



WEST BENGAL CHEMICAL INDUSTRIES LIMITED

145/1, Jessore Road, Lake Town,

Kolkata – 700 089, India.

Phone: +9133 4025 1700 Fax: +9133 2574 7410

Email: [webcil@wbcil.com](mailto:webcil@wbcil.com)

Website: [www.wbcil.com](http://www.wbcil.com)

## Section 1 - Chemical Product and Company Identification

**MSDS Name:** Zinc Citrate Dihydrate USP

**Product Code:** ZCTUS31

**Company Identification:**

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## Section 2 - Composition / Information on Ingredients

Chemical Name	:	Zinc Citrate Dihydrate USP
CAS Number	:	5990-32-9
Molecular Formula	:	C <sub>12</sub> H <sub>10</sub> O <sub>4</sub> Zn <sub>3</sub>
Molecular Weight	:	574.338 g/mol
Content	:	NLT 31.3% w/w (as Zinc)(On Dried Basis)

## Section 3 - Hazards Identification

**Potential Acute Health Effects:** Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

Repeated or prolonged exposure is not known to aggravate medical condition.

**Hazard statement Code(s):**

**H319** - Causes serious eye irritation.

**H400** - Very toxic to aquatic life.

**H410 (51.06%)**: Very toxic to aquatic life with long lasting effects

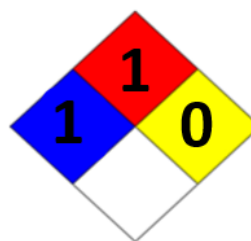
**H411** - Toxic to aquatic life with long lasting effects.

**Supplemental Hazard statement Code(s):**

not applicable

**Precautionary statements:**

Prevention



NFPA SCALE (0-4)



GHS09



GHS07





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### Section 3 - Hazards Identification

P264 + P265 - Wash hands thoroughly after handling.

P273 - Avoid release to the environment.

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

#### Response

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present. Continue rinsing.

P337+P317 - If eye irritation persists: Get medical advice/attention.

#### Disposal

P391 - Collect spillage.

P501 - Dispose of contents/container in accordance with local/regional/international regulations.

**Eye Irrit. 2** (95.74%)

**Aquatic Acute 1** (98.4%)

**Aquatic Chronic 1** (51.06%)

**Aquatic Chronic 2** (94.68%)

Health	1
Flammability	1
Physical Hazard	0
Personal protection	E

HMIS RATINGS (0-4)

Ac

### Section 4 - First Aid Measures

<b>Inhalation</b>	:	Move exposed person to fresh air. If not breathing, seek immediate medical attention. If breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel and seek medical attention.
<b>Ingestion</b>	:	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.
<b>Skin Contact</b>	:	Remove contaminated clothing and shoes and immediately flush skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Clean shoes thoroughly before reuse. If irritation persists, seek medical attention.
<b>Eye Contact</b>	:	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek immediate medical attention.





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### Section 5 - Fire-Fighting Measures

<b>Flammability of the Product</b>	:	May be combustible at high temperature.
<b>Auto-Ignition Temperature:</b>	:	Not available.
<b>Flash Points</b>	:	Not available.
<b>Flammable Limits</b>	:	These products are carbon oxides (CO, CO <sub>2</sub> ), nitrogen oxides (NO, NO <sub>2</sub> ...). Some metallic oxides.
<b>Products of Combustion</b>	:	Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
<b>Fire Hazards in Presence of Various Substances</b>	:	Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.
<b>Fire Fighting Media and Instructions</b>	:	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
<b>Special Remarks on Fire Hazards</b>	:	Fire is possible at elevated temperatures.
<b>Special Remarks on Explosion Hazards</b>	:	Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

### Section 6 - Accidental Release Measures

<b>SPILL CONTROL &amp; RECOVERY</b>	:	Wear appropriate personal protective equipment as specified in Section 8. Clean up spills in a manner that does not disperse dust into the air. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container
<b>DISPOSAL</b>	:	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.





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## Section 7 - Handling and Storage

HANDLING	:	Avoid contact with eyes. Avoid breathing dust. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use.
STORAGE	:	Store in accordance with local regulations. Store in original container, protected from direct sunlight. Keep container tightly closed and sealed until ready for use.
Storage class (TRGS 510)	:	Combustible Solids

## Section 8 - Exposure Controls / Personal Protection

Engineering Controls	:	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below Recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	:	Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	:	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	:	Not available.

## Section 9 - Physical and Chemical Properties

Appearance Form:-		
pH (of 3% w/v aqueous suspension)	:	5.0 – 7.0 (30g/l) at 20°C
Melting point/freezing point	:	334 °C - dec.
Initial boiling point and boiling range	:	No data available
Sublimation Temperature:	:	No data available

### Other safety information

No data available





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## Section 10 - Stability and Reactivity

<b>Stability</b>	:	The product is stable at normal conditions.
<b>Instability Temperature</b>	:	Not available.
<b>Conditions of Instability</b>	:	Excess heat, excess dust generation, incompatible materials
<b>Incompatibility with various substances</b>	:	Reactive with acids.
<b>Corrosivity</b>	:	Not available.
<b>Special Remarks on reactivity</b>	:	Incompatible with strong mineral acids, and strong organic acids.
<b>Special Remarks on Corrosivity</b>	:	Not available.
<b>Polymerization</b>	:	Will not occur

## Section 11 - Toxicological Information

<b>RTECS Reference</b>	:	No data available
<b>Target Organs:</b>	:	No data available
<b>Toxicity Data:</b>	:	No data available
<b>Skin corrosion/irritation:</b>	:	No data available
<b>Serious eye damage/irritation:</b>	:	No data available
<b>Carcinogenicity:</b>	:	No data available
<b>LD50/oral/mouse =</b> Value - Acute Tox Oral = 1290 mg/kg		
<b>LD50/dermal/rabbit</b> VALUE-Acute Tox Dermal = No information available		
<b>LD50/dermal/rat</b> VALUE -Acute Tox Dermal = No information available		
<b>LC50/inhalation/rat</b> VALUE-Vapor = No information available		
VALUE-Gas = No information available		
VALUE-Dust/Mist = No information available		
<b>LC50/Inhalation/mouse</b> VALUE-Vapor = No information available		
VALUE - Gas = No information available		
VALUE - Dust/Mist = No information available		





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## Section 12 - Ecological Information

<b>Ecotoxicity</b>	:	No data available
<b>BOD5 and COD</b>	:	No data available
<b>Products of Biodegradation</b>	:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise
<b>Toxicity of the Products of Biodegradation</b>	:	The product itself and its products of degradation are not toxic.
<b>Special Remarks on the Products of Biodegradation</b>	:	No data available
<b>LC50, 96 h (dynamic)</b> 0.136 mg/l (fish) <b>LC 50, 24 h (static)</b> 1,535 mg/l (daphnia) <b>EC50, 48 h (static)</b> 0.068 mg/l (daphnia) <b>EC50, 72 h</b> 485 mg/l (bacterium) (protozoa) <b>LC50, 48 h (static)</b> 440 mg/l (fish) <b>NOEC, 72 h (static)</b> 0.015 mg/l (algae) <b>NOEC, 8 d (static)</b> 425 mg/l (algae)		

## Section 13 - Disposal Considerations

### Disposal methods:

Refer to local government authority for disposal recommendation.

## Section 14 - Transport Information

D O T Classification : Not a DOT controlled material  
Air transport Goods : Nonhazardous/non dangerous as per IATA DGR.  
Special Provision for Transport : Not applicable  
IATA Specification : Non-dangerous, non-hazardous

### DOT (Pictograms)

AS PER IATA REGULATION SAFE FOR CARRAGE, NON-HAZARDOUS AND NON-RESTRICTED.

NO SPECIAL LABELLING OR TRANSPORT MEASURE HAVE BEEN IDENTIFIED.

THIS IS NOT REGULATED AS PER IATA REGULATION





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## Section 15 - Regulatory Information

### **Federal and State Regulations:**

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found. SARA 313 toxic chemical notification and release reporting: Zinc compounds.

**Other Regulations:** Not available.

### **Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

### **DSCL (EEC):**

This product is not classified according to the EU regulations. Not applicable.

### **HMIS (U.S.A.):**

Health Hazard: 1

Fire Hazard: 1

Reactivity: 0

Personal Protection: E

### **National Fire Protection Association (U.S.A.):**

Health: 1

Flammability: 1

Reactivity: 0

Specific hazard:

### **Protective Equipment:**

Gloves. Lab coat. Dust respirator. Safety glasses.

## Section 16 - Other Information

**Disclaimer:** This material safety data sheet is provided as an information resource only. WEST BENGAL CHEMICAL INDUSTRIES LIMITED believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to verify its validity. The buyer assumes all responsibility of using and handling the product in accordance with federal, state, and local regulations.

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