



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

Website: www.wbcil.com

Section 1 - Chemical Product and Company Identification

MSDS Name: Zinc Gluconate USP

Product Code : ZGLUS97

Company Identification:

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Section 2 - Composition / Information on Ingredients

Chemical Name	:	Zinc Gluconate
CAS Number	:	4468-02-4
Molecular Formula	:	$C_{12}H_{22}O_{14}Zn \cdot xH_2O$
Molecular Weight	:	455.68 + xH_2O g/mol

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.

Classification of the substance or mixture:

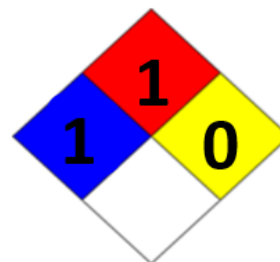
REGULATION (EC) No.- 1272/2008

Acute aquatic toxicity:

Category 1, H400

Chronic aquatic toxicity:

Category 1, H410



NFPA SCALE (0-4)



GHS09

GHS05



WHMIS (Canada)

Health	1
Flammability	1
Physical Hazard	0
Personal protection	E

HMIS RATINGS (0-4)





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Signal Word Warning	Hazard Statement
H318 (95.22%)	Causes serious eye damage [Danger Serious eye damage/eye irritation]
H400 (85.65%)	Very toxic to aquatic life Warning- Hazardous to the aquatic environment, acute hazard.
H410 (87.08%)	Very toxic to aquatic life with long lasting effects Warning- Hazardous to the aquatic environment, long-term hazard.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection
P391	Collect spillage
P264+P265	Wash hands thoroughly after handling. Do not touch eyes.
P317	Get emergency medical help.
P305+P354+P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
67/548/EEC or 1999/45/EC	Dangerous for the environment R50/53. For the full text of the R-phrases mentioned in this Section, see Section 16.

Section 4 - First Aid Measures

Inhalation	:	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.
Ingestion	:	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.
Skin Contact	:	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.
Eye Contact	:	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

Flammability of the Product	:	May be combustible at high temperature.
Auto-Ignition Temperature:	:	Not available.
Flash Points	:	Not available.
Flammable Limits	:	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂ ...). Some metallic oxides.
Products of Combustion	:	Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
Fire Hazards in Presence of Various Substances	:	Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.
Fire Fighting Media and Instructions	:	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet. Use suitable Extinguishing media(Like, Water, Carbon Dioxide (CO ₂), Foam, Dry powder).
Special Remarks on Fire Hazards	:	Fire is possible at elevated temperatures.
Special Remarks on Explosion Hazards	:	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

SPILL CONTROL & RECOVERY	:	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
DISPOSAL	:	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.





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. Store at a dry place at room temperature (+15°C to +25°C). Storage class: TRHS 510: 11 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.	 Gloves  Lab coat  Dust respirator  Safety glasses
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.	
Eye/face protection	: Use	
Eye/face protection	: Use safety glasses for eye/face protection.	
Hand Protection	: For full contact use Nitrile rubber glove (thickness: 0.11mm) and it's break	





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	<p>through time is > 480 min.</p> <p>For splash contact use Nitrile rubber glove (thickness: 0.11mm) and it's break through time is > 480 min.</p> <p>The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).</p> <p>The breakthrough times stated above were determined by KCL in laboratory tests according to EN374 with samples of the recommended glove types.</p>	
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Section 9 - Physical and Chemical Properties

Appearance Form :-		
Form	:	White or practically white powder or granules
pH (of 1% w/v aqueous suspension)	:	5.5 – 7.5
Melting point/freezing point	:	172-175°C
Density	:	1.44 (at 20°C)
Partition coefficient	:	7.41 at 20°C
Boiling Point	:	319°C
Thermal Decomposition Temperature	:	155°C
Flash Point	:	> 93.3 °C / 199.9 °F
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

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

Section 11 - Toxicological Information

RTECS Reference	:	ZH5260000 (Zinc gluconate)
Target Organs:	:	Primarily the gastrointestinal tract, kidney, and liver, with possible impacts on skin and respiratory tract.
Toxicity Data:	:	Oral LD50 (rat): > 5000 mg/kg 111
Skin corrosion/irritation:	:	Not classified as a skin irritant.
Serious eye damage/irritation:	:	Not classified as an eye irritant.
Carcinogenicity:	:	Not classified as a carcinogen by IARC, NTP, or OSHA.
Toxicity:	:	Aquatic toxicity: EC50 0.26 mg/L (Algae) 22.8 mg/L /48h (invertebrates) 5.2 mg/L (Microorganism)

Section 12 - Ecological Information

Ecotoxicity	:	No data available
BOD5 and COD	:	No data available
Products of Biodegradation	:	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise
Toxicity of the Products of Biodegradation	:	The product itself and its products of degradation are not toxic.





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Section 12 - Ecological Information

Special Remarks on the Products of Biodegradation	:	No data available
Acute oral toxicity	:	LD50 Rat: > 5,000 mg/kg (External MSDS) Symptoms: After uptake of large quantities:, Nausea, Vomiting, Diarrhoea.
Water hazard class 2 (German Regulation) (Self-assessment):	:	Hazardous for water. Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into.

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

Pennsylvania RTK: Zinc gluconate (listed as Zinc/Zinc compounds)

Federal and State

Michigan critical material: Zinc gluconate (listed as Zinc/Zinc compounds)

Regulations

New Jersey: Zinc gluconate (listed as Zinc/Zinc compounds)

New Jersey spill list: Zinc gluconate (listed as Zinc/Zinc compounds)

California Director's List of Hazardous Substances: Zinc gluconate (listed as Zinc/Zinc compounds)

SARA 313 toxic chemical notification and release reporting: Zinc gluconate (listed as Zinc/Zinc compounds)

California California prop. 65: This product contains the following ingredients for which the State of California has

Proposition 65 found to cause cancer which would require a warning under the statute: No products were found.

Warnings

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.

Other Regulations For CAS no. 4468-02-4 (anhydrous form):

EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS

No. 224-736-9).

Canada: Listed on Canadian Domestic Substance List (DSL).

China: Listed on National Inventory.

Japan: Listed on National Inventory (ENCS).

Korea: Listed on National Inventory (KECI).

Philippines: Listed on National Inventory (PICCS).

Australia: Listed on AICS.

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

Other Classifications

DSCL (EEC) R22- Harmful if swallowed. S46- If swallowed, seek medical advice

immediately and show this container or label.

Health Hazard

HMIS (U.S.A.) 1 National Fire Protection

1 Flammability

1 Association (U.S.A.)





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Section 15 - Regulatory Information

Fire Hazard

1 0 Reactivity

Health

Reactivity

0

Specific hazard

Personal Protection

E

WHMIS (Canada)

(Pictograms)

DSCL (Europe)

(Pictograms)

Zinc gluconate

TDG (Canada)

(Pictograms)

ADR (Europe)

(Pictograms)

Protective Equipment

Gloves.

Lab coat.

Dust respirator. Be sure to use an approved/certified respirator.

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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