



Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Zinc Sulfate USP Monohydrate

30-1364

Section 1: Identification

Product Name Zinc Sulfate USP Monohydrate
Commercial Name Not available.
Product Use Not available.
Restrictions On Use Not available.

Product Code 30-1364

Company PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: Acute Tox. 4 (Oral) Eye Dam. 1 Aquatic Acute 1 Aquatic Chronic 1
CFR 1910.1200

Signal Word DANGER

Hazard Statement(s) Harmful if swallowed. Causes serious eye damage. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

Pictogram(s) or Symbol(s)



Precautionary Statement(s):

Prevention	P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P273 - Avoid release to the environment P280 - Wear protective gloves, eye protection
Response	P301+P312 - If swallowed: Call a doctor if you feel unwell 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 doctor P330 - Rinse mouth P391 - Collect spillage
Storage	Not available.
Disposal	P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

Section 3: Composition/Information on Ingredients

Substance/Mixture Substance
Components Zinc Sulfate USP Monohydrate
% By Weight 100
CAS# 7446-19-7
Molecular Weight 179.43 g/mole
Chemical Formula ZnSO₄.H₂O
Synonym(s) Sulfuric Acid, Zinc Salt; Zinc Vitriol, White Vitriol

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Zinc Sulfate USP Monohydrate	7446-19-7	>=99.0%		

Section 4: First-Aid Measures

Inhalation	Remove person to fresh air and keep comfortable for breathing. Respiratory problems: consult a doctor/medical service.
Skin Contact	Wash with plenty of soap and water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists
Eye Contact	Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
Ingestion	Rinse mouth with water, do not induce vomiting, call a doctor. Drink plenty of water
Symptoms/Effects	
Acute	AFTER INHALATION OF DUST: Coughing; after skin contact : Slight irritation; after eye contact: Irritation of the eye tissue. Visual disturbances. Serious damage to eyes; after ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Gastrointestinal complaints. Nausea. Vomiting. Abdominal pain. Blood in stool. Decreased renal function. Change in the haemogramme/blood composition. Weakening of the immune system.
Delayed	ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Gastrointestinal complaints. Inflammation/damage of the eye tissue.
Immediate Medical Attention	
Treat symptomatically.	

Section 5: Fire-Fighting Measures**Suitable Extinguishing Media**

EXTINGUISHING MEDIA FOR SURROUNDING FIRES: Adapt extinguishing media to the environment. Water spray. Dry powder. Foam.

Unsuitable Extinguishing Media

Not available.

Products of Combustion

On burning: release of toxic and corrosive gases/vapours (sulphur oxides, zinc oxide) and formation of metallic fumes. Reacts violently with (strong) bases

Firefighters Special Equipment and Precautions

Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it. Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

Section 6: Accidental Release Measures

Protective equipment : Gloves. Safety glasses. Protective clothing. Emergency procedures : Ventilate spillage area. Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. Avoid contact with skin and eyes. Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows. 6.1.2. For emergency responders Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8 Exposure controls/personal protection" Avoid release to the environment. Prevent soil and water pollution. Prevent spreading in sewers. For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Collect spillage. Methods for cleaning up : Recover mechanically the product. Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Other information : Dispose of materials or solid residues at an authorized site

Section 7: Handling and Storage

Handling: Avoid dust formation. Clean contaminated clothing. Do not discharge the waste into the drain. Do not eat, drink or smoke when using this product. Ensure good ventilation of the work station. Observe strict hygiene. Keep away from naked flames/heat. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Avoid contact with skin and eyes. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Storage: Storage conditions : Store in a well-ventilated place. Keep cool. Incompatible products : Oxidizing agent. strong acids. Strong bases. Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) bases. water/moisture. Storage area : Store at ambient temperature. Store in a dry area. Keep container in a well-ventilated place. Meet the legal requirements. Special rules on packaging : SPECIAL REQUIREMENTS: closing. watertight. dry. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers. Packaging materials : MATERIAL TO AVOID: lead

Section 8: Exposure Controls/Personal Protection

Exposure Limits	OSHA OSHA PEL (TWA) (mg/m ³) 15 mg/m ³ Total Dust 5 mg/m ³ Respirable
Engineering Controls	Appropriate engineering controls : Ensure good ventilation of the work station.
Personal Protection	Personal protective equipment : Dust production: dust mask with filter type P2. Safety glasses. Gloves. In case of dust production: protective goggles. Materials for protective clothing : butyl rubber. PVC. Hand protection : nitrile rubber gloves. Eye protection : Safety glasses. In case of dust production: protective goggles. Skin and body protection : Protective clothing. Respiratory protection : Dust mask. Environmental exposure controls : Avoid release to the environment.

Section 9: Physical and Chemical Properties

Appearance	White. Solid. Powder.		
Odor	Odourless		
Odor Threshold	Not available.		
Melting Point	238 °C	pH	4.0 (5 %)
Freezing Point	Not available.	Vapor Pressure	Not available.
Boiling Point/Range	> 500 °C	Vapor Density	Not available.
Decomposition temperature	> 500 °C	Viscosity	Not available.
Partition Coefficient: n-octanol/water	Not available.	Evaporation Rate	Not available.
Flash Point	Not flammable.	Autoignition temperature	Not available.
Flammability	Not available.	Flammability or Explosive Limits:	
		Lower	Not available.
		Upper	Not available.
Solubility(ies)	Soluble in water. Water: 35 g/100ml Soluble in methanol. Soluble in glycerol.		
Other	Molecular mass : 179.47 g/mol		

Section 10: Stability and Reactivity

Reactivity	On burning: release of toxic and corrosive gases/vapours (sulphur oxides, zinc oxide) and formation of metallic fumes. Reacts violently with (strong) bases.
Chemical Stability	Hygroscopic
Hazardous Polymerization	No dangerous reactions known under normal conditions of use
Conditions to Avoid	Not available.
Incompatible Materials	Oxidizing agent.
Hazardous Decomposition Products	Not available.

Section 11: Toxicological Information**RTECS** ZH5270000**Acute Toxicity**

LD50 oral rat ~ 1710 mg/kg LD50 dermal rat > 2000 mg/kg ATE US (oral) 500.000 mg/kg body weight

Skin Corrosion/Irritation

Not available

Serious Eye Damage/Irritation

Causes serious eye damage

Respiratory or Skin Sensitization

Not available.

Germ Cell Mutagenicity

Not available.

Carcinogenicity

Not available.

Reproductive Toxicity

Not available.

Routes of Entry

Skin and eyes contact

Symptoms Related to Exposure

AFTER INHALATION OF DUST: Coughing. After skin contact : Slight irritation. After eye contact : Irritation of the eye tissue. Visual disturbances. Serious damage to eyes. After ingestion : AFTER ABSORPTION OF HIGH QUANTITIES: Gastrointestinal complaints. Nausea. Vomiting. Abdominal pain. Blood in stool. Decreased renal function. Change in the haemogramme/blood composition. Weakening of the immune system.

Potential Health Effects

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Skin rash/inflammation. Gastrointestinal complaints. Inflammation/damage of the eye tissue.

Target Organ(s) Not available.

Section 12: Ecological Information**Ecotoxicity**

Dangerous for the environment. Very toxic to aquatic life with long lasting effects. Very toxic to aquatic life with long lasting effects. LC50 fish 1 1.7 mg/l (96 h; Poecilia reticulata; Anhydrous form) EC50 Daphnia 1 0.56 mg/l (48 h; Daphnia magna; Anhydrous form) LC50 fish 2 2.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Anhydrous form) EC50 Daphnia 2 1 mg/l (24 h; Daphnia magna; Anhydrous form)

Persistence and Degradability

Biodegradability: not applicable.

Bioaccumulative Potential

BCF fish 1 59 - 242 (Cyprinus carpio; Anhydrous form) BCF fish 2 59 - 242 (Cyprinus carpio; Test duration: 8 weeks) Log Pow Not applicable (inorganic substance) Log Kow Not applicable (inorganic substance) Bioaccumulative potential Bioaccumable.

Mobility in Soil

Not available.

Other Adverse Effects

Not available.

Section 13: Disposal Considerations**Waste Disposal**

Remove waste in accordance with local and/or national regulations. Recycle/reuse.

Disposal of Container

Not available.

Other Considerations

Not available.

Section 14: Transport Information**DOT Classification**

Transport document description : UN3077 Environmentally hazardous substances, solid, n.o.s., 9, III UN-No.(DOT) : UN3077 Proper Shipping Name (DOT) : Environmentally hazardous substances, solid, n.o.s. Hazard Classes (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140 Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials) Packing group (DOT) : III - Minor Danger Dangerous for the environment : Yes Marine pollutant : Yes DOT Packaging Non Bulk (49 CFR 173.xxx) : 213 DOT Packaging Bulk (49 CFR 173.xxx) : 240 DOT Symbols : G - Identifies PSN requiring a technical name DOT Special Provisions (49 CFR 172.102) : 8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies. 146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination. 335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging. A112 - Notwithstanding the quantity limits shown in Column (9A) and (9B) for this entry, the following IBCs are authorized for transportation aboard passenger and cargo-only aircraft. Each IBC may not exceed a maximum net quantity of 1,000 kg: a. Metal: 11A, 11B, 11N, 21A, 21B and 21N b. Rigid plastics: 11H1, 11H2, 21H1 and 21H2 c. Composite with plastic inner receptacle: 11HZ1, 11HZ2, 21HZ1 and 21HZ2 d. Fiberboard: 11G e. Wooden: 11C, 11D and 11F (with inner liners) f. Flexible: 13H2, 13H3, 13H4, 13H5, 13L2, 13L3, 13L4, 13M1 and 13M2 (flexible IBCs must be sift-proof and water resistant or must be fitted with a sift-proof and water resistant liner). B54 - Open-top, sift-proof rail cars are also authorized. IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2). IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner. N20 - A 5M1 multi-wall paper bag is authorized if transported in

Section 15: Regulatory Information

Regulations

SARA Section 311/312 Hazard Classes Immediate (acute) health hazard

Other

Not available.

Section 16: Other Information

This information is given without any warranty or representation. It is believed to be correct but does not claim to be all inclusive and shall be used only as a guide. American International Chemical, Inc., shall not be held liable for any damage resulting from handling or contact with the above product. It is offered solely for your consideration, investigation and verification.