# MATERIAL SAFETY DATA SHEET

## MICRONUTRIENTS TBZC

### 1. Product And Company Identification

| Supplier | Manufacturer |
|---|---|
| **Micronutrients**<br>**1550 Research Way**<br>**Indianapolis, IN 46231**<br><br>**Company Contact:** Ted Moore<br>**Telephone Number:** (317) 486-5880 | **Micronutrients**<br>**1550 Research Way**<br>**Indianapolis, IN 46231**<br><br>**Company Contact:** Ted Moore<br>**Telephone Number:** (317) 486-5880 |
| **Supplier Emergency Contacts & Phone Number**<br>**CHEMTREC: (800) 424-9300**<br>**Micronutrients: (317) 486-5880** | **Manufacturer Emergency Contacts & Phone Number**<br>**CHEMTREC: (800) 424-9300**<br>**Micronutrients: (317) 486-5880** |

**Issue Date:** 07/26/2001

**Product Name:** MICRONUTRIENTS TBZC
**CAS Number:** 11073-22-6
**Chemical Formula:** Zn5 Cl2 (OH)8 - H2O
**MSDS Number:** 428

**Synonyms**

Basic Zinc Chloride
Tetrabasic Zinc Chloride
Zinc Hydroxychloride
Zinc Oxychloride

**Product/Material Uses**

SPECIAL NOTE: AUTHORIZED FOR USE IN ANIMAL FEED ONLY !

### 2. Composition/Information On Ingredients

| Ingredient Name | CAS Number | | Percent Of Total Weight |
|---|---|---|---|
| BASIC ZINC CHLORIDE | 11073-22-6 | | 100 |

### 3. Hazards Identification

**Eye Hazards**

Zinc chloride compounds have been reported as causing eye irritation which may be an allergic reaction.

**Skin Hazards**

Zinc chloride compounds have been reported as causing skin irritation which may be on an allergic basis. Discoloration of skin may occur but is not indicative of any injury or illness.

**Ingestion Hazards**

Zinc Chloride may be toxic by ingestion.

**Inhalation Hazards**

Zinc Chloride may be toxic by inhalation.

### 4. First Aid Measures

**Eye**

Flush affected eyes with large amounts of water for at least 20 minutes. Contact an eye doctor if irritation or other problems develop.

## 4. First Aid Measures - Continued

**Skin**

Immediately wash exposed skin with soap and large amounts of water.

**Ingestion**

Contact Poison Control Center and occupational physician immediately and follow their directions.

**Inhalation**

Remove person to fresh air immediately. Perform artificial respiration if necessary. Contact a physician.

## 5. Fire Fighting Measures

**Fire And Explosion Hazards**

Material is not considered to be combustible.

Material may melt with decomposition under fire conditions. Large concentrations of dust may contribute to a flammable or explosive mixture in air.

**Extinguishing Media**

Fire extinguishing media must be compatable with material that is burning.

**Fire Fighting Instructions**

Self contained breathing apparatus must be worn when fighting fires with Zinc compounds present.

## 6. Accidental Release Measures

Material is dry powder form. Lightly sweep or vacuum material to collect.

## 7. Handling And Storage

**Handling And Storage Precautions**

Store in cool dry place. Do not allow bags to become wetted or exposed to fire or extreme heat. When opening bags, wear personal protective equipment as indicated when ventilation is not adequate.

**Work/Hygienic Practices**

Practice good personal hygiene when handling material. Wash thoroughly if skin becomes contaminated. Separately wash soiled clothing as appropriate.

## 8. Exposure Controls/Personal Protection

**Engineering Controls**

Local or general area ventilation to keep concentrations of dust below the PEL. Consider engineering controls to collect dust where possible.

**Eye/Face Protection**

Chemical goggles should be required when opening or handling open bags of this material.

**Skin Protection**

Work uniforms or coveralls should be worn to prevent dust accumulation on street clothes. PVC gloves should be worn to prevent skin contact with hands when handling the material.

**Respiratory Protection**

Where adequate ventilation is not available, a NIOSH approved dust mask or air purifying respirator with P-100 or N-100 (HEPA) filter cartridges should be worn when opening or handling open bags of this material.

**Ingredient(s) - Exposure Limits**

BASIC ZINC CHLORIDE

There is no TLV or PEL established specifically for Basic Zinc Chloride.
The following are those for Zinc Chloride Fume (CASRN 7646-85-7):

## 8. Exposure Controls/Personal Protection - Continued

**Ingredient(s) - Exposure Limits - Continued**

ACGIH 8 hr TLV: 1 mg/m3
OSHA 8 hr PEL: 1 mg/m3
The following are those for Zinc Oxide Dust (CASRN 1314-13-2) Respirable Fraction:
ACGIH 8 Hr TLV: 10 mg/m3
OSHA 8 Hr PEL: 5 mg/m3

## 9. Physical And Chemical Properties

**Appearance**

Fine, white particulate (typical particle size: 100-400 microns)

**Chemical Type:** Pure
**Physical State:** Solid
**Specific Gravity:** 1.2 - 1.4
**Molecular Weight:** 551.89
**Packing Density:** 35 - 45 lb/ft3
**Solubility:** insoluble in water
pH 6.9 in water measured by EPA Method SW846-9045

Material melts with decomposition.

Material soluble in ammonium hydroxide solutions.
Material soluble with decomposition in dilute acids.

## 10. Stability And Reactivity

**Stability:** Stable
**Hazardous Polymerization:** Will not occur

**Conditions To Avoid (Stability)**

None known

**Incompatible Materials**

None known

**Hazardous Decomposition Products**

Will decompose with emissions of hydrogen chloride at 450 degrees centigrade.

## 11. Toxicological Information

**Miscellaneous Toxicological Information**

This material was subjected to a research study involving feeding this material to animals in varying concentrations greater than normal animal feed additive concentrations. The results of the study indicate that the animals were able to substitute this zinc material for the zinc supplement that they had been accustomed to being fed with no adverse health effects.

In man, the ingestion of large amounts of zinc compounds has caused vomiting, gastric pain, anemia, convulsions, shock, and death. Symptoms attributed to damage to the nervous system and kidney have been recorded.

## 12. Ecological Information

**Other Environmental Information**

No ecological effects known.

## 13. Disposal Considerations

Dispose of waste material in accordance with local, state, and federal regulations. Consider reclaiming or recycling material whenever possible.

## 14. Transport Information

**Proper Shipping Name**

(Not regulated by U. S. DOT)

## 15. Regulatory Information

**U.S. Regulatory Information**

Basic Zinc Chloride is not on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as feed additives are not regulated under TSCA, per Section 3 (2)(B)(vi) of TSCA and Section 201(f) of the Federal Food, Drug, and Cosmetic Act (FFDCA).

This chemical is subject to the Tier I/Tier II reporting requirements of the Emergency Planning and Community Right To Know Act (EPCRA - 40 CFR 370.25) if present and on-site in quantities equal to or exceeding 10,000 pounds.

Micronutrients TBCC is not regulated as a hazardous material under the U.S. DOT Regulations.

**SARA Hazard Classes**

Acute Health Hazard

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

**SARA Section 313 Notification**

Zinc compounds are considered to be toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

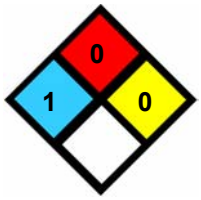
**Ingredient(s) - U.S. Regulatory Information**

BASIC ZINC CHLORIDE

SARA Title III - Section 313 Form "R"/TRI Reportable Chemical

SARA - Acute Health Hazard

**NFPA**




**HMIS**

| | |
|---|---|
| HEALTH | 1 |
| FLAMMABILITY | 0 |
| REACTIVITY | 0 |
| PERSONAL PROTECTION | J |

## 16. Other Information

**Revision/Preparer Information**

**MSDS Preparer: Douglas A. Lozier**

**MSDS Preparer Phone Number: (317) 875-4670**

## 16. Other Information - Continued

**Reference Documentation**

Information based on research conducted by the University of Florida Institute of Food and Agricultural Sciences, "Hazardous Chemicals Desk Reference" by Sax and Lewis, RTECS of NIOSH, and Heritage Research Group.

**Other Information**

Basic Zinc Chloride is intended only for use as a source of zinc in animal feeds. Other uses are not authorized.

## Disclaimer

**Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitablility of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purposes(s).**

**Micronutrients**