

# Zirconium Phosphate

## MSDS (Material Safety Data Sheet)

Section 1: chemical name		
Chemical chinese name:	磷酸锆	
Chemical english name:	Zirconium Phosphate	
Chinese name2:	磷酸氢锆	
English name 2:	Zirconium(iv) hydrogenphosphate	
Technical description coding:		
CAS No.:	13772-29-7	
Molecular formula:	HZr2(PO4)3	
Molecular weight:	468.362	
Section 2: composition/information on ingredients		
composition:	content%	CAS No.
Zirconium Phosphate:	100	13772-29-7
Section 3: hazards summarizing		
Hazards category:		
Routes of invasion:		
Health hazard:	It's not harmful to to suck in and ingestion. Do not stimulate an effect. Not reported argyria and zirconium poisoning in industry.	
Environmental hazard:	Do not endanger to the environment.	
Combustion hazard:	This material is non-inflammable and non-stimulated.	
Section 4: emergency treatment		
Skin exposure:	Strip off the infectant clothing, use clear flowing water to wash.	
Contact with eyes:	Mention an eyelid, use clear flowing water or physiological saline to wash.	
Inhalation:	rapidly break away from a scene to fresh air. keep respiratory tract unobstructed. If losing his breath, be performed oxygen therapy. If respiratory arrest, carries out artificial breathing immediately and hospitalize .	
Ingestion:	Drink amounts enough warm water,accustomed to emetic and hospitalize.	
Section 5: fire protection		
Hazard properties:	Non-inflammable, not decomposing under high temperature(1700℃).	
Harmful combustion products:	none	
extinguishment method:	Move the container from fireground to spacious place as far as possible	
Section 6: emergency Leakage treatment		

Emergency Treatment:	To leakage pollution zone, Restrict getting in and out. Suggest that the emergency treatment persons take a anti-dust respirator, Put on general work clothes. A little leakage: Avoid raising dust, Sweeping up carefully. Collecting and carrying to waste disposal sites. A great quantity leakage:collecting and carrying to waste disposal sites.
Section 7: handling and storage	
Precautions in operation:	With colsed operation, local exhaust. Prevent dust release from workshop. Operation personnel must be speciality training and Strictly following operating instruction. Suggest that operation personnel wears self-inhalation filtertype dust respirator, wears chemical safety protect ing glasses, puts on work clothes protecting poisons infiltration,.wears the rubber glove. Avoid producing dust.
Precautions in stroage:	Store in a cool,well-ventilated storehouse. Prevent against sunlight direct shooting. package encapsulation.
Section 8: control of touching/individual protection	
Occupation touches limit value(OEL):	
CHINA MAC(mg/m3):	Have not worked out a standard.
TLVTN:	Have not worked out a standard.
TLVWN:	Have not worked out a standard.
Monitoring method:	
Engineering control:	With colsed operation, Pay attention to being ventilated
Respiratory system protects:	When dust thickness goes beyond standard in air,must wear self-inhalation filtertype dust respirator.
Eye protection:	wears chemical safety protect ing glasses.
Body protection:	Put on general work clothes
Hand protection:	Wears general work protective gloves.
Other protection:	Replace and wash work clothes in time. Pay attention to clean hygiene of individual.
Section 9: physical and chemical properties	
Main composition:	Pure silver zirconium phosphate.Purity:>99%. technical pure.
Appearance and properties:	a tasteless and odourless white coloured powder.
PH:	7
Melting point (°C):	1700
Boiling point(°C):	No Data
Relative density(water=1):	2.5-3.0
Relative vapour density(air=1):	No Data
Saturation vapor pressure (kPa):	No Data
Heat of combustion (kJ/mol):	insignificance

Critical temperature (°C):	insignificance
Critical pressure (MPa):	insignificance
log kow of octanol/water partition ratio:	insignificance
Flash point (°C):	insignificance
Ignition temperature (°C):	insignificance
upper explosive limit %(V/V):	insignificance
lower explosive limit %(V/V):	insignificance
Solubility:	Be insoluble in water, in alcohol, more insoluble than the hydrocarbon resembles.
Main application:	Be used as antibacterial additive of plastics, ceramics, fibreglass and paints etc functional material.
Other physicochemical property:	mean grain size:2~3µm. bulk density:0.55~0.60 cm <sup>3</sup> /g, L value:>95. MIC(colon bacillus)=250, MIC(Staphylococcus aureus)=300, MIC(Candida albicans)=200.
Section 10: stability and reaction activity	
Stability:	very stable, Warmup does not decompose at 1700°C.
Forbidding fitting matter:	NO
Avoid the condition getting in touch with:	
Polymerization damage:	
Decomposition product:	
Section 11: toxicological information	
Acute toxicity:	LD50: >5000 mg/kg(bandicoot by orally). innocuity. LC50:NO DATA.
subacute and chronic toxicity:	innocuity
Pungency:	no pungency
Sensitization:	no sensitization
Mutagenicity:	No mutagenicity
Teratogenicity:	No teratogenicity
Carcinogenicity:	No carcinogenicity
Section 12: ecological information	
Ecotoxicology toxicity:	No. Have not affected to the ecological environment.
Biological degradability:	non-degradable
No bio-degradable:	
Biological concentration or Living things accumulation:	
Other deleterious effect:	No Data
Section 13: disposal	
Waste characteristic:	

Method of waste disposal:	Disposal according regulatory requirements involved state and local government.
Waste precautions:	
Section 14: transport information	
Code of Dangerous Goods:	No Data
UN code:	No Data
Packaging mark:	
Category of package:	plastic cask
Packing method:	15kg/barrel
Precautions of transport:	When starting the shipment of, package should be entire,the loading should be reliable. Need to ensure that the container not leaking , not collapsing , not dropping , not damaging in transporting process. On passage, should protect against the solarization,raining,defends against high temperature. Should be thorough cleaning after wheel transport. In highway transportation should run according to regulation circuit.
Section 15: regulatory information	
Regulatory information:	The Regulations of Safe Management Regarding Dangerous Chemicals(published by state council on Feb17,1987),the Implementation Details regarding Safety Regulations on Managing Dangerous Chemicals issued by the Ministry of Chemical Industry ([1992] 677 numbers). the Regulation For Chemical Usage Safety in Work Place published by Ministry of Labor (1996)423numbers. These law and regulation have assumed corresponding regulation equally in the safety use,produce,storage,transport, loading and unloading etc of chemical hazard.
Section 16: other information	
References:	
Revise explanation:	
Other information:	