

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Zinc Sulfate Heptahydrate
CAS number	7446-20-0
Synonyms	Zinc vitriol; Salt of vitriol; White vitriol

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute Oral Toxicity	Category 4
Serious Eye Damage/Eye Irritation	Category 1
Specific Target Organ Toxicity (repeated exposure)	Category 2
Target Organ(s) - Heart, Blood	

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Harmful if swallowed.
Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention: Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapors/spray.

Response: Get medical attention/advice if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Zinc sulfate heptahydrate	Zinc vitriol; Salt of vitriol; White vitriol	7446-20-0	100%
Zinc sulfate		7733-02-0	-

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.

- In case of skin contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
- In case of eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
- If swallowed** Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes eye burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Keep product and empty container away from heat and sources of ignition. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Do not allow run-off from fire-fighting to enter drains or water courses.
Hazardous Combustion Products: Sulfur oxides.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with eyes, skin, or clothing.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place.

Incompatibilities

Strong bases.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

8.2 Exposure controls

Appropriate engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles, as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	White
Odor	Odorless
Odor Threshold	No information available
pH	4.4 - 6 (5% aq.solution)
Melting Point/Range	100 °C / 212 °F
Boiling Point/Range	No information available
Evaporation Rate	Not applicable
Flammability (solid)	No information available

Flammability or explosive limit	No data available
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	Not applicable
Density	3.54 @ 25 °C
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No information available
Decomposition Temp	500°C
Viscosity	Not applicable
Molecular Formula	O4SZn.7H2O
Molecular Weight	287.53 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat.

10.5 Incompatible materials

Strong bases.

10.6 Hazardous decomposition products

Sulfur oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Zinc sulfate heptahydrate	1260 mg/kg (Rat)	-	-
Zinc sulfate	1710 mg/kg (Rat)	>2000 mg/kg (Rat)	-

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

Severe eye irritant.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Zinc sulfate heptahydrate	7446-20-0	Not listed	Not listed	Not listed	Not listed	Not listed
Zinc sulfate	7733-02-0	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

Heart, Blood.

Reproductive toxicity

Experiments have shown reproductive toxicity effects on laboratory animals.

Chronic effects

No information available.

11.2 Additional Information

Tumorigenic effects have been reported in experimental animals. See actual entry in RTECS for complete information.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

Product		Species	Test Results
Zinc sulfate heptahydrate	LC50	Freshwater Fish	1.9 mg/L, 96h

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN no.	UN3077
Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packing Group	III

IMDG

UN no.	UN3077
Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packing Group	III

IATA

UN no.	UN3077
Proper Shipping Name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packing Group	III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed (ZINC SULFATE), Hazardous Substances RQs: 1000 lb

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
See Section 2 for more information.

SARA 313 (TRI reporting)
Listed (ZINC SULFATE HEPTAHYDRATE).
Listed (ZINC SULFATE).

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Clean Water Act (CWA)
Listed (ZINC SULFATE) Hazardous Substances. Reportable Quantities: 1000 lb. Toxic Pollutants.
Listed (ZINC SULFATE HEPTAHYDRATE) Toxic Pollutants.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

US state regulations

US. Massachusetts RTK - Substance List
Listed (ZINC SULFATE).

US. New Jersey Worker and Community Right-to-Know Act
Listed (ZINC SULFATE HEPTAHYDRATE).

Listed (ZINC SULFATE).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed (ZINC SULFATE HEPTAHYDRATE).

Listed (ZINC SULFATE).

California Proposition 65

Not listed.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.