

SAFETY DATA SHEET

Dyna Gro Zinc



Date Prepared: 8/8/2013

Replaces: All Previous

SECTION 1. IDENTIFICATION

Product Name: Dyna Gro Zinc
 Synonyms: Zinc Nitrate Solution, GROZN
 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	Oxidizing Liquid	Cat 3	May intensify fire; oxidizer
		Skin Irritation Eye Irritation STOT: Single Exposure	Cat 2 Cat 2A Cat 3	Causes skin and serious eye irritation May cause respiratory Irritation
Precautionary Statements:	<p>Prevention: Keep away from heat. Keep/Store away from clothing and combustible materials. Take any precaution to avoid mixing with combustibles. Wear protective gloves/chemical splash proof goggles/face protection. Wash thoroughly after handling. Avoid breathing dusts/fumes/vapors/gas/mists or sprays. Use only outdoors or in well-ventilated area.</p> <p>Response: <u>If inhaled:</u> Remove person to fresh air and keep comfortable for breathing <u>If on skin:</u> Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical attention. <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 or advice. <u>If swallowed:</u> rinse mouth, Do NOT induce vomiting. Call poison center or doctor if you feel unwell.</p> <p>Storage: Store in a well ventilated place. Keep container tightly closed. Store locked up. Do not allow product to dry out.</p> <p>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.</p>			

SECTION 3. COMPOSITION

Material	CAS #	EINECS #	%WT
Zinc Nitrate	7779-88-6	231-943-8	50%
Water	7732-18-5	231-791-2	balance

See product label for guaranteed analysis.

SECTION 4. FIRST AID MEASURES

Ingestion:	Rinse mouth. Do NOT induce vomiting. Drink large amounts of water. Never give anything by mouth to an unconscious person. Immediately call physician or poison control.
Skin Contact:	Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
Inhalation:	Remove person to fresh air and keep comfortable for breathing. If not breathing, give artificial respiration. Seek prompt medical attention.
Eye Contact:	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical attention or advice.
Acute Exposure Symptoms:	Harmful if swallowed or inhaled. Destructive to mucous membranes and upper respiratory tract, eyes and skin. Redness and irritation of tissue may occur. Ingestion can lead to stomach aches and nausea. High levels of zinc nitrate may reduce the blood's ability to transport oxygen causing headache, fatigue, dizziness and blue lips and skin (methemoglobinemia).
Chronic Exposure Symptoms:	Exposure to zinc compounds is mainly acute and lasts less than a day.

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing Media:	Use water. Do not use dry chemicals or foams. CO2 or halon may provide limited control. Cool containers with water spray to avoid rupture due to thermal expansion.
Specific Hazards:	This product is an aqueous mixture which will not burn. Under fire conditions, this product behaves as an oxidizer, particularly if evaporated to dryness. Contact with oxidizable substances may result in ignition. Violent combustion or explosion when involved in fire can occur. This material may decompose and produce acrid vapors, zinc compounds and oxides of nitrogen. For safety, avoid water spray with full jet to prevent spread of product.
Protective Equipment and Precautions for Fire-Fighters:	Wear self-contained breathing apparatus (SCBA) and full protective gear. Avoid inhaling combustion products. Fire run-off should be contained to prevent possible environmental damage.
NFPA Rating:	Health: 2, Fire: 0, Reactivity: 0, OX

SECTION 6. ACCIDENTAL RELEASE MEASURES	
Precautions:	Isolate area. Keep unnecessary personnel away. Avoid splashing or spraying.
Protective Equipment:	Impervious gloves (rubber, neoprene or nitrile), Long sleeved clothing, chemical splash-proof goggles, face shield. Chemical resistant apron and/or rubber boots may be needed.
Containment:	Stop flow of material if safe to do so. Dike area with diatomaceous earth or sand and maximize recovery. Do not absorb in saw dust.
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	
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 from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Do not store on wood floors. Keep containers tightly closed when not in use. Do not let product go below 32°F. Store locked up. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged.
Incompatibilities:	Flammable and combustible materials, strong reducing agents (such as ammonium hydroxide), finely powdered metals. Keep away from intense heat or fire.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION			
Component Exposure Limits:	Zinc Nitrate $Zn(NO_3)_2$	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:	<u>Eyes:</u> or chemical splash-proof goggles <u>Skin:</u> Impervious gloves (rubber, neoprene or nitrile), long sleeved clothing. Chemically resistant apron is recommended. <u>Respiratory:</u> None required for ambient air concentrations (i.e. in the open under normal agronomic conditions) not exceeding occupational exposure limits. Respiratory protection may be required in the event of a spill in an enclosed area. Use a NIOSH/MSHA approved SCBA with full face piece operated in a positive pressure mode.		
General:	Eye wash stations and safety shower required.		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearance:	Clear, colorless Liquid		
Odor:	Odorless	UEL / LEL:	Not Applicable
Odor Threshold:	Not Applicable	Vapor Pressure:	Similar to water
pH:	2-3	Density:	1.6 g/cm ³
Melting/Freezing Point:	-7°C (19.4°F)	Solubility:	Water
Boiling Point:	> 100°C (>212°F)	Log_{ow}:	Not Available
Flash Point:	Not Applicable	Auto Ignition Temp:	Not Applicable
Evaporation Rate:	Similar to water	Decomposition Temp:	Not Available
Flammability (Solid/Gas):	Not Applicable	Viscosity	Not Available

SECTION 10. STABILITY AND REACTIVITY	
Reactivity:	Product may act as an oxidizer
Chemical Stability:	Stable under normal conditions
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	Avoid exposure to extreme temperatures, contact with incompatible chemicals and all contact with combustible materials. Elevated temperatures may cause containers to rupture. Do not allow product to dry out.
Incompatible Materials:	Flammable and combustible materials, strong reducing agents (such as ammonium hydroxide), finely powdered metals.
Hazardous Decomposition Products:	Zinc compounds and nitrogen oxides.

SECTION 11. TOXICOLOGICAL INFORMATION	
Acute Toxicity:	LD50 oral (rat): 1558.7 mg/kg (as dry material) 3117 mg/kg (as product)
Likely Routes of Exposure:	Inhalation, ingestion or skin absorption
Symptoms and Signs of Exposure:	<u>Eyes:</u> Causes irritation. May result in redness, tearing and blurred vision. <u>Skin:</u> Causes irritation to the skin. May result in redness, itching and pain. <u>Ingestion:</u> Irritating to gastrointestinal tract. Abdominal pain, burning sensation, upset stomach and cramps may occur. <u>Inhalation:</u> Causes irritation to the respiratory tract. Cough, fever, nausea, irritability, apathy, headache and shortness of breath are possible. Metallic taste in mouth if inhaled.
Chronic Effects:	None known
Carcinogenic:	None of this product's components are listed by ACGIH, OSHA, NIOSH or NTP as carcinogenic. IARC: 2A Probably carcinogenic to humans (Nitrates (ingested) under conditions that result in endogenous nitrosation)
Mutagenicity:	Not Available
Reproductive Toxicity:	Not Available

SECTION 12. ECOLOGICAL INFORMATION	
Ecotoxicity:	In high concentrations, this product may be harmful to both terrestrial and aquatic plant or animal life.
Other Adverse Effects:	Not harmful to ozone layer
Ecotoxicity:	LC50 (96 hr) rainbow trout (juvenile): 0.43 mg/L. Flow-through, soft water. LC50 (96 hr) rainbow trout (juvenile): 1.2-7.2 mg/L. Flow-through, hard water. LC50 (96 hr) fathead minnow: 0.1-7.2 mg/L. LC50 (96 hr) bluegill: 0.1-7.2 mg/L

SECTION 13. DISPOSAL CONSIDERATIONS	
General Information:	As packaged, this product is a D001 ignitable waste per 40 CFR 261; applicable to wastes containing this product.
Disposal Instructions:	Agronomical land application at recommended rates or dispose of in accordance with local/regional/national regulations.

SECTION 14. TRANSPORT INFORMATION	
This material is hazardous as defined by 49 CFR 172.101 by the US Department of Transportation	
Proper Shipping Name:	Zinc Nitrate Solution
Hazard Class:	5.1
UN Identification #:	1514
Packing Group:	II
Required Label(s):	Oxidizer
Emergency Response Guide Number:	140
Marine Pollutant:	Yes

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: 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:
Zinc Nitrate CAS No. 7779-88-6	CERCLA RQ (pounds): 1000 lbs (100% basis) SARA Reporting, 302: No SARA Reporting, 304: No SARA Reporting, 313: Yes, 1.0% de minimus concentration (Zinc Compounds, N982) and 1.0% de minimus concentration (N511, Water Dissociable Nitrate)

Federal Insecticide, Fungicide, and Rodenticide Act	This product is not a pesticide.
State Regulations:	Other state regulations may apply. Check individual state requirements.
Zinc Nitrate: CAS No. 7779-88-6	Appears on one or more of the following state hazardous substance lists: CA, MA, NJ, PA

SECTION 16. OTHER INFORMATION

Date of Revision:	8/8/2013, 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.