

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

1.1. Product identifier

Product form	: Substance
Substance name	: ZINC CHLORIDE ANHYDROUS
Chemical name	: zinc chloride
IUPAC name	: zinc(2+) ion dichloride
EC Index-No.	: 030-003-00-2
EC-No.	: 231-592-0
CAS-No.	: 7646-85-7
Product code	: 27258777
Product group	: Raw material

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

1.2.1. Relevant identified uses

Industrial/Professional use spec	: For professional use only Industrial Laboratory chemicals
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1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Scafell Organics
Lingfield Way
Yarm Road Business Park
DL1 4XX Darlington - UK
T +44 (0) 1949 823777
info@scafellorganics.com - www.scafellorganics.com

1.4. Emergency telephone number

Emergency number : +44 7590 545705

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 1B	H314
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	
Specific concentration limits: (C >= 5)	STOT SE 3, H335

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

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

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Precautionary statements (CLP) : P260 - Do not breathe dust, mist.
P273 - Avoid release to the environment.
P280 - Wear protective clothing, eye protection, face protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.. Immediately call a doctor, a POISON CENTER.
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 doctor, a POISON CENTER.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
ZINC CHLORIDE ANHYDROUS	(CAS-No.) 7646-85-7 (EC-No.) 231-592-0 (EC Index-No.) 030-003-00-2	100

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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. Give oxygen or artificial respiration if necessary.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Do not remove clothing if it sticks to the skin. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : Inhalation may cause irritation (cough, short breathing, difficulty in breathing).

Symptoms/effects after skin contact : irritation (itching, redness, blistering). Causes severe burns.

Symptoms/effects after eye contact : redness, itching, tears. More severe symptoms are also possible. Serious damage to eyes.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Abdominal pain, nausea.

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

If possible show this sheet, if not available show packaging or label.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Chlorine. Zinc oxide. hydrogen chloride.

5.3. Advice for firefighters

Precautionary measures fire : Eliminate all ignition sources if safe to do so. Evacuate area.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Use extinguishing agent suitable for surrounding fire.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Warn all persons of corrosive and toxic hazard.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk. No flames, no sparks. Eliminate all sources of ignition. Avoid dust formation.

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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel. Avoid contact with skin, eyes and clothing. Do not breathe dust. Do not touch or walk on the spilled product.
Measures in case of dust release	: Keep upwind. Ventilate the area thoroughly, especially low lying areas (basements, workpits etc).

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection. Use self-contained breathing apparatus and chemically protective clothing.
Emergency procedures	: Ventilate area. Stop leak if safe to do so.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: On land, sweep or shovel into suitable containers. Minimise generation of dust. Store away from other materials.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Handle under inert gas.
Precautions for safe handling	: Avoid contact with skin, eyes and clothing. Do not handle until all safety precautions have been read and understood. Ensure good ventilation of the work station.
Hygiene measures	: Take off immediately all contaminated clothing and wash it before reuse. Contaminated work clothing should not be allowed out of the workplace. Always wash hands after handling the product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Handle and store contents under inert gas. Protect from moisture.
Storage conditions	: Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container closed when not in use.
Incompatible products	: Oxidising agents. Strong bases. Water.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources. Material is hygroscopic.
Storage area	: Store in dry protected location to prevent any moisture contact. Store at ambient temperature.

7.3. Specific end use(s)

No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ZINC CHLORIDE ANHYDROUS (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
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

ZINC CHLORIDE ANHYDROUS (7646-85-7)

DNEL/DMEL (Workers)

Long-term - systemic effects, dermal	8.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1 mg/m ³

DNEL/DMEL (General population)

Long-term - systemic effects, oral	830 µg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.25 mg/m ³
Long-term - systemic effects, dermal	8.3 mg/kg bodyweight/day

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ZINC CHLORIDE ANHYDROUS (7646-85-7)					
PNEC (Water)					
PNEC aqua (freshwater)		20.6 µg/L			
PNEC aqua (marine water)		6.1 µg/L			
PNEC (Sediment)					
PNEC sediment (freshwater)		117.8 mg/kg dwt			
PNEC sediment (marine water)		56.5 mg/kg dwt			
PNEC (Soil)					
PNEC soil		35.6 mg/kg dwt			
PNEC (STP)					
PNEC sewage treatment plant		100 µg/L			
8.2. Exposure controls					
Appropriate engineering controls:					
Ensure that there is a suitable ventilation system. Handle in accordance with good industrial hygiene and safety procedures. Avoid contact with eyes, skin and clothing.					
Personal protective equipment:					
Wear recommended personal protective equipment. Avoid all unnecessary exposure.					
Materials for protective clothing:					
Use chemically protective clothing. Total impervious protective suits, gloves, and boots must be worn to prevent any contact with the product					
Hand protection:					
The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374. Always wash hands after handling the product					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR)	6 (> 480 minutes)	0.11mm minimum		EN 374
Eye protection:					
Chemical goggles or face shield. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Use eye protection according to EN 166, designed to protect against powders and dusts.					
Type	Use	Characteristics	Standard		
Safety glasses	Dust, Fine dust	With side shields	EN 166		
Face shield	Dust, Fine dust		EN 166		
Safety goggles	Dust, Fine dust	tightly fitting safety goggles	EN 166		
Skin and body protection:					
Emergency safety showers should be available in the immediate vicinity of any potential exposure					
Type	Standard				
Impermeable clothing	EN 13832				
Respiratory protection:					
Keep self contained breathing apparatus readily available for emergency use. In case of insufficient ventilation, wear suitable respiratory equipment					
Device	Filter type	Condition	Standard		
Respiratory protective device with a particle filter	Type P3	Dust protection	EN 143		

Environmental exposure controls:

Prevent entry to sewers and public waters. Avoid release to the environment. Avoid creating or spreading dust.

Other information:

Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline powder.
Colour	: white.
Odour	: Barely perceptible odour.
Odour threshold	: No data available
pH	: 4
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 290 - 293 °C
Freezing point	: No data available
Boiling point	: 732 °C @1013hPa
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.91 g/cm ³ @20.C
Solubility	: soluble in water. Soluble in alcohols. Ether. Glycerol. diluted hydrochloric acid. Water: 3680 g/l
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 recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Water, humidity. Moisture.

10.5. Incompatible materials

Strong bases. Oxidising agents. water.

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)	: Oral: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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LD50 oral rat	350 mg/kg
LC50 inhalation rat (mg/l)	2000 mg/m ³
Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 4
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 4
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met

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Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water	: Harmful to aquatic life with long lasting effects. Danger of pollution of drinking water when product enters the soil. Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Very toxic to aquatic life with long lasting effects.

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LC50 fish 1	0.4 - 2.2 mg/l Cyprinus carpio (Carp)
EC50 Daphnia 1	0.2 mg/l

12.2. Persistence and degradability

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Persistence and degradability	May cause long-term adverse effects in the environment.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not potentially bioaccumulable.
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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

Product/Packaging disposal recommendations	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information





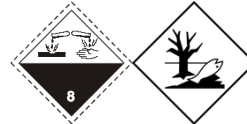
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
2331	2331	2331	2331	2331
14.2. UN proper shipping name				
ZINC CHLORIDE, ANHYDROUS	ZINC CHLORIDE, ANHYDROUS	Zinc chloride, anhydrous	ZINC CHLORIDE, ANHYDROUS	ZINC CHLORIDE, ANHYDROUS


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Transport document description				
UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 2331 Zinc chloride, anhydrous, 8, III, ENVIRONMENTALLY HAZARDOUS	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, ENVIRONMENTALLY HAZARDOUS	UN 2331 ZINC CHLORIDE, ANHYDROUS, 8, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
8	8	8	8	8
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available				
14.6. Special precautions for user				

Overland transport

Classification code (ADR)	: C2
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP7
Hazard identification number (Kemler No.)	: 80
Orange plates	: 

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

Transport by sea

Packing instructions (IMDG)	: P002, LP02
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-B
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: White, deliquescent crystals. Soluble in water. Dust causes burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y845

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PCA limited quantity max net quantity (IATA)	: 5kg
PCA packing instructions (IATA)	: 860
PCA max net quantity (IATA)	: 25kg
CAO packing instructions (IATA)	: 864
CAO max net quantity (IATA)	: 100kg
Special provisions (IATA)	: A803
ERG code (IATA)	: 8L

Inland waterway transport

Classification code (ADN)	: C2
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, EP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: C2
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P002, IBC08, LP02, R001
Special packing provisions (RID)	: B3
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T1
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAV
Transport category (RID)	: 3
Special provisions for carriage – Bulk (RID)	: VC1, VC2, AP7
Colis express (express parcels) (RID)	: CE11
Hazard identification number (RID)	: 80

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

No REACH Annex XVII restrictions
ZINC CHLORIDE ANHYDROUS is not on the REACH Candidate List
ZINC CHLORIDE ANHYDROUS is not on the REACH Annex XIV List
Directive 2012/18/EU (SEVESO III)

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

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
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
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.

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H410	Very toxic to aquatic life with long lasting effects.
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SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product