) [2]	1 ppm (gas and aerosol mists)
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HYDROCHLORIC ACID (7647-01-0)	
WEL STEL (OEL STEL)	8 mg/m³ (gas and aerosol mists)
WEL STEL (OEL STEL) [ppm]	5 ppm (gas and aerosol mists)
USA - ACGIH - Occupational Exposure Limits	
Local name	Hydrogen chloride
ACGIH OEL C [ppm]	2 ppm
Remark (ACGIH)	URT irr

DNEL : 8 mg/m³

HYDROCHLORIC ACID (7647-01-0)		
EU	Local name	Hydrogen chloride
EU	IOEL TWA	8 mg/m³
EU	IOEL TWA [ppm]	5 ppm
EU	IOEL STEL	15 mg/m³
EU	IOEL STEL [ppm]	10 ppm
United Kingdom	Local name	Hydrogen chloride
United Kingdom	WEL TWA (OEL TWA) [1]	2 mg/m³ (gas and aerosol mists)
United Kingdom	WEL TWA (OEL TWA) [2]	1 ppm (gas and aerosol mists)
United Kingdom	WEL STEL (OEL STEL)	8 mg/m³ (gas and aerosol mists)
United Kingdom	WEL STEL (OEL STEL) [ppm]	5 ppm (gas and aerosol mists)
USA - ACGIH	Local name	Hydrogen chloride
USA - ACGIH	ACGIH OEL C [ppm]	2 ppm
USA - ACGIH	Remark (ACGIH)	URT irr
USA - OSHA	Local name	Hydrogen chloride
USA - OSHA	OSHA PEL C	7 mg/m³
USA - OSHA	OSHA PEL C [ppm]	5 ppm

DNEL : 8 mg/m³

8.2. Exposure controls	
Appropriate engineering controls	: Ensure good ventilation of the work station.
Personal protective equipment	: Gloves, shoulder length. Face shield. Protective goggles. Protective clothing. Safety Boots. Gas mask with filter type E.
Hand protection	: PVC gloves, Nitrile gloves. neoprene gloves. Butyl rubber gloves
Eye protection	: Protective goggles. Face shield
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.



Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties	
Physical state	: Liquid
Molecular mass	: 36.461 g/mol
Colour	: Colourless to light yellow.
Odour	: Pungent.
Odour threshold	: No data available
pH	: 0 – 1

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Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: -30 °C Not applicable
Freezing point	: No data available
Boiling point	: 96 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: 65 °C
Flammability	: Not applicable
Vapour pressure	: 84 mm Hg @ 20 C
Relative vapour density at 20°C	: 1.267 @ 20 C
Relative density	: No data available
Density	: 1.16 – 1.19
Solubility	: Soluble in water. Water: 100 %
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

Reacts violently with (some) bases. Corrosive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Attacks many metals in the presence of water forming flammable explosive gas (hydrogen) . Reacts violently with oxidantd forming toxic gas (chlorine).

10.4. Conditions to avoid

Heat. Incompatible materials. Metals. Bases.

10.5. Incompatible materials

Bases, Amines, Metals, Permanganates, fluorine, Metal acetylides, hexalithium disilicide.

10.6. Hazardous decomposition products

Hydrogen chloride. Chlorine. May generate flammable hydrogen gas, avoid contact with incompatible materials.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed or in contact with skin.

SUDGEN (7647-01-0)	
LD50 oral rat	238 – 277 mg/kg
LD50 dermal rabbit	> 5010 mg/kg
LC50 Inhalation - Rat [ppm]	3124 ppm/1h

Skin corrosion/irritation	: Causes severe skin burns. pH: 0 – 1
Serious eye damage/irritation	: Causes serious eye damage. pH: 0 – 1
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.

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STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Before neutralisation, the product may represent a danger to aquatic organisms.
Ecology - water	: This material is toxic to fish and aquatic organisms . Most aquatic species do not tolerate pH lower than 5.5 for any extended period.

SUDGEN (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 alga (72 h) mg/l

12.2. Persistence and degradability

SUDGEN (7647-01-0)	
Persistence and degradability	Not biodegradable.

12.3. Bioaccumulative potential

No additional information available

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

Additional information	: Avoid release to the environment.
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SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

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

14.1. UN number

UN-No. (ADR)	: 1789
UN-No. (IMDG)	: 1789
UN-No. (IATA)	: 1789

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: HYDROCHLORIC ACID
Proper Shipping Name (IMDG)	: HYDROCHLORIC ACID
Proper Shipping Name (IATA)	: Hydrochloric acid
Transport document description (ADR)	: UN 1789 HYDROCHLORIC ACID, 8, II, (E)
Transport document description (IMDG)	: UN 1789 HYDROCHLORIC ACID, 8, II
Transport document description (IATA)	: UN 1789 Hydrochloric acid, 8, II

14.3. Transport hazard class(es)

ADR

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



IMDG

Transport hazard class(es) (IMDG)	: 8
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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	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport	
Classification code (ADR)	: C1
Special provisions (ADR)	: 520
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E2
Packing instructions (ADR)	: P001, IBC02
Mixed packing provisions (ADR)	: MP15
Portable tank and bulk container instructions (ADR)	: T8
Portable tank and bulk container special provisions (ADR)	: TP2
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	: 2R
- Transport by sea	
Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
IBC special provisions (IMDG)	: B20
Tank instructions (IMDG)	: T8
Tank special provisions (IMDG)	: TP2

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EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: C
Properties and observations (IMDG)	: Colourless liquid. An aqueous solution of the gas hydrogen chloride. Highly corrosive to most metals. 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

Not listed on REACH Annex XVII

Not listed on the REACH Candidate List

Not listed on REACH Annex XIV (Authorisation List)

15.1.2. National regulations

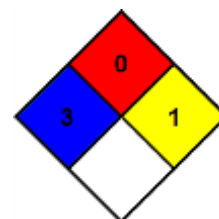
No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

NFPA health hazard	: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	: 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	: 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Full text of H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
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

SDS ImproChem Test

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