



Report No.: MND241460QD_CN(En)2/2

Nomination No.: MCHQD2403895-02

Design Report of Safety Data Sheet

Product Name: ZINC PHOSPHATE

Warranty of Design: GB/T 17519-2013 and GB/T 16483-2008

Application Company Name: SHIJIAZHUANG CITY XINSHENG CHEMICAL CO.,LTD.

Application Company Address: 8 Chang 'an Road, Economic Development Zone, Xinle City, Hebei Province,
China

Contact Information: 18633067939

24 Hour Emergency Call: **031188676378**

Inspection Date: 2025/01/03

SGS-CSTC Standards Technical Services(Qingdao) Co.,Ltd

Authorised Signatory
2025-01-07



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Safety Data Sheet

ZINC PHOSPHATE

Version: V2.0.0.2
Report No.: MND241460QD_CN(En)2/2
Nomination No.: MCHQD2403895-02
Creation Date: 2024/12/31
Revision Date: 2025/01/03

*Prepared according to GB/T 17519-2013 and GB/T 16483-2008

1 Identification of the chemical and supplier

Product identifier

Product Name	ZINC PHOSPHATE
CAS No.	7779-90-0
EC No.	231-944-3
Molecular Formula	Zn ₃ (PO ₄) ₂

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	SHIJIAZHUANG CITY XINSHENG CHEMICAL CO.,LTD.
Address of the company	8 Chang 'an Road, Economic Development Zone, Xinle City, Hebei Province, China
Post code	—
Telephone number	18633067939
Fax number	031188676378
E-mail address	admin@xsphos.com

Emergency phone number

Emergency phone number	031188676378
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2 Hazard(s) identification

Emergency overview

Solid. Very toxic to aquatic organisms, Use appropriate container to avoid environmental contamination. May cause long-term adverse effects in the aquatic environment. Use appropriate container to avoid environmental contamination.

Hazard classification according to GHS

Hazardous To The Aquatic Environment – Short-Term (Acute) Hazard	Category 1
Hazardous To The Aquatic Environment – Long-Term (Chronic) Hazard	Category 1

GHS Label elements

Hazard pictograms	
Signal word	Warning

Hazard statements

H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention	
P273	Avoid release to the environment.
Response	
P391	Collect spillage.
Storage	
Storage	Not applicable
Disposal	
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description

Physical and chemical hazards	
	No information available
Health hazards	
Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	Accidental ingestion of the product may be harmful to the health of the individual.
Skin Contact	Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Eye	This product may cause temporary discomfort following direct contact with the eye.
Environmental hazards	
	This product is very toxic to aquatic life with long lasting effects. Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Substance
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Component	CAS No.	EC No.	Concentration (wt, %)
ZINC PHOSPHATE	7779-90-0	231-944-3	45-50%
Calcium carbonate	471-34-1	207-439-9	50-45%

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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Advice for protecting the rescuer

1	Remove all sources of ignition and increase ventilation.
2	Avoid contact with skin and eyes.
3	Avoid inhalation of dusts.
4	Use personal protective equipment including respirator.

Special note to the doctor

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Small fire: dry chemical, CO2, water spray or regular foam; Large fire: water spray, fog or regular foam; Fire involving tanks: cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Large fire: Do not scatter spilled material with high-pressure water streams.

Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.

Fire precautions and protective measures

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment, do not breathe dust/fume.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Isolation of contaminated areas and restrictions on access.
4	It is recommended that emergency personnel wear dust masks.
5	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

Storage

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

Occupational Exposure limit values	No relevant regulations
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◆ Biological limit values

Biological limit values	No relevant regulations
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◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
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2	GBZ/T 300 series standard Determination of toxic substances in workplace air.
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Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	    
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear appropriate chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 Physical and chemical properties

Physical and chemical properties

Appearance	White Powder
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	846
Initial boiling point and boiling range(°C)	No information available
Flash point(Closed cup,°C)	Not applicable
Evaporation rate	Not applicable
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit: No information available; Lower limit: No information available
Vapor pressure(kPa)	Not applicable
Vapor density(Air = 1)	Not applicable
Relative density(Water=1)	3.26 (20 °C)
Solubility(mg/L)	2.7mg/L (20 °C)
n-octanol/water partition coefficient	No information available
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	No information available
Kinematic viscosity(mm²/s)	Not applicable

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	No information available.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Acute toxicity	No information available
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Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
ZINC PHOSPHATE	Not Listed	Not Listed

Others

ZINC PHOSPHATE(Component)	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
ZINC PHOSPHATE	LC ₅₀ : 0.09mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Chronic aquatic toxicity	No information available
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Persistence and degradability

Persistence and degradability	No information available
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Bioaccumulative potential

Bioaccumulative potential	No information available
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Mobility in soil

Mobility in soil	No information available
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Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
ZINC PHOSPHATE	Not applicable

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	
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IMDG-CODE

UN number	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport hazard class	9
Transport subsidiary hazard class	None
Packing group	III
Marine pollutant (Yes or no)	Yes

IATA-DGR

UN number	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport hazard class	9
Transport subsidiary hazard class	None
Packing group	III

UN-ADR

UN number	3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class	9
Transport subsidiary hazard class	None
Packing group	III

Others

Precautions for transport	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.
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15 Regulatory information

International chemical inventory

Component	EC inventory	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AIIC	ENCS
ZINC PHOSPHATE	✓	✓	✓	✓	✓	✓	✓	✓	✓

[EC inventory] European Inventory of Existing Commercial Chemical Substances

[TSCA] United States Toxic Substances Control Act Inventory

[DSL] Canadian Domestic Substances List

[IECSC] China Inventory of Existing Chemical Substances

[NZIoC] New Zealand Inventory of Chemicals

[PICCS] Philippines Inventory of Chemicals and Chemical Substances

[KECI] Korea Existing Chemicals Inventory

[AIIC] Australian. Inventory of Industrial Chemical (AIIC)

[ENCS] Japan Inventory of Existing & New Chemical Substances

Chinese chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
ZINC PHOSPHATE	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×

[A] Catalog of Hazardous Chemicals(2015 Edition), Notice 5th 2015, the former China State Administration of Work Safety together with the Ministry of Industry and Information Technology, etc.

[B] List of Toxic Chemicals Restricted in China, Notice 60th 2019, the Ministry of Ecology and Environment, Ministry of Commerce, General Administration of Customs.

[C] List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China (2021) , Decree No. 50 of Ministry of Ecology and environment of PRC in 2021.

[D] Catalog of Hazardous Chemicals for Priority Management (First and Second batches) , Notice 95th, 2011, Notice 12th 2013, China State Administration of Work Safety.

[E] Catalog of Hazardous Chemicals for Environmental Management, Notice 33th 2014, The former Ministry of Environmental Protection.

[F] List of Various Monitoring Chemicals, 52th 2020, the Ministry of Industry and Information Technology.

[G] List of Priority Controlled Chemicals (the First batch), 83th 2017, the former Ministry of Environmental Protection, Ministry of Industry and Information Technology, the former National Health And Family Planning Commission.

[H] Catalog of Specially Controlled Hazardous Chemicals (First Edition), 1st 2020, the Ministry of Emergency Management, Ministry of Industry and Information Technology, Ministry of Public Security, Ministry of Transport.

[I] List of Toxic and Harmful Water Pollutants (First batch), 28th 2019, the Ministry of Ecology and Environment, National Health Commission.

[J] Catalog of Highly Toxic Chemicals, Notice 142th 2003, the former Ministry of Health of P.R.China.

[K] Dangerous Chemicals Directory Used to Manufacture Exploder (2017 Edition), Notice 11th May. 2017, Ministry of Public Security of P.R.China.

- [L]** Catalog of Stupefacent and Psychotropic Substances, China Food and Drug Administration Notice No. 230 in 2013, No. 39 in 2020, No. 43 in 2023 and the Ministry of Public Security Notice No. 27 [2015].
- [M]** Decree No. 445 of the State Council in 2005 and its amendment announcement.
- [N]** Catalog of Import and Export Management of Precursor Chemicals, 7th 2006, the Ministry of Commerce.
- [O]** International Verification of Precursor Chemicals Management Catalog, 8th 2006, the Ministry of Commerce, Ministry of Public Security.

Note:

“√” Indicates that the substance included in the regulations.

“×” No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2024/12/31
Revision Date	2025/01/03
Reason for revision	-

Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.
- [2] IARC, website: <http://www.iarc.fr/>.
- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.echemportal.org/echemportal/>.
- [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
- [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
- [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
- [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
- [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC ₅₀	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD ₅₀	Lethal Dose 50%	NTP	National Toxicology Program
EC ₅₀	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC _x	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P _{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to GB/T 16483 and GB/T 17519. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.