

ZINC ACETATE

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

ZINC ACETATE
Zinc Acetate Dihydrate, Zinc Diacetate
CAS: 557-34-6

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Textile dyeing/printing mordant, wood preservative, catalyst (e.g. PVC/polyester manufacture), animal feed and agricultural micronutrient formulations, chemical intermediate, laboratory reagent. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on the harmonised/standard classification for zinc acetate.

Acute Tox. 4	Acute oral toxicity, Category 4, H302
Skin Irrit. 2	Skin irritation, Category 2, H315
Eye Dam. 1	Serious eye damage, Category 1, H318
Aquatic Acute 1	Hazardous to the aquatic environment, acute hazard, Category 1, H400
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic hazard, Category 1, H410

2.2 GHS label elements, including precautionary statements:

GHS: Danger
Hazard statements:
Acute Tox. 4: H302 – Harmful if swallowed.
Skin Irrit. 2: H315 – Causes skin irritation.
Eye Dam. 1: H318 – Causes serious eye damage.
Aquatic Acute 1: H400 – Very toxic to aquatic life.
Aquatic Chronic 1: H410 – Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P264: Wash hands 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: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302+P352: IF ON SKIN: Wash with plenty of water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER/doctor.
P332+P313: If skin irritation occurs: Get medical advice/attention.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with local regulations on hazardous waste.

2.3 Other hazards which do not result in classification:

Not identified as PBT/vPvB. No other hazards known.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Zinc Acetate (commonly supplied as the dihydrate)
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 557-34-6	Zinc acetate – Acute Tox. 4: H302; Skin Irrit. 2: H315; Eye Dam. 1: H318; Aquatic Acute 1: H400; Aquatic Chronic 1: H410 – Danger	Min. 98% (technical/industrial grade, dihydrate basis)

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance if symptoms occur, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure to fresh air and keep at rest. Seek medical attention if breathing difficulty or irritation persists.

By skin contact:

Remove contaminated clothing. Rinse skin thoroughly with plenty of water. Seek medical attention if irritation persists.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek immediate medical attention – may cause serious eye damage.

By ingestion/aspiration:

Rinse mouth with water. Do not induce vomiting. Give water to drink if the person is conscious. Seek immediate medical attention/call a poison centre if unwell.

4.2 Most important symptoms/effects, acute and delayed:

Harmful if swallowed. Causes skin irritation and serious eye damage. See sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Treat symptomatically.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water spray, foam, dry chemical powder, carbon dioxide – select per surrounding fire.

Unsuitable: None known.

5.2 Specific hazards arising from the chemical:

Not combustible/flammable in itself. On strong heating, decomposes releasing irritant fumes (acetic acid vapour, zinc oxide fume).

5.3 Special protective actions for fire-fighters:

Wear self-contained breathing apparatus and standard fire-fighting protective clothing. Cool fire-exposed containers with water spray from a safe distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Avoid generating and inhaling dust; avoid contact with skin and eyes. Use PPE as described in Section 8.

For emergency responders:

Wear appropriate protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Prevent entry into drains, watercourses and soil – very toxic to aquatic life with long lasting effects. Notify relevant authorities in case of significant release.

6.3 Methods and materials for containment and cleaning up:

Sweep or vacuum up spilled material and place in a suitable labelled container for reuse or disposal. Avoid generating dust during cleanup.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. General precautions for safe use:

Avoid generating and breathing dust; avoid contact with skin and eyes. Provide good general/local exhaust ventilation.

B. Technical recommendations for the prevention of fires and explosions:

No specific fire/explosion prevention measures required; standard good housekeeping applies.

C. Technical recommendations on general occupational hygiene:

Do not eat, drink or smoke during handling; wash hands and exposed skin thoroughly after handling.

D. Technical recommendations to prevent environmental risks:

Prevent product/dust from entering drains, soil or watercourses.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	Ambient
Maximum Temp.	<30°C, away from direct heat
Maximum time	24 Months (unopened original packaging, dry storage)

B. General conditions for storage:

Store in a cool, dry, well-ventilated place, away from strong oxidisers and strong bases, in tightly closed containers.

7.3 Specific end use(s):

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

No substance-specific occupational exposure limit is separately notified for zinc acetate under the Factories Act, 1948. Control as a nuisance dust and per zinc compound guidance (as Zn):

Identification	Occupational Exposure Limit Type	Value
Zinc acetate (as total dust, general/particulates-not-otherwise-classified basis) CAS: 557-34-6	Time Weighted average concentration (8 hrs), total dust	10 mg/m³ (general nuisance dust guidance)
	Time Weighted average concentration (8 hrs), respirable fraction	3 mg/m³ (general nuisance dust guidance)

8.2 Appropriate engineering controls:

Use local exhaust ventilation at grinding, blending and packing operations to control dust below occupational exposure limits.

B. Respiratory protection:

Particulate respirator (e.g. FFP2) where dust levels are elevated.

C. Specific protection for the hands:

Chemical-resistant gloves (nitrile or PVC).

D. Eye and face protection:

Chemical splash goggles.

E. Bodily protection:

Standard work clothing; coveralls for dusty operations.

F. Additional emergency measures:

Emergency shower and eyewash station should be available in the work area.

Environmental exposure controls:

Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

Appearance	
Physical state at 20°C	Solid (crystalline powder/granules)
Appearance	Crystalline powder
Color	White
Odor	Faint acetic (vinegar-like) odor
Odour threshold	Not relevant *
Volatility	
Boiling point at atmospheric pressure	Non-applicable (decomposes before boiling)
Vapour pressure at 20°C / 50°C	Negligible
Evaporation rate at 20°C	Not relevant *
Product Description	
Density at 20°C	Approx. 1.84 g/cm³ (dihydrate)
Dynamic / Kinematic viscosity	Non-applicable (solid)
Concentration	Min. 98% (dihydrate basis, technical grade)
pH (5% aqueous solution)	Approx. 6–7.5 (mildly acidic to near-neutral)
Vapour density at 20°C	Not relevant *
Partition coefficient n-octanol/water 20°C	Not applicable (inorganic/ionic salt)
Solubility in water at 20°C	Freely soluble (approx. 430 g/L); also soluble in ethanol
Decomposition temperature	Loses water of crystallisation around 100°C; decomposes above approx. 200°C
Melting point/freezing point	Approx. 237–242°C (dihydrate, with decomposition)
Flammability	
Flash Point	Non-applicable (inorganic solid)
Flammability (solid, gas)	Not classified as flammable
Autoignition temperature	Not relevant *
Lower / Upper flammability limit	Not relevant *
Particle Characteristics	
Median equivalent diameter	Available on request (grade dependent)

* Not relevant due to the nature of the product, not providing information on the properties of its hazards.

9.2 Other information:

Explosive properties	Not explosive
Oxidising properties	Not oxidising
Corrosive to metals	Not significantly corrosive to metals under normal conditions
Heat of combustion	Not relevant (non-combustible)
Surface tension at 20°C	Not relevant *
Refraction index	Not relevant *

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Reacts with strong oxidising agents and strong bases. No significant reactivity with water beyond dissolution.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use. Hygroscopic to some degree; protect from moisture.

10.3 Possibility of hazardous reactions:

Under normal conditions, hazardous reactions are not expected.

10.4 Conditions to avoid:

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Decomposes above approx. 200°C	No particular effect	Avoid – product is hygroscopic

10.5 Incompatible materials:

Strong Oxidising Agents	Strong Bases
Risk of vigorous reaction	Forms zinc hydroxide/zincates

10.6 Hazardous decomposition products:

On strong heating: acetic acid vapour and zinc oxide fume.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

In case of exposure that is repetitive, prolonged, or at concentrations higher than the recommended occupational exposure limits, adverse health effects may result depending on the means of exposure:

A. Ingestion (acute effect):

Harmful if swallowed; may cause gastrointestinal irritation, nausea and vomiting.

B. Inhalation (acute effect):

Dust may irritate the respiratory tract.

C. Contact with skin and eyes (acute effect):

Causes skin irritation and serious eye damage on direct contact.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data.

E. Sensitizing effects:
Classification criteria for respiratory or skin sensitisation are not met based on available data.

F. Specific target organ toxicity (STOT) – single exposure:
Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure:
Classification criteria are not met based on available data.

H. Aspiration hazard:
Classification criteria are not met based on available data.

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Zinc acetate CAS: 557-34-6	LD50 oral: approx. 555 mg/kg	Rat
	LD50 dermal: Available on request	–

SECTION 12: ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: approx. 1–3 mg Zn/L (96h, literature range)	Non-applicable	Fish
EC50: approx. 0.1–1 mg Zn/L (48h, literature range)	Non-applicable	Crustacean (Daphnia)

12.2 Persistence and degradability:
Not applicable in the classical sense (inorganic salt); acetate moiety is readily biodegradable, zinc ion persists and its bioavailability is water-chemistry dependent.

12.3 Bioaccumulative potential:
Zinc is an essential trace element subject to homeostatic regulation in most organisms; bioaccumulation is limited under normal conditions but can occur at elevated exposure.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not relevant	Not relevant	Soluble/mobile	Soluble/mobile, pH dependent retention

12.5 Results of PBT and vPvB assessment:
Non-applicable (inorganic substance; PBT/vPvB criteria are designed for organic substances)

12.6 Other adverse effects:
Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:
Recover for reuse where possible. Dispose of via a licensed hazardous waste contractor in accordance with local regulations; avoid discharge to water bodies. Packaging that has contained the product should be emptied completely before disposal or recycling.
Refer to national and local regulations on waste management.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Not assigned
14.2 UN proper shipping name	Non-hazardous for transport under ADR/RID at typical commercial package sizes
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	Yes (Environmentally Hazardous Substance, aquatic) – bulk shipments above regulatory thresholds may require Class 9 environmentally hazardous substance marking; consult current shipping documentation
14.6 Special precautions for user	Physico-chemical properties: see section 9
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Not assigned
14.2 UN proper shipping name	Non-hazardous for transport under IMDG at typical commercial package sizes
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Marine pollutant	Yes
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Not assigned
14.2 UN proper shipping name	Non-hazardous for transport under IATA/ICAO
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	Yes
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
Water (Prevention and Control of Pollution) Act, 1974

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

- H302: Harmful if swallowed.
- H315: Causes skin irritation.
- H318: Causes serious eye damage.
- H400: Very toxic to aquatic life.
- H410: Very toxic to aquatic life with long lasting effects.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

Publicly available GHS classification and physical/toxicological reference data for CAS 557-34-6.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Koc: Partition coefficient of organic carbon | PBT: Persistent, Bioaccumulative, Toxic | vPvB: very Persistent, very Bioaccumulative

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET