

Material Safety Data Sheet

Section1. Product Information and Company Identification			
Product name	Zinc chloride anhydrous		
Mol.formula	Zncl ₂	Cas no	7646-85-7
Mol.wt	136.3 g/mol		
Manufacture name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6 th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	+201225728304 , +201023932115		

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Acute toxicity, (Category 4)	H302: Harmful if swallowed.
Skin corrosion, (Sub-category 1B)	H314: Causes severe skin burns and eye damage.
Serious eye damage, (Category	H318: Causes serious eye damage.

1)

Specific target organ toxicity - single H335: May cause respiratory irritation.
exposure, (Category 3), Respiratory
system

Short-term (acute) aquatic hazard, H400: Very toxic to aquatic life.
(Category 1)

Long-term (chronic) aquatic hazard, H410: Very toxic to aquatic life with long lasting
(Category 1) effects.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal Word

Danger

Hazard Statements

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.

Precautionary Statements

P260

Do not breathe dust.

P273

Avoid release to the environment.

P280

protection.

Wear protective gloves/ protective clothing/ eye protection/ face

P301 + P312
unwell.

IF SWALLOWED: Call a POISON CENTER/ doctor if you feel

P303 + P361 + P353
clothing. Rinse skin with water.

IF ON SKIN (or hair): Take off immediately all contaminated

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard

none

Statements

Reduced Labeling (<= 125 ml)

Pictogram



Signal Word

Danger

Hazard Statements

H314

Causes severe skin burns and eye damage.

Precautionary Statements

P260

Do not breathe dust.

P280

Wear protective gloves/ protective clothing/ eye protection/ face

protection.

P303 + P361 + P353

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard

none

Statements

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula : ZnCl2
Molecular weight : 136,30 g/mol
CAS-No. : 7646-85-7
EC-No. : 231-592-0
Index-No. : 030-003-00-2

Component		Classification	Concentration
zinc chloride			
CAS-No.	7646-85-7	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H302, H314, H318, H335, H400, H410	<= 100 %
EC-No.	231-592-0	Concentration limits: >= 5 %: STOT SE 3, H335;	
Index-No.	030-003-00-2	M-Factor - Aquatic Chronic: 1 M-Factor - Aquatic Acute: 1	

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable

extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Hydrogen chloride gas Zinc/zinc
oxides

Not combustible.

Fire may cause evolution of:

Hydrogen chloride gas

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters Derived No

Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	inhalation	Systemic effects	1 mg/m ³
Remarks	Zinc		
Worker DNEL, longterm	dermal	Systemic effects	
	Zinc		
Consumer DNEL, longterm	inhalation	Systemic effects	1,3 mg/m ³
	Zinc		
Consumer DNEL, longterm	dermal	Systemic effects	
	Zinc		
Consumer DNEL, longterm	oral	Systemic effects	
	Zinc		

Predicted No Effect Concentration (PNEC)

Compartment	Value
Fresh water	20,6 µg/l
Remarks	Zinc
Fresh water sediment	117,8 mg/kg
	Zinc
Sea water	6,1 µg/l
	Zinc
Sea sediment	56,5 mg/kg
	Zinc
Sewage treatment plant	52 µg/l
	Zinc
Soil	35,6 mg/kg
	Zinc

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through

time: 480 min

Material tested: KCL 741 Dermatrill® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN 16523-1 please

contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through

time: 480 min

Material tested: KCL 741 Dermatril® L

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P2

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state	powder
b) Color	white
c) Odor	odorless
d) Melting point/freezing point	Melting point: 293 °C No
e) Initial boiling point and boiling range	data available
f) Flammability (solid, gas)	The product is not flammable. No
g) Upper/lower flammability or explosive limits	data available
h) Flash point	Not applicable
i) Autoignition temperature	No data available No
j) Decomposition temperature	data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available

Viscosity, dynamic: > 100 - 200 mPa.s at 400 °C

m) Water solubility 851 g/l at 20 °C - OECD Test Guideline 105- completely soluble

n) Partition coefficient: Not applicable for inorganic substances
n-octanol/water

o) Vapor pressure No data available

p) Density 2,93 g/cm³ at 22 °C

Relative density No data available

q) Relative vapor density No data available No density

r) Particle data available

characteristics

s) Explosive properties No data available

t) Oxidizing properties none

9.2 Other safety information

Bulk density ca.1.400 - 1.800 kg/m³

Particle size ca.0,288 mm - Mean particle size

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with: sodium

Strong oxidizing agents

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

various metals

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 1.100 mg/kg (OECD Test Guideline 401)

Acute toxicity estimate Oral - 1.100 mg/kg (ATE value derived from LD50/LC50 value)

LC50 Inhalation - Rat - female - 10 min - ≤ 1.975 mg/m³ - aerosol

Remarks: (ECHA)

LD50 Dermal - Rat - male and female - > 2.000 mg/kg (OECD Test Guideline 402)

Skin corrosion/irritation

Skin - Mouse Remarks: (ECHA)

Serious eye damage/eye irritation

Remarks: Risk of blindness!

(Regulation (EC) No 1272/2008, Annex VI)

Respiratory or skin sensitization

Maximization Test - Guinea pig Result:

negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells

Metabolic activation: without metabolic activation Result: negative

Remarks: (ECHA)

Test Type: Micronucleus test Species: Mouse

Cell type: Red blood cells (erythrocytes) Application

Route: Intraperitoneal

Result: negative

Remarks: (in analogy to similar products) (ECHA)

The value is given in analogy to the following substances: Zinc sulphate

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information**Endocrine disrupting properties****Product:**

Assessment The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Repeated dose toxicity - Rat - male and female - Oral - 13 Weeks - NOAEL (No observed adverse effect level) - 31,52 mg/kg - LOAEL (Lowest observed adverse effect level) - 53,8 mg/kg

Zinc chloride and its aqueous solutions are corrosive to the eyes and skin. They cause conjunctivitis and corneal burns in the eye and produce chemical burns, particularly on areas where the skin is broken. Ingestion produces a corrosive action to the mouth, throat, and digestive tract which can include symptoms of stomach pain, nausea, vomiting, bloody diarrhea, swelling of the throat, blood in the urine, and shock. Inhalation irritates the nose and throat producing cough, chest pain, bluish skin, fever, nausea and vomiting, shortness of breath, difficulty in breathing (onset may be delayed by several hours), and pneumonia. Fatalities have occurred by inhalation and ingestion., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish - 96 h Remarks: (ECHA)	static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,169 mg/l
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 0,33 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae 0,0049 mg/l - 72 h (OECD Test Guideline 201)	static test NOEC - Pseudokirchneriella subcapitata (green algae) -
Toxicity to bacteria (ISO 9509) Remarks: (referred to the cation)	static test IC50 - activated sludge - 0,35 mg/l - 4 h
Toxicity to fish(Chronic toxicity)	flow-through test NOEC - Oncorhynchus mykiss (rainbow trout) - 0,039 mg/l - 30 d (OECD Test Guideline 215)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test NOEC - Daphnia magna (Water flea) - 0,039 mg/l - 21 d
(OECD Test Guideline 211)

12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

Bioaccumulation Channa punctata - 45 d
at 27 °C(zinc chloride)

Bioconcentration factor (BCF): 0,4

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Hazard for drinking water supplies.
Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

14.1 UN number

ADR/RID: 2331 IMDG: 2331 IATA: 2331

14.2 UN proper shipping name

ADR/RID: ZINC CHLORIDE, ANHYDROUS IMDG:
ZINC CHLORIDE, ANHYDROUS
IATA: Zinc chloride, anhydrous

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA: no

14.6 Special precautions for user

Tunnel restriction code : (E)

Further information : No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European E1
Parliament and of the Council on the control of
major-accident hazards involving dangerous
substances.

ENVIRONMENTAL HAZARDS

Other regulations

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information Full text

of H-Statements

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.