SAFETY DATA SHEET

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

1.1 Product identifiers

Product name	Zinc Chloride Solution
CAS number	See section 3
Synonyms	None

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

Identified uses	Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Toxicity - Oral Category 4
Acute Toxicity - Dermal Category 3
Skin Corrosion / Irritation Category 1A
Eye Damage / Irritation Category 1
Germ Cell Mutagenicity Category 2
Reproductive Toxicity Category 2
Specific Target Organs/Systemic Toxicity Following Single Exposure Category 1
Specific Target Organs/Systemic Toxicity Following Repeated Exposure Category 1
Corrosive to Metals Category 1
Hazardous to the Aquatic Environment (Acute) Category 2
Hazardous to the Aquatic Environment (Chronic) Category 2

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word: Danger

Hazard statements:
H290 May be corrosive to metals.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H341 Suspected of causing genetic defects.
H361 Suspected of damaging fertility or the unborn child.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P234 Keep only in original container. P260 Do not breathe fumes, mist, vapors, or spray. P264 Wash arms, hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P273 Avoid release to the environment. P280 Wear protective gloves and eye protection. P301+P312 IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P302+P352 IF ON SKIN: Wash with plenty of soap and water. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P307+P311 IF exposed: Call a POISON CENTER or physician. P308+P313 IF exposed or concerned: Get medical attention. P310 Immediately call a POISON CENTER or physician. P312 Call a POISON CENTER or physician if you feel unwell. P314 Get medical attention if you feel unwell. P321 Specific treatment (Wash areas of contact with water). P330 Rinse mouth. P361 Take off immediately all contaminated clothing and wash it before reuse. P363 Wash contaminated clothing before reuse. P390 Absorb spillage to prevent material damage. P391 Collect spillage. P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner. P501 Dispose of contents in accordance with local, state, federal and international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	-	7732-18-5	86-93%
Zinc Chloride	-	7646-85-7	7-14%
Hydrochloric Acid	-	7647-01-0	<0.5%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice Show this sheet to a doctor if medical advice is needed.

If inhaled IF INHALED: Remove person to fresh air and keep comfortable for breathing.

In case of skin contact IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. May cause irritation, redness, and pain.

In case of eye contact IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

If swallowed IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. CAUTION! Corrosive. May cause irritation to areas of contact. Handle this and all chemicals with care. Wash areas of contact with water. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Vomiting may occur spontaneously but do not induce. Call a physician immediately.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Not considered to be a fire or explosion hazard.

5.3 Special protective equipment and precautions for firefighters

Use protective clothing and NIOSH-approved breathing equipment appropriate for the surrounding fire.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No data available.

Sensitivity to Static Discharge No data available.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective gloves and eye protection.

6.2 Environmental precautions

No information available.

6.3 Methods and materials for containment and cleaning up

Do not flush to sewer. Absorb with suitable material. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

6.4 Reference to other sections

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in corrosive resistant container with a resistant inner liner. Protect from freezing and physical damage.

Incompatibilities

Cyanides and sulfides, powdered zinc. When mixed with potassium, a weak explosion will occur on impact.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Hydrochloric Acid	Ceiling	5 ppm
Zinc Chloride	TWA	1 mg/m3
	STEL	2 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Hydrochloric Acid	Ceiling	2 ppm
Zinc Chloride	TWA	1 mg/m3
	STEL	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Hydrochloric Acid	Ceiling	5 ppm
Zinc Chloride	TWA	1 mg/m3
	STEL	2 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

No specific controls are needed. Normal room ventilation is adequate.

Personal protective equipment

Eye/face protection

Wear protective gloves and eye protection. Safety glasses or goggles.

Skin protection

Wear protective gloves and eye protection. Chemical resistant gloves.

Body Protection

Proper protective work clothing.

Respiratory protection

Normal room ventilation is adequate.

Control of environmental exposure

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	No information available
Odor Threshold	No information available
pH	3
Melting Point/Range	No information available
Boiling Point/Range	No information available
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	1.16
Solubility	Miscible in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	No information available
Molecular Weight	No information available
VOC Content(%)	No information available

Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions of use and storage.

10.2 Chemical stability

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Data not available.

10.4 Conditions to avoid

Keep only in original container.

10.5 Incompatible materials

Cyanides and sulfides, powdered zinc. When mixed with potassium, a weak explosion will occur on impact.

10.6 Hazardous decomposition products

Will not occur.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc Chloride	Rat: 350 mg/kg	-	-

Skin corrosion/irritation

Causes severe skin burns and eye damage. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection.

Serious eye damage/eye irritation

Causes serious eye damage. Wear protective gloves and eye protection.

Respiratory or skin sensitization

Not applicable.

Germ cell mutagenicity

Suspected of causing genetic defects. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection.

Carcinogenicity

Not applicable.

Specific target organ toxicity - single exposure

Causes damage to organs. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product.

Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure. Do not breathe fumes, mist, vapors, or spray. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell.

Reproductive toxicity

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects. Avoid release to the environment. Collect spillage. Dispose of contents in accordance with local, state, federal and international regulations.

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	UN1840
Proper Shipping name	Zinc Chloride, solution
Hazard Class	8
Packaging Group	III

IMDG

UN Number	UN1840
Proper Shipping name	Zinc Chloride, solution
Hazard Class	8
Packaging Group	III

IATA

UN Number	UN1840
Proper Shipping name	Zinc Chloride, solution
Hazard Class	8
Packaging Group	III

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed/applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Zinc Chloride (CAS # 7646-85-7): 1000 lb final RQ
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ

SARA 304 Emergency release notification

Not listed/applicable.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Hydrochloric Acid (CAS # 7647-01-0): 500 lb TPQ (gas only)
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb EPCRA RQ (gas only)

SARA 311/312 Hazardous

Zinc Chloride (CAS # 7646-85-7): 1000 lb final RQ; 454 kg final RQ
Hydrochloric Acid (CAS # 7647-01-0): 5000 lb final RQ; 2270 kg final RQ

SARA 313 (TRI reporting)

Zinc Chloride (CAS # 7646-85-7): 1.0 % de minimis concentration (listed under Chemical Category N982)
Hydrochloric Acid (CAS # 7647-01-0): 1.0 % de minimis concentration (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed/applicable.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed/applicable.

Safe Drinking Water Act

Zinc Chloride (CAS # 7646-85-7): 1,000,000 lb final RQ
Hydrochloric Acid (CAS # 7647-01-0): 5,000,000 lb final RQ

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Zinc Chloride (CAS # 7646-85-7): Present (fume)
Hydrochloric Acid (CAS # 7647-01-0): Extraordinarily hazardous

US. New Jersey Worker and Community Right-to-Know Act

Zinc Chloride (CAS # 7646-85-7): corrosive, sn 2030, sn 3012 500 lb TPQ (Category Code N982. Includes any unique chemical substance that contains the named metal as part of that chemical structure)
Hydrochloric Acid (CAS # 7647-01-0): corrosive, sn 1012 500 lb TPQ (>=37% concentration); SN 2909 500 lb TPQ (Hydrogen chloride gas only)

US. Pennsylvania Worker and Community Right-to-Know Law

Zinc Chloride (CAS # 7646-85-7): Environmental hazard (including fume)
Zinc Chloride (CAS # 7646-85-7): Present (including fume)
Hydrochloric Acid (CAS # 7647-01-0): Environmental hazard
Water (CAS # 7732-18-5): Present

California Proposition 65

Not listed.

SECTION 16: Other information

Date of Issue: 6/24/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.