Preparing for the New Era of Laboratories

MATERIAL SAFETY DATA SHEET (MSDS)

According to regulation (EU) no.1907/2006

ZINC CHLORIDE DRY 98% AR

PRODUCT CODE : O-5229

CAS No : 7646-85-7

FORMULA : $ZnCl_2$

UN No : 2331

website : www.labotiq.net

MATERIAL SAFETY DATA SHEET (SDS/MSDS)
ZINC CHLORIDE DRY 98% AR

MSDS Number : 0418 | Date : February 26, 2025 | Version : 1.0

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

1.1 Product Name : **ZINC CHLORIDE DRY 98%AR**
Synonyms : zinc (II) chloride, zinc dichloride
CAS No. : 7646-85-7
HS Code : 2827 3990
Chemical Formula : $ZnCl_2$
Molecular Weight : 136,30 g/mol
Product Code : O-5229
Brand : Labotiq
1.2 Manufacturer : Labotiq
Address : Jl.Terapi Raya AD2-Bumi Menteng Asri Bogor, Jawa Barat Indonesia – 16111
Website : www.labotiq.net
Email : labotiq.id@gmail.com,
For information : Phone : (+62-251) 839110, 8311662, Fax : (+62-251) 83135710
Emergency number : +6281316894650
1.3 Application : Laboratory chemicals, Manufacture of substances, General Chemical reagent

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

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 1)	H318: Causes serious eye damage.
Specific target organ toxicity – single exposure, (Category 3), Respiratory system	H335: May cause respiratory irritation.
Short-term (acute) aquatic hazard, (Category 1)	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, (Category 1)	H410: Very toxic to aquatic life with long lasting effects.

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

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word	Danger
Hazard statement(s)	
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 statement(s)	
P260	Do not breathe dust.

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
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 Statements	none

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 Statements	none

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

Synonyms	: zinc (II) chloride, zinc dichloride
Formula	: $ZnCl_2$
Molecular weight	: 136,30 g/mol
CAS-No.	: 7646-85-7

3.2 Mixture

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Classification	Concentration
zinc chloride CAS-No. 7646-85-7 EC-No. 231-592-0 Index-No. 030-003-00-2	Acute Tox. 4; Skin Corr. 1B; Eye Dam. 1; STOT SE 3; Aquatic Acute 1; Aquatic Chronic 1; H302, H314, H318, H335, H400, H410 Concentration limits: >= 5 %: STOT SE 3, H335; M-Factor - Aquatic Acute: 10 - Aquatic Chronic: 1	<= 100 %

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.
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

Handle under nitrogen, protect from moisture. Store under nitrogen. Tightly closed. Dry. strongly hygroscopic.

Storage class

Storage class (TRGS 510): 8A: 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

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

Appropriat engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested: KCL 741 Dermatril® L

Splash contact

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: 480 min
Material tested:KCL 741

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 entrepeneur 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

Appearance	Form: powder Colour: white
Odour	odorless
Odour Threshold	No data available
pH	No data available
Melting point/freezingpoint	Melting point/ range: 293 °C - lit..
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available No data available
Vapour pressure	ca.18 hPa at 20 °C
Vapour density	No data available
Density	2,93 g/cm3 at 22 °C
Relative density	No data available
Water solubility	851 g/l at 20 °C - OECD Test Guideline 105- completely soluble
Partition coefficient: noctanol/water	Not applicable for inorganic substances
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: > 100 - 200 mPa.s at 400 °C
Explosive properties	Not classified as explosive.
Oxidizing properties	none

9.2 Other safety information
No data available

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
Exposure to moisture.

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 sensitisation
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

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

RTECS: ZH1400000
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
static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0,169 mg/l - 96 h
Remarks: (ECHA)

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
static test NOEC - Pseudokirchneriella subcapitata (green algae) - 0,0049 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria
static test IC50 - activated sludge - 0,35 mg/l - 4 h (ISO 9509)
Remarks: (referred to the cation)

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 Other adverse effects

Harmful to aquatic life.

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.

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

No data available

SECTION 15: Regulatory information

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

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

National legislation

Seveso III: Directive 2012/18/EU of the E1 ENVIRONMENTAL HAZARDS

European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Other regulations
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Take note of Dir 94/33/EC on the protection of young people at work.

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 referred to under sections 2 and 3.
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.

National Fire Protection Association (U.S.A.):
Health: 3
Flammability: 0
Reactivity: 2.

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Labotiq shall not be held liable for any damage resulting from handling or from contact with the above product.

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