

SAFETY DATA SHEET

Dyna Flo 3-0-6

Date Prepared: 7/10/2017

Replaces: All Previous

SECTION 1. IDENTIFICATION

Product Name: Dyna Flo 3-0-6
 Synonyms: MAC306X
 Use: Agricultural, Liquid 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 Eye Irritation STOT: SE	Cat 2 Cat 2A Cat 3	Causes skin and serious eye irritation May cause respiratory irritation
Precautionary Statements:	Prevention: Avoid breathing dusts, mists or sprays. Wear protective gloves, chemical splash proof goggles and face protection. Wash thoroughly after handling. Use only outdoors or in a well ventilated place. Response: <u>If on skin:</u> Wash with plenty of water. If skin irritation occurs, get medical attention. Take off contaminated clothing and wash it before reuse. <u>If in eyes:</u> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. If eye irritation persists, seek medical attention. <u>If Inhaled:</u> Remove person to fresh air and keep comfortable for breathing. Call poison center or doctor if you feel unwell. <u>If Swallowed:</u> Rinse mouth. Drink 2 glasses of water. Call poison center or doctor. Absorb spillage to prevent material damage. Storage: Store in corrosive resistant container (polypropylene or polyethylene, See Section 7 of SDS). 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
Sodium Nitrate	7631-99-4	231-554-3	17-20%
Potassium Sulfate	7778-80-5	231-915-5	Proprietary blend of materials not classified as hazardous or are below de minimus classification concentrations
Water	7732-18-5	231-791-2	

See fertilizer tag (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. Get medical attention immediately.
Skin Contact:	Wash with plenty of water. If skin irritation occurs, get medical attention. Take off contaminated clothing and wash it 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, seek medical attention.
Acute Exposure Symptoms:	Redness, irritation, burning to exposed skin and eyes. Ingestion may lead to gastrointestinal disturbances such as abdominal cramps, vomiting, bloody diarrhea, weakness.
Chronic Exposure Symptoms:	Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.

SECTION 5. FIRE FIGHTING MEASURES

Extinguishing Media:	This product is non-flammable. Use appropriate media for surrounding fire. Cool containers with water spray to avoid rupture due to thermal expansion.
Specific Hazards:	This product is an aqueous mixture and is not flammable. If evaporated to dryness, the solid residue may behave as an oxidizer. If material is exposed to prolonged heat in a fire, material may release acrid compounds, oxides of nitrogen, potassium, and sulfur. For safety, avoid water spray with full jet to prevent spread of product.
PPE & 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: 1, Fire: 0, Reactivity: 0

SECTION 6. ACCIDENTAL RELEASE MEASURES

Precautions:	Isolate area. Keep unnecessary personnel away. Avoid splashing or spraying. Do no touch or walk through spilled material.
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 into sawdust or other combustible materials. Prevent spillage from entering drains or open bodies of water. Any release to the environment may be subject to reporting requirements.
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:	Open containers carefully. 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 or well ventilated 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. Do not store on wood floors. Keep containers tightly closed when not in use. Do not let product go below 35°F. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Store in original container. Bulk shipments can be stored in HD polyethylene, polypropylene, fiberglass or 316L stainless steel.
Incompatibilities:	Flammable and combustible materials, strong reducing agents and bases (such as ammonium hydroxide), finely powdered metals, cyanide compounds, active metals like sodium or potassium. Keep away from intense heat or fire. Not compatible with copper, aluminum, zinc and their alloys (e.g. brass, bronze, galvanized metals). These materials should not be used in fittings, piping or storage tanks handling this product.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits:	Sodium Nitrate & Potassium Sulfate	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. Eye wash stations and safety showers required.		
Personal Protective Equipment:	<u>Eyes:</u> Chemical splash-proof goggles and face shield <u>Skin:</u> Impervious gloves (rubber, neoprene or nitrile), long sleeved clothing. Chemically resistant apron is recommended.		

	Respiratory: 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. Wear NIOSH approved respiratory protective equipment when vapor or mists may exist as well as a chemical suit.
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid		
Odor:	None	UEL / LEL:	Not Applicable
Odor Threshold:	Not Available	Vapor Pressure:	Not Available
pH:	7 to 9	Density:	1.24 to 1.25 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:	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 if evaporated to dryness
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.
Incompatible Materials:	Strong bases (e.g. aqua ammonia), active metals (e.g., sodium, potassium), cyanide compounds, flammable and combustible materials, strong reducing agents, finely powdered metals. May be corrosive to copper, aluminum, zinc and their alloys (e.g. brass, bronze, galvanized metals). These materials should not be used in fittings, piping or storage tanks handling this product.
Hazardous Decomposition Products:	Oxides of nitrogen, potassium, and sulfur

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity: (100% basis)	Sodium Nitrate LD50 oral (rat): >2000 mg/kg Potassium Sulfate LD50 oral (rat): 6600 mg/kg
Likely Routes of Exposure:	Inhalation of mist, eye, and skin contact.
Symptoms and Signs of Exposure:	<u>Eyes</u> : cause irritation, pain, reddening, and may result in blindness depending on the duration. <u>Skin</u> : Depending on the duration of contact, symptoms will include reddening, discomfort, irritation, ulceration and burns. Effects may be delayed. <u>Ingestion</u> : Irritating to gastrointestinal tract. Abdominal pain, burning sensation, upset stomach, abdominal cramps, vomiting, bloody diarrhea and weakness may occur. The nitrate component may reduce the blood's ability to transport oxygen causing headache, fatigue, dizziness and blue lips and skin (methemoglobinemia). Symptoms may be delayed. <u>Inhalation</u> : Can cause eye, nose, throat, and respiratory irritation or coughing, burns.
Chronic Effects:	Prolonged and/or repeated skin contact with this product may cause irritation/dermatitis.
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 and animal life.
Ecotoxicity:	Sodium Nitrate LC50 (48 hr) Daphnia magna (Water flea): 3,581,000 mg/L. Freshwater; static LC50 (96 hr) Lepomis macrochirus (bluegill): 3,247,000 mg/L. Freshwater; static Potassium Sulfate EC50 (48 hr) Daphnia magna (water flea): 720,000 mg/L. Freshwater; static LC50 (96 hr) Lepomis macrochirus (bluegill): 3,550,000 mg/L. Freshwater; static

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. Container contents should be completely used and the containers triple rinsed prior to discard. Rinsed containers may be offered for recycling.

SECTION 14. TRANSPORT INFORMATION

This material is not hazardous as defined by 49 CFR 172.101 by the US Department of Transportation	
Proper Shipping Name:	Not Applicable
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: 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:
Sodium Nitrate	CERCLA RQ (pounds): No SARA Reporting, 302: No SARA Reporting, 304: No SARA Reporting, 313: 1.0 % de minimis concentration (Chemical Category N511, Water Dissociable Nitrate)
Potassium Sulfate	CERCLA RQ (pounds): No SARA Reporting, 302: No SARA Reporting, 304: No SARA Reporting, 313: No
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

Date of Revision:	7/10/2017, 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.