

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

1.1. Identification

Product form : Substance
 Substance name : Ammoniated Zinc 10%
 Other means of identification : 10% Zinc Solution, Alkaline Zinc Solution

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

Use of the substance/mixture : Various agricultural applications

1.3. Details of the supplier of the safety data sheet

Two Rivers Terminal
 3300 North Glade Road
 Pasco, Wa. 99302 - USA
 T 509-547-7776 - F 509-546-9508
www.tworiversterminal.com

1.4. Emergency telephone number

Emergency number : 24 Hour Emergency HAZMAT Response: (800) 229-5252; EPA National Response Center (800) 424-8802

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Eye Irrit. 2A H319 - Causes serious eye irritation
 Aquatic Acute 3 H402 - Harmful to aquatic life

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
 Hazard statements (GHS-US) : H319 - Causes serious eye irritation
 H402 - Harmful to aquatic life
 Precautionary statements (GHS-US) : P264 - Wash skin thoroughly after handling
 P273 - Avoid release to the environment
 P280 - Wear eye protection, protective gloves
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P337+P313 - If eye irritation persists: Get medical advice/attention
 P501 - Dispose of contents/container to comply with local, state, and federal regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

| Name | Product identifier | % | Classification (GHS-US) |
|---|--------------------|-----|--|
| Ammoniated Zinc 10% (Main constituent) | | 100 | Eye Irrit. 2A, H319 Aquatic Acute 3, H402 |

Full text of H-phrases: see section 16

3.2. Mixture

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May cause eye irritation.
Symptoms/injuries after inhalation : May cause respiratory irritation.
Symptoms/injuries after skin contact : May cause slight irritation to the skin.
Symptoms/injuries after eye contact : Irritation to eyes.
Symptoms/injuries after ingestion : Ingestion may cause nausea, vomiting and diarrhea.

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 : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8 : Exposure-controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
Incompatible products : alkalis. Caustics. nitric acid. Oxidizing agents.
Storage area : Keep container in a well-ventilated place.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

| | |
|----------------------------------|---|
| Appropriate engineering controls | : Ensure good ventilation of the work station. |
| Hand protection | : Protective gloves. |
| Eye protection | : Safety glasses. |
| Skin and body protection | : Wear suitable protective clothing. |
| Respiratory protection | : In case of insufficient ventilation, wear suitable respiratory equipment. |
| Environmental exposure controls | : Avoid release to the environment. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---------------------|
| Physical state | : Liquid |
| Color | : Tan |
| Odor | : Ammonia odour |
| Odor threshold | : No data available |
| pH | : 7.5 - 8.5 |
| Melting point | : Not applicable |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Vapor pressure | : No data available |
| Relative density | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Specific gravity / density | : 1.26 g/ml |
| Solubility | : No data available |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

alkalis. Carbonates. nitric acid. Oxidizing agents.

10.6. Hazardous decomposition products

ammonia. Nitrogen oxides. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| | |
|--|--|
| Acute toxicity | : Oral: Not classified. |
| Skin corrosion/irritation | : Not classified pH: 7.5 - 8.5 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 7.5 - 8.5 |
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| Specific target organ toxicity (single exposure) | : Not classified |
| Specific target organ toxicity (repeated exposure) | : Not classified |
| Aspiration hazard | : Not classified |
| Symptoms/injuries after inhalation | : May cause respiratory irritation. |
| Symptoms/injuries after skin contact | : May cause slight irritation to the skin. |
| Symptoms/injuries after eye contact | : Irritation to eyes. |
| Symptoms/injuries after ingestion | : Ingestion may cause nausea, vomiting and diarrhea. |

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|---------------------------------|--|
| Sewage disposal recommendations | : Prevent liquid from entering sewers, watercourses, underground or low areas. |
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

Department of Transportation (DOT)

| | |
|--------------------------------|--|
| In accordance with DOT | |
| Transport document description | : UN3082 Environmentally hazardous substances, liquid, n.o.s. (Zinc Sulfate), 9, III |
| UN-No.(DOT) | : UN3082 |

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| | |
|----------------------------|--|
| Proper Shipping Name (DOT) | : Environmentally hazardous substances, liquid, n.o.s. Zinc Sulfate |
| 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 |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : 203 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : 241 |
| 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. 173 - An appropriate generic entry may be used for this material. 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. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 155 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : No limit |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : No limit |
| DOT Vessel Stowage Location | : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel. |
| Other information | : No supplementary information available. |

TDG

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

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15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes : Format change.

Revision date : 08/26/2015

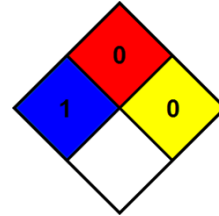
Full text of H-phrases:

| | |
|-----------------|--|
| Aquatic Acute 3 | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| H319 | Causes serious eye irritation |
| H402 | Harmful to aquatic life |

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

All information contained in this Safety Data Sheet is furnished free of charge and is intended for your evaluation. In our opinion the information is, as of the date of this Safety Data Sheet, reliable, however, it is your responsibility to determine the suitability of the information for your use. You are advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional or variable conditions or circumstances exist or because of applicable laws or government regulations. Therefore, you should use this information only as a supplement to other information gathered by you, and you must make independent determinations of the suitability and completeness of the information from all sources to assure both proper use of the material described herein and the safety and health of employees. Accordingly, no guarantee is expressed or implied as to the results to be obtained based upon your use of the information.