
1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Zinc Dust
Catalog Number: RZ75
Product Use: For laboratory use only

Manufacturer's Name: Dalynn Biologicals Inc.
Supplier's Name: Dalynn Biologicals Inc.
Address: 3253 – 34 Avenue NE
Calgary, AB, Canada
T1Y 6X2

Telephone: 1-888-404-4045
Fax: (403) 250-9010
Chemical Emergency: 1-613-996-6666
Phone Number Only

2. HAZARD IDENTIFICATION**Emergency Overview****GHS Classification**

Self-heating substances and mixtures (Category 1)
Substances and mixtures, which in contact with water, emit flammable gases (Category 1)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 1)

GHS Label Elements, Including Precautionary Statements

Pictogram



Signal word Danger

Hazard statement(s)

H251 Self-heating: may catch fire.
H260 In contact with water releases flammable gases which may ignite spontaneously.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P223 Do not allow contact with water
P231+P232 Handle and store contents under inert gas. Protect from moisture
P235 Keep cool.
P273 Avoid release to environment
P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P501 Dispose of contents/container to an approved waste disposal plant.

Potential Health Effects

Inhalation	May be harmful if inhaled may cause respiratory tract irritation. No adverse effects are expected but dust may cause mechanical irritation. When heated, the fumes are highly toxic and may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest and muscle pain and increased white blood count.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.
Ingestion	May be harmful if swallowed.

3. COMPOSITION & INFORMATION ON INGREDIENTS

Synonyms Zinc metal powder

INGREDIENT	%	CAS-No.	EC-No.	Index-No.
Zinc powder (pyrophoric)	~99	7440-66-6	231-175-3	030-001-00-1

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move affected individual out of affected area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash affected area with soap and plenty of water. Consult a physician.

In case of eye contact

As a precaution, flush eyes with plenty of water.

If swallowed

Do not induce vomiting. Rinse mouth with water if patient is conscious. Take patient to hospital and consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability

Flammable in the presence of an ignition source when the temperature is above the flash point. Fine dust in air may ignite. Pyrophoric: spontaneously flammable in air. Water reactive. Contact with water liberates extremely flammable gases.

Suitable extinguishing media

DO NOT USE WATER!! Use alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions: carbon oxides, zinc oxides

Explosion data – sensitivity to mechanical impact

No data available.

Explosion data – sensitivity to static discharge

No data available.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing in dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the Environment must be avoided.

Methods and materials for containment and cleaning up

Wearing appropriate safety gear including chemical resistant gloves and dust mask or respirator. Sweep up and place in a sealed container and hold for disposal. Do not expose spill to water.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use in area with adequate ventilation. Keep away from sources of ignition.

Conditions for safe storage

Keep container tightly closed in a well ventilated place.
Keep in a dry place. Never allow product to get in contact with water during storage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Components with workplace control parameters**

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

Personal protective equipment**Respiratory protection**

Use in area with adequate ventilation. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands after use.

Eye protection

Face shield and/or safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Skin and body protection

Wear appropriate clothing such as a lab coat that covers as much of the body as possible. Complete suit can also be worn if desired.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Powder
Color	Grey

Safety data

pH	No data available
Melting point/ freezing point	420°C (788°F)
Boiling point	907°C (1,655°F)
Flash point	No data available
Ignition temperature	No data available
Auto ignition temperature	Classified as self-heating
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	1 hPa (1 mmHg) at 487°C (909°F)
Density	7.133 g/mL at 25°C (77°F)
Water solubility	No data available
Partition coefficient/ n-octanol/water	log Pow: 5
Relative vapor density	No data available
Odour	No data available
Odour threshold	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Reacts with water to form flammable gases.

Conditions to avoid

Exposure to moisture / water.

Materials to avoid

Strong acids and oxidizing agents.

Hazardous decomposition products

Other decomposition products – No data available

Hazardous decomposition products formed under fire conditions – carbon oxides and zinc oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity****Oral LD50**

No data available

Inhalation LC50

No data available

Other information on acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity – single exposure (GHS)

No data available

Specific target organ toxicity – repeated exposure (GHS)

No data available

Aspiration hazard

No data available

Potential health effects

Inhalation	May be harmful if inhaled may cause respiratory tract irritation. No adverse effects are expected but dust may cause mechanical irritation. When heated, the fumes are highly toxic and may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest and muscle pain and increased white blood count.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. Causes skin burns.
Eye	Causes eye irritation and burns.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects

No data available

Additional information

RTECS: ZG8600000

12. ECOLOGICAL INFORMATION

Toxicity

Component	Freshwater Algae	Freshwater Fish	Water Flea
Zinc powder (zinc dust)	(<i>Pseudokirchneriella subcapitata</i>) EC50 = 0.09 – 0.125 mg/L – 72h static (<i>Pseudokirchneriella subcapitata</i>) EC50 = 0.11 – 0.271 mg/L – 96h static	(<i>Oncorhynchus mykiss</i>) LC50 = 0.41 mg/L – 96h static (<i>Oncorhynchus mykiss</i>) LC50 = 0.59 mg/L – 96h semi-static (<i>Oncorhynchus mykiss</i>) LC50 = 0.24 mg/L – 96h flow-through (<i>Lepomis macrochirus</i>) LC50 = 3.5 mg/L – 96h static (<i>Cyprinus carpio</i>) LC50 = 7.8 mg/L – 96h static (<i>Cyprinus carpio</i>) LC50 = 0.45 mg/L – 96h semi-static (<i>Pimpehales promelas</i>) LC50 = 2.66 mg/L – 96h static (<i>Pimpehales promelas</i>) LC50 = 0.211 – 0.269 mg/L – 96h semi-static (<i>Pimpehales promelas</i>) LC50 = 2.16 – 3.05 mg/L – 96h flow-through	(<i>Daphnia magna</i>) EC50 = 0.139 – 0.908 mg/L – 48h static

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

PBT and vPvB assessment

No data available

Other adverse effects

Very toxic to aquatic life with long lasting effects.

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

UN Number: 1436 Class: 4.3 (4.2) Packing Group: II
Proper Shipping Name: Zinc powder
Reportable Quantity (RQ): 1000 lbs
Marine Pollutant: No
Poison Inhalation Hazard: No

IMDG

UN Number: 1436 Class: 4.3 (4.2) Packing Group: II EMS-No: F-G, S-O
Proper Shipping Name: Zinc powder
Marine Pollutant: No

IATA

UN Number: 1436 Class: 4.3 (4.2) Packing Group: II
Proper Shipping Name: Zinc powder

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by them.

16. OTHER INFORMATION**Further information**

Copyright 2017 Dalynn Biologicals Inc. The above information is believed to be correct but does not purport to be all inclusive and shall be only used as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Dalynn Biologicals Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.
