

Section 1 - Chemical Product and Company Identification

MSDS Name: Zinc Ascorbate Product Code : ZAS1380 Company Identification: WEST BENGAL CHEMICAL INDUSTRIES LIMITED 145/1, Jessore Road, Lake Town, Kolkata – 700 089, India. Phone: +91 33 4025 1700 Website: www.wbcil.com

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Section 2 - Composition / Information on Ingredients

Chemical Name	:	Zinc Ascorbate
CAS Number	:	331242-75-2
Molecular Formula	:	$C_{12}H_{14}O_{12}Zn$
Molecular Weight	:	415.612 g/mol
Content	•••	13.0% - 16.0% 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: MUTAGENIC EFFECTS: TERATOGENIC EFFECTS: Not available. Not available. Not available. Not available.

DEVELOPMENTAL TOXICITY: Precautionary Statement(s):

H411: Toxic to aquatic life with long lasting effects.

P261: Avoid breathing dust/fume/gas/mist/vapors/spray.

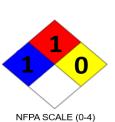
P262: Do not get in eyes, on skin, or on clothing.

P273: Avoid release to the environment.

P281: Use personal protective equipment as required.

P302+P352: IF ON SKIN: Wash with plenty of soap and water. P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position 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.





HMIS RATINGS (0-4)

P337+313: If eye irritation persists get medical advice/attention.

P391: Collect spillage P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. Repeated or prolonged exposure





is not known to aggravate medical condition.

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.	

Section 5 - Fire-Fighting Measures		
Flammability of the Product	:	May be combustible at high temperature.
Autoignition Temperature:	:	Not available.
Flash Points	:	Not available.
Flammable Limits	:	These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2). Some metallic oxides.
Products of Combustion	:	Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
Autoignition Temperature	:	380°C
Fire Hazards in Presence of	:	Slightly explosive in presence of open flames and sparks.
Various Substances		Non-explosive in presence of shocks.
Fire Fighting Media	:	SMALL FIRE: Use DRY chemical powder.
and Instructions		LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on	:	Fire is possible at elevated temperatures.
Fire Hazards		
Special Remarks on	:	Fine dust dispersed in air in sufficient concentrations, and in the
Explosion Hazards		presences of an ignition source is a potential dust explosion hazard.

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Section 5 - Fire-Fighting Measures			
Suitable Extinguishing Media	:	Suitable extinguishing media: Water Foam Carbon dioxide (CO2) Dry powder.	
		Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.	

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 wit adequate ventilation. Wear appropriate respirator whe ventilation is inadequate. Keep in the original container or a approved alternative made from a compatible material, kep tightly closed when not in use.	
STORAGE	: Store in accordance with local regulations. Store in original container, protected from direct sunlight. Keep contained tightly closed and sealed until ready for use.	
STORAGE CLASS	: TRGS 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.
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	:	Off white to yellowish powder	
Solubility	:	Solubility 333 g/L (20°C)	
pH (of 5% w/v aqueous solution)	:	2.1 – 2.6	
Melting Point/Range	:	190°C - 192°C / 374°F - 377.6°F	
Auto Ignition Temperature	:	380°C / 716°F	
Density	:	1.65 g/cm ³ at 20°C	
Initial boiling point and boiling range	:	No data available	
Sublimation Temperature:	:	No data available	
Other Safety Information	:	No data available	





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	: Reactive with acids.
substances	
Corrosivity	: Not available.
Special Remarks on	: Incompatible with strong mineral acids, and strong
reactivity	organic acids.
Special Remarks on	: Not available.
Corrosivity	
Polymerization	: Will not occur

Section 11		Toxicological Information
RTECS Reference	:	No data available
Target Organs	:	No data available
Toxicity Data	:	No data available
Skin corrosion/irritation	:	No data available
Serious eye damage/irritation	:	No data available
Carcinogenicity	:	No data available
LD50 (oral)	:	11900 mg/kg (Rat)
Acute Toxicity	:	Low toxicity reported.
		 LD50 (oral, rat): Estimated >5,000 mg/kg (non-toxic range) Chronic Effects: Chronic high doses may interfere with copper metabolism. Target Organs: Gastrointestinal tract. Irritation: Mild skin and eye irritation possible.





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	:	The product itself and its products of degradation are not	
of Biodegradation		toxic.	
Special Remarks on the	:	No data available	
Products of Biodegradation			
Toxicity	:	Toxicity to fish:	
		LC50- Oncorhynchus mykiss (rainbow trout) - 1.020 mg/l -	
		96 h	
		(OECD Test Guideline 203)	
		Remarks: acidic	
		Tovicity to dophnicy	
		Toxicity to daphnia: EC50- <i>Daphnia magna</i> (Water flea) - 360 mg/l - 48 h and	
		other aquatic	
		invertebrates	
		Remarks: (External MSDS)	
		Toxicity to algae:	
		IC50- Desmodesmus subspicatus (green algae) - 1.750	
		mg/l - 72 h	
		Remarks: (External MSDS)	
		Toxicity to bacteria:	
		EC50- <i>Pseudomonas putida</i> - 140 mg/l - 16 h	
		Remarks: (External MSDS)	
Persistence and degradability	:	Biodegradability Result: 97 % - Readily eliminated from	
		water	
		(OECD Test Guideline 302B)	
		Ratio BOD/ThBOD 65 %	
		Remarks: Closed Bottle test (own results)	
		Ratio BOD/ThBOD 48 %	
		Remarks: Closed Bottle test (own results)	





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					





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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