## SAFETY DATA SHEET

| Dyna Zone 15-0-10-6S | Date Prepared: 5/30/2014 | Replaces: All Previous |
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## SECTION 1. IDENTIFICATION

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|---|---|
| Product Name: | Dyna Zone 15-0-10-6S |
| Synonyms: | ZON15010 |
| Use: | Agricultural, Liquid Micronutrient Fertilizer |
| Manufacturer: | Chemical Dynamics, Inc. |
| | 4206 Business Lane |
| | Plant City FL 33566 |
| Phone: | 813-752-4950 |
| Chemtrec (Emergency) Phone: | 800-424-9300 |

## SECTION 2. HAZARDS IDENTIFICATION

| Pictogram | Signal Word | Hazard Class | Hazard Category | Hazard Statement |
|---|---|---|---|---|
| | | | | |
|  | **WARNING** | Skin Irritation<br>Eye Irritation | Cat 2<br>Cat 2A | Causes skin irritation<br>Causes serious eye irritation |
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| **Precautionary Statements:** | **Prevention:** Wash thoroughly after handling. Wear protective gloves, eye protection, and face protection.<br>**Response**: <u>If on skin (or hair):</u> Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.<br><u>If in eyes:</u> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical attention.<br><u>Ingestion:</u> Rinse mouth. Drink large amounts of water. Do NOT induce vomiting. Call doctor or poison control.<br><u>Inhalation:</u> Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention for any breathing difficulty.<br>**Storage**: Keep container tightly closed. Store between 30°F and 120°F.<br>**Disposal**: Dispose of contents/containers in accordance with local/regional/national regulations (See Section 13 of SDS). Containers may be triple rinsed and offered for recycling. |

## SECTION 3. COMPOSITION

| Material | CAS # | EINECS # | %WT |
|---|---|---|---|
| Potassium Thiosulfate | 10294-66-3 | 233-666-9 | 20% |
| Triazone | 7098-14-8 | 230-406-5 | Proprietary Blend of |
| Urea | 57-13-6 | 200-315-5 | Materials Not Classified as |
| Water | 7732-18-5 | 231-791-2 | Hazardous |

See product label for guaranteed analysis.

| SECTION 4. FIRST AID MEASURES | |
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| **General:** | In case of persisting adverse effects consult a physician. Treat symptomatically. |
| **Ingestion:** | Rinse mouth. Drink large amounts of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention. |
| **Skin Contact:** | Remove contaminated clothing. Wash with soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. |
| **Inhalation:** | Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention for any breathing difficulty. |
| **Eye Contact:** | Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| **Acute Exposure Symptoms:** | Irritation to respiratory tract. Irritation or burning sensation eyes. Prolonged or repeated contact with skin may cause skin irritation. Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea. Potassium thiosulfate is considered to have a low toxicity to humans. |
| **Chronic Exposure Symptoms:** | Not available |

| SECTION 5. FIRE FIGHTING MEASURES | |
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| **Extinguishing Media:** | Not Flammable. Use extinguishing media appropriate to surrounding fire. Cool containers with water spray from a distance to avoid rupture from thermal expansion. |
| **Specific Hazards:** | This product is an aqueous mixture which will not burn. In a fire, this material may decompose and produce ammonia, sulfur, sulfur oxides and oxides of nitrogen, carbon and potassium. |
| **Protective Equipment and Precautions for Fire-Fighters:** | Wear self-contained breathing apparatus (SCBA) and full protective gear. Avoid inhaling combustion products.<br>Fire run-off should be contained to prevent possible environmental damage. |
| **NFPA Rating:** | Health: 1, Fire: 0, Reactivity: 0 |

| SECTION 6. ACCIDENTAL RELEASE MEASURES | |
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| **Precautions:** | Isolate area. Keep unnecessary personnel away. Avoid splashing or spraying. |
| **Protective Equipment:** | Impervious gloves (rubber, neoprene or nitrile), Long sleeved clothing.<br>Chemical splash-proof goggles, face shield<br>Chemical resistant apron and/or rubber boots may be needed. Clothing and equipment can be washed or laundered for reuse. |
| **Containment:** | Stop flow of material if safe to do so. Dike area with diatomaceous earth or sand and maximize recovery. Avoid infiltration of large quantities into drains, surface water, groundwater and soil. Keep out of “waters of the U.S.” because of potential aquatic toxicity. |
| **Clean Up:** | Pump into a suitable tank or absorb with diatomaceous earth or sand. Sweep up and place into suitable containers for agronomical land application at recommended rates or dispose of in accordance with local/regional/national regulations (See Section 13 of SDS). |

| SECTION 7. HANDLING AND STORAGE | |
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| **Precautions for safe handling:** | Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Do not eat, drink or use tobacco products when handling this material. Apply product in open areas. Keep away from children and pets. Do not contaminate feed, seed or any water sources. Launder work clothes frequently and separate from other laundry. |
| **Conditions for safe storage:** | Store in a well-ventilated, cool, dry place, away where freezing is possible. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store tote and smaller containers out of direct sunlight at moderate temperatures. Keep containers tightly closed when not in use. Do not let product go below 30°F or above 105°F. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.<br>Product solutions have been successfully stored in 304 stainless steel, fiberglass, polypropylene and HD polyethylene. Consult with tank manufacturers to confirm whether a specific resin is acceptable product storage. |
| **Incompatibilities:** | This product is not compatible with copper, zinc, lead, mercury or their alloys (i.e. bronze, brass, galvanized metals, etc.). These materials of construction should not be used in piping, handling systems or storage containers for this product.<br>Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Acids will cause the release of sulfur dioxide, a severe respiratory hazard. |

| SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION | | | |
|---|---|---|---|
| **Component Exposure Limits:** | Urea | Not Established | PEL, OSHA |
| | | 10 mg/m$^3$ | TLV, ACGIH |
| | | Not Established | IDLH, NIOSH |
| | | Not Established | REL, NIOSH |
| | | Not Established | STEL, NIOSH |
| | Potassium Thiosulfate and Triazone | Not Established | PEL, OSHA |
| | | Not Established | TWA, ACGIH |
| | | Not Established | IDLH, NIOSH |
| | | Not Established | REL, NIOSH |
| | | Not Established | STEL, NIOSH |
| **Engineering Controls:** | Provide local exhaust ventilation and wash facilities. | | |
| **Personal Protective Equipment:** | Eyes: chemical splash-proof goggles and face shield<br>Skin: Impervious gloves (rubber, neoprene or nitrile), long sleeved clothing and Chemically resistant apron.<br>Respiratory: None required for ambient air concentrations (i.e. in the open under normal agronomic conditions). Use NIOSH approved respirator when dusts, mists, or vapors are present. | | |
| **General:** | Eye wash stations and safety shower recommended. Good industrial hygiene practices should be followed, such as, washing thoroughly after handling and before eating or drinking. | | |

| SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES | | | |
|---|---|---|---|
| **Appearance:** | Clear, light blue to colorless liquid | | |
| **Odor:** | Amine odor | **UEL / LEL:** | Not Applicable |
| **Odor Threshold:** | Not Available | **Vapor Pressure:** | Similar to water |
| **pH:** | 9.6 to 10.5 | **Density:** | 1.30 to 1.32 g/cm$^3$ |
| **Melting/Freezing Point:** | < 0°C (32°F) | **Solubility:** | Water |
| **Boiling Point:** | >100°C (212°F) | **$Log_{ow}$:** | Not Available |
| **Flash Point:** | Not Applicable | **Auto Ignition Temp:** | Not Applicable |
| **Evaporation Rate:** | Not Available | **Decomposition Temp:** | Not Available |
| **Flammability (Solid/Gas):** | Not Applicable | **Viscosity** | Not Available |

| SECTION 10. STABILITY AND REACTIVITY | |
|---|---|
| **Reactivity:** | Stable |
| **Chemical Stability:** | Stable under normal conditions |
| **Possibility of Hazardous Reactions:** | Hazardous polymerization will not occur. |
| **Conditions to avoid:** | Heat, strong oxidizers and acids or acidic materials. Elevated temperatures may cause containers to rupture. Do not allow product to go above 105°F. |
| **Incompatible Materials:** | Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Avoid contact with acids or acid materials. Acids will cause the release of sulfur dioxide, a severe respiratory hazard. Acids can also precipitate elemental sulfur. The product DynaZone® is not compatible with copper, zinc, lead, mercury or their alloys (i.e. bronze, brass, galvanized metals, etc.). These materials of construction should not be used in piping, handling systems or storage containers for this product. |
| **Hazardous Decomposition Products:** | Heating this product will evolve ammonia. Heating to dryness will cause the production of ammonia, potassium sulfate, sulfur, oxides of carbon and sulfur. Ammonia (16-25%) may form flammable mixtures with air. |

| SECTION 11. TOXILOGICAL INFORMATION | |
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| **Acute Toxicity:** | LD50 oral (rat): > 2000 mg/kg, all components |
| **Likely Routes of Exposure:** | Inhalation, ingestion or skin absorption |
| **Symptoms and Signs of Exposure:** | Eyes: Contact with the eyes by product mist or solution may cause irritation or a burning sensation.<br>Skin: Prolonged or repeated contact with product mist or solution may cause skin irritation. Absorption is unlikely to occur.<br>Ingestion: Ingestion of product solution may cause irritation of the gastrointestinal tract to include nausea, vomiting and diarrhea. Potassium thiosulfate is considered to have a low toxicity to humans.<br>Inhalation: Inhalation of product mist may cause irritation of the nose, throat and respiratory tract. |
| **Chronic Effects:** | None known |
| **Carcinogenetic:** | None of this product's components are listed by ACGIH, OSHA, IARC, NIOSH or NTP as carcinogenic. |
| **Mutagenicity:** | Not Available |
| **Reproductive Toxicity:** | Not Available |

| SECTION 12. ECOLOGICAL INFORMATION | |
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| **Ecotoxicity:** | This product is not bioaccumulative. |
| **Other Adverse Effects:** | Not harmful to ozone layer |
| **Ecotoxicity:** | Potassium Thiosulfate:<br>Static acute 96 hour-LC50 for sheepshead minnow is > 1,000 mg/L.<br>Static acute 96 hour-LC50 for mysid shrimp is 89 mg/L.<br>Urea:<br>LC50 – Poecilia retiulata (guppy): 17,500 mg/L for 96 hrs<br>Triazone: Not Available |

| SECTION 13. DISPOSAL CONSIDERATIONS | |
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| **General Information:** | None |
| **Disposal Instructions:** | Agronomical land application at recommended rates or dispose of in accordance with local/regional/national regulations. |

| SECTION 14. TRANSPORT INFORMATION | |
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| **This material is not hazardous as defined by 49 CFR 172.101 by the US Department of Transportation** | |
| **Proper Shipping Name:** | Urea Triazone solution (Not regulated by DOT) |
| **Hazard Class:** | Not Applicable |
| **UN Identification #:** | Not Applicable |
| **Packing Group:** | Not Applicable |
| **Required Label(s):** | Not Applicable |
| **Emergency Response Guide Number:** | Not Applicable |
| **Marine Pollutant:** | No |

| SECTION 15. REGULATORY INFORMATION | |
|---|---|
| **TSCA Inventory Status** | All intentional ingredients listed on the TSCA inventory. |
| **DSCL (EEC) Status** | All intentional ingredients listed on the DSCL inventory. |
| **United States – SARA Hazard Category:** | This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories:<br><br>Fire – No, Pressure – No, Acute – Yes, Chronic – No, Reactive – No |
| **SARA Title III Information:** | This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372: |
| Triazone<br>CAS No. 31138-65-6,<br>Urea<br>CAS No. 57-13-6 and<br>Potassium Thiosulfate<br>CAS No. 10294-66-3 | CERCLA RQ (pounds): No<br>SARA Reporting, 302: No<br>SARA Reporting, 304: No<br>SARA Reporting, 313: No |

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| **Federal Insecticide, Fungicide, and Rodenticide Act** | This product is not a pesticide. |
| **State Regulations:** | Other state regulations may apply. Check individual state requirements. |

## SECTION 16. OTHER INFORMATION

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| Date of Revision: | 5/30/2014, revision prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards. |
| Disclaimer: | The information contained in this SDS refers only to the specific material designated and does not relate to any process or use with any other materials. This information is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Because safety standards and regulations are subject to change and because Chemical Dynamics, Inc. has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. No warranty, expressed or implied, and no liability is assumed by Chemical Dynamics, Inc. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents. |