

Section 1: Identification

Product name: 0.2M Zinc Chloride Solution
Product number: TBS5047
Identified uses: Laboratory chemicals, Synthesis of substances.

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Section 2: Hazard(s) Identification

Hazard Classification: Flammable liquids (Category 2), H225
 Acute toxicity, Oral (Category 4), H302
 Skin corrosion (Category 1B), H314
 Serious eye damage (Category 1), H318
 Short-term (acute) aquatic hazard (Category 1), H400
 Long-term (chronic) aquatic hazard (Category 1), H410
 For the full text of the H-Statements mentioned in this Section, see Section 16.

Signal Word(s): Danger
Hazard Statements: H225: Highly flammable liquid and vapor.
 H302: Harmful if swallowed.
 H314: Causes severe skin burns and eye damage.
 H410: Very toxic to aquatic life with long lasting effects.

Pictograms:



Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
 P233: Keep container tightly closed.
 P240: Ground/bond container and receiving equipment.

Safety Data Sheet
0.2M Zinc Chloride Solution

P241: Use explosion-proof electrical/ ventilating/ lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P264: Wash skin thoroughly after handling.

P270: Do not eat, drink, or smoke when using this product.

P273: Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P312 + P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 + P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

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/doctor.

P363: Wash contaminated clothing before reuse.

P370 + P378: In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish.

P391: Collect spillage.

P403 + P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/ container to an approved waste disposal plant.

Safety Data Sheet
0.2M Zinc Chloride Solution

Description of other hazards: None

Section 3: Composition/ Information on Ingredients

Chemical Name	CAS#	Concentration (%)
Tetrahydro-2-methylfuran	96-47-9	>= 70 - < 90
Zinc chloride	7646-85-7	>= 20 - < 30

Section 4: First-Aid Measures

After skin contact:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
After eye contact:	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
After inhalation:	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
After swallowing:	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section 5: Fire-Fighting Measures

Suitable extinguishing agents:	Dry powder Dry sand
Unsuitable extinguishing agents:	Do NOT use water jet.
Specific hazards arising from chemical:	Carbon oxides, Hydrogen chloride gas, Zinc/zinc oxides.
Special protective equipment for firefighters:	Wear self-contained breathing apparatus for firefighting if necessary.

Section 6: Accidental Release Measures

Personal precautions:	Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.
Measures for environmental protection:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Measures for cleaning/collecting:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Section 7: Handling and Storage

Safety Data Sheet
0.2M Zinc Chloride Solution

Handling:	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.2.
Storage:	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Air and moisture sensitive. Handle and store under inert gas. Storage class (TRGS 510): 3: Flammable liquids.

Section 8: Exposure Controls/Personal Protection

Engineering controls:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
General protective and hygienic measures:	Handle in accordance with good industrial hygiene and safety practice.
Breathing equipment:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Protection of hands:	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.
Eye protection:	Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Section 9: Physical and Chemical Properties

Physical state:	Liquid.
Color:	Clear.

Safety Data Sheet
0.2M Zinc Chloride Solution

Odor:	Colorless.
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Boiling point/boiling range:	No data available.
Flash point:	-12 °C (10 °F) - closed cup – Solvent
Evaporation rate:	No data available.
Flammability:	No data available.
Upper/lower flammability or explosive limits:	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	1.07 g/mL at 25 °C (77 °F)
Solubility:	No data available.
Partition coefficient:	No data available.
Auto ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

Section 10: Stability and Reactivity

Reactivity:	No data available.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	Vapors may form explosive mixture with air.
Conditions to avoid:	Heat, flames, and sparks.
Incompatible materials:	Strong bases, Strong oxidizing agents, Strong acids.

Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Zinc/zinc oxides Other decomposition products - No data available In the event of fire: see section 5.
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Section 11: Toxicological Information

Acute toxicity:	No data available.
Skin:	No data available.
Eye:	No data available.
Inhalation:	No data available.
Germ cell mutagenicity:	No data available.
Carcinogenic effects:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
Reproductive toxicity:	No data available.
STOT - single exposure:	No data available.

Safety Data Sheet
0.2M Zinc Chloride Solution

STOT - repeated exposure: No data available.
Aspiration hazard: No data available.

Section 12: Ecological Information

Ecotoxicity: 0% of the mixture consists of components of unknown hazards to the aquatic environment.

Mobility: No data available.
Biodegradation: No data available.
Bioaccumulation: No data available.
Other adverse effects: No data available.

Section 13: Disposal Considerations

Waste from residues/unused products: Contact a licensed professional waste disposal service to dispose of this material. Offer surplus and non-recyclable solutions to a licensed disposal company. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Contaminated packaging: Dispose of as unused product.

Section 14: Transport Information

DOT regulations

UN number: 2331
UN shipping name: Zinc chloride, anhydrous
Hazard class: 8
Packing group: III
Marine pollutant: Yes.
Transport in bulk: Not applicable.
Special precautions: Not applicable.

Section 15: Regulatory Information

SARA Section 313 (specific toxic chemical listings): 7646-85-7 Zinc Chloride & Zinc Compounds (N982).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs): This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.

TSCA (Toxic Substances Control Act): CAS# 7646-85-7 is listed on the TSCA inventory.

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