Conforms to ANSI Z400.1-2004 Standard (United States, Canada).

Material Safety Data Sheet

Zinc Sulphate Monohydrate Mini Granule & Powder

1 . Product and company identification

Common name : **Zinc Sulphate Monohydrate Mini Granule & Powder**

Material uses : Included in animal feeds and used as a fertilizer micronutrient.

Supplier/Manufacturer : Pestell Minerals & Ingredients
141 Hamilton Road
New Hamburg, Ontario
Canada, N3A 2H1
Tel : (519) 662-2877
Fax : (519) 662-6242
E-mail: pestellgroup@pestell.com

In case of emergency : CANUTEC (613) 996-6666

MSDS authored by: : Kemika XXI Inc. + 1-450-435-7475 September16, 2010

2 . Hazards identification

Physical state : Solid. (granule & powder)

Color : White to off-white.

Hazard status : This material is classified hazardous under OSHA regulations in the United States and the WHMIS Controlled Product Regulation in Canada.

Emergency overview : WARNING !

CAUSES SEVERE EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.

Do not ingest. Avoid contact with eyes. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eyes : Severely irritating to eyes.

Skin : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Ingestion : May be harmful if swallowed.

Potential chronic health effects : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
Mutagenic effects: Not available.
Teratogenic effects: Not available.

Medical conditions aggravated by over-exposure : Repeated skin exposure can produce local skin destruction or dermatitis. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated or prolonged exposure to the substance can produce target organ damage.

See toxicological information (section 11)

3 . Composition/information on ingredients

United States

Name	CAS number	%
Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate	7446-19-7	60 - 100

Canada

Name	CAS number	%
Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate	7446-19-7	60 - 100

4 . First aid measures

Eye contact : Check for and remove any contact lenses. In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if symptoms occur.

Skin contact : Wash with soap and water. Get medical attention if symptoms occur.

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms appear.

Ingestion : Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Notes to physician : No specific antidote. Medical staff must contact Poison Control Center.

5 . Fire-fighting measures

Flammability of the product : Non-flammable.

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : No specific hazard.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental precautions : Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up : If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

7 . Handling and storage

Handling : Do not ingest. Avoid contact with eyes. Wash thoroughly after handling.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protection

Eyes : Safety glasses.

Skin : Lab coat.

Respiratory : A respirator is not needed under normal and intended conditions of use.

Hands : Natural rubber (latex).

HMIS Code/Personal protective equipment : B

Personal protection in case of a large spill : Safety glasses, goggles or face shield. Impervious gloves. Full suit. Boots. Wear NIOSH-approved self-contained breathing apparatus or equivalent and full protective gear.

Hygiene measures : Wash hands, forearms and face thoroughly after handling compounds and before eating, smoking and using the lavatory and at the end of the day. Follow good industrial hygiene practice.

9 . Physical and chemical properties

Physical state : Solid. (granule & powder)

Color : White to off-white.

pH : 4 to 7 (Conc. (% w/w): 10) [Acidic.]

Relative density : 3.28 (Water = 1)

Solubility : Powder is soluble in water.

10 . Stability and reactivity

Stability and reactivity : The product is stable.

Incompatibility with various substances : Reactive with oxidizing materials.

Hazardous polymerization : Will not occur.

Conditions of reactivity : Not available.

11 . Toxicological information

Acute Effects

Eyes : Severely irritating to eyes.

Skin : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Ingestion : May be harmful if swallowed.

Potential chronic health effects : Carcinogenic effects: Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.
Mutagenic effects: Not available.
Teratogenic effects: Not available.

12 . Ecological information

Environmental precautions : Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Products of degradation : These products are sulfur oxides. Some metallic oxides.

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material, runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional and local authority requirements.

14 . Transport information

AERG : 171

Regulatory information	Proper shipping name	Class	UN number	PG	Label
UN / IMDG / IATA Classification	Not regulated.	-	-	-	
DOT Classification	RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate)	9	UN3077	III	
TDG Classification	Not regulated.	-	-	-	

Additional information	UN	IMDG	IATA	DOT	TDG
	-	-	-	**Remarks** Not regulated when shipped in quantities less than 1000lbs/453.6 Kg (RQ).	-

15 . Regulatory information

United States

HCS Classification : Irritating material

U.S. Federal regulations : TSCA 6 proposed risk management: Lead
TSCA 8(b) inventory: All components listed.
TSCA 12(b) annual export notification: Lead

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: No products were found.

Clean Water Act (CWA) 307: Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate; Lead; Cadmium; Mercury

Clean Water Act (CWA) 311: No products were found.

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

State regulations : Pennsylvania RTK: Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate: (environmental hazard, generic environmental hazard); Lead: (environmental hazard, generic environmental hazard); Cadmium: (special hazard, environmental hazard, generic environmental hazard); Mercury: (environmental hazard, generic environmental hazard)
Massachusetts RTK: Lead; Cadmium; Mercury
New Jersey: Zinc sulphate (hydrous) mono-, hexa- and hepta hydrate; Lead; Cadmium; Mercury

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Lead	Yes.	Yes.	15 µg/day (ingestion)	Yes.
Cadmium	Yes.	Yes.	0.05 µg/day (inhalation)	Yes.
Mercury	No.	Yes.	No.	No.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

DSL : All components listed.

This product has been classified in accordance with the hazard criteria of the Canadian CPR and the United States OSHA. This MSDS contains all the information required by the CPR and OSHA, the American National Standard Institute (ANSI) Z400.1.

International lists : This product, (and its ingredients) is (are) listed on national inventories, or is (are) exempted from being listed, in Australia (AICS), in Europe (EINECS/ELINCS), in Korea (TCCL), in Japan (METI), in the Philippines (RA6969).

16 . Other information

Label requirements (U.S.A.) : CAUSES SEVERE EYE IRRITATION.
MAY BE HARMFUL IF SWALLOWED.

Hazardous Material Information System (U.S.A.) :

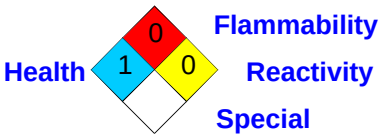
HMIS RATING

Health	1
Fire hazard	0
Physical Hazard	0
Personal protection	B

HAZARD RATINGS

4- Extreme
3- Serious
2- Moderate
1- Slight
0- Minimal
See section 8 for more detailed information on personal protection.

National Fire Protection Association (U.S.A.) :



References : ANSI Z400.1, MSDS Standard, 2004. - Manufacturer's Material Safety Data Sheet. - 29CFR Part1910.1200 OSHA MSDS Requirements. - 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. - Canada Gazette Part II, Vol. 122, No. 2. Registration SOR/88-64, 31 December 1987. Hazardous Products Act "Ingredient Disclosure List" - Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2005.

Date of issue : 16/09/2010

Version : 1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.