SAFETY DATA SHEET

Dyna Phos 0-54-0 | Date Prepared: 12/20/2013 | Replaces: All Previous

SECTION 1. IDENTIFICATION

Product Name:	Dyna Phos 0-54-0
Synonyms:	Phosphoric Acid, FLOPHOS
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
	DANGER	Skin Corrosion Eye Damage Corrosive to Metals	Cat 1	Causes severe skin burns and serious eye damage May be Corrosive to Metals

Precautionary Statements:

Prevention: Do not breathe vapors, mists or sprays. Wash thoroughly after handling. Wear protective gloves, protective clothing, chemical splash proof goggles, and face protection.

Response: If swallowed: rinse mouth, Do NOT induce vomiting. Immediately call doctor or poison control.

If on skin (or hair): Take of immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call doctor or poison control.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call doctor.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call doctor.

Absorb spillage to prevent material damage.

Storage: Store locked up. Store in corrosive resistant container (polyethylene, polypropylene or fiberglass, 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
Phosphoric Acid	7664-38-2	231-633-2	75%
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. Get medical attention immediately.
Skin Contact:	Immediately Take of all contaminated clothing and rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately seek medical attention.
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. Continue rinsing eyes during transport to hospital.
Acute Exposure Symptoms:	Harmful if swallowed or inhaled. Immediately seek medical attention. Phosphoric acid at high concentrations is corrosive to all tissues with which it comes in contact. It can cause severe skin burns at concentrations of 75% or greater. Inhalation of the vapor or mist can cause eye, nose, throat, and respiratory irritation, coughing or burns. When ingested, it can produce nausea, vomiting, abdominal pain, bloody diarrhea, acidosis, shock, and irritation or burns of the oropharyngeal mucosa, esophagus, and stomach.
Chronic Exposure Symptoms:	Not available
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.
Specific Hazards:	Phosphoric Acid is not flammable however the following hazards can occur when exposure to extreme heat: release of phosphorus oxides and/or phosphine from thermal decomposition and hydrogen from reaction with metals. 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: 3, Fire: 0, Reactivity: 0
SECTION 6. ACCIDENTAL RELEASE MEASURES	
Precautions:	Corrosive liquid. 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), chemical resistant suit. Chemical splash-proof goggles, face shield. Chemical resistant apron and/or rubber boots may be needed. Use NIOSH approved respirator if vapors or mists exceed applicable concentration limits.
Containment:	Stop flow of material if safe to do so. Dike area with diatomaceous earth or sand and maximize recovery. Can be neutralized with mild alkali. 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:	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. When diluting always pour product into water and not vice versa
Conditions for safe storage:	Store locked up. Store in a well-ventilated, cool, dry place, away from sources of intense heat, or where freezing is possible. Keep away from combustible materials, strong bases and metals. Do not store in metal containers. Large storage tanks should have secondary containment and electrically grounded. Avoid using unprotected steel containers. Keep containers tightly closed when not in use. Do not let product go below 32°F. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Acceptable storage materials include polyethylene, polypropylene or fiberglass.
Incompatibilities:	Flammable and combustible materials, strong reducing agents and bases (such as ammonium hydroxide), finely powdered metals. Keep away from intense heat or fire. Avoid sulfate materials.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION			
Component Exposure Limits:	Phosphoric Acid H_3PO_4	1 mg/m3	PEL, OSHA
		3 mg/m3	STEL, OSHA
		1 mg/m3	TLV, ACGIH
		1,000 mg/m3	IDLH, NIOSH
		1 mg/m3	REL, NIOSH
		3 mg/m3	STEL, NIOSH
Engineering Controls:	Provide local exhaust ventilation and wash facilities. Eyewash station and safety shower required.		
Personal Protective Equipment:	Eyes: Chemical splash-proof goggles Skin: 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 exceed applicable concentration limits as well as a chemical suit.		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES			
Appearance:	Clear, colorless liquid		
Odor:	Odorless	**UEL / LEL:**	Not Applicable
Odor Threshold:	Not Available	**Vapor Pressure:**	11-4 mm Hg @ 25ºC (low volatility)
pH:	-2 to 0	**Density:**	1.56 to 1.60 g/cm^3
Melting/Freezing Point:	-17.5°C (0.5°F)	**Solubility:**	Water
Boiling Point:	121-144°C (250-291°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**	12-33 cp @ 20ºC, 7.2-16 cp @ 40ºC

SECTION 10. STABILITY AND REACTIVITY	
Reactivity:	Product is acidic.
Chemical Stability:	Hydroscopic. Stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to avoid:	High temperatures
Incompatible Materials:	Bases, aluminum, copper, mild steel, brass and bronze
Hazardous Decomposition Products:	Phosphorus oxides and/or phosphine from thermal decomposition and hydrogen gas from reaction with metals.
SECTION 11. TOXILOGICAL INFORMATION	
Acute Toxicity:	LD50 oral (rat): 1530 mg/kg LD50 dermal (rabbit): 2740 mg/kg LC50 inhalation (rabbit): 1.689 mg/l 1 hr
Likely Routes of Exposure:	Inhalation of mist, eye, and skin contact.
Symptoms and Signs of Exposure:	Eyes: Contact causes severe irritation and tissue damage; Eye burns, watering eyes. Skin: Causes severe skin burns; Burning, itching, redness, inflammation, swelling of exposed tissue. Effects may be delayed. Ingestion: Burning, choking, nausea, vomiting, severe pain; Danger of perforation of esophagus and stomach Inhalation: Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache or nausea.
Chronic Effects:	Not Available
Carcinogenetic:	None of this product's components are listed by ACGIH, OSHA, IARC, NIOSH, NTP or California Prop 65 as carcinogenic.
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) Lepomis macrochirus (bluegill): 60 mg/L. Freshwater; static LC50 (96 hr) Oncorhynchus mykiss (Rainbow trout): 87 mg/L. Freshwater; static EC50 (48 hr) Daphnia manga (water flea): 150 mg/L. Freshwater; static
SECTION 13. DISPOSAL CONSIDERATIONS	
General Information:	As packaged, this product is a D002 corrosive 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. May be neutralized with lime or other base. Dispose of in accordance with product characteristics at time of disposal. Containers may be triple rinsed and offered for recycling.

SECTION 14. TRANSPORT INFORMATION	
This material is hazardous as defined by 49 CFR 172.101 by the US Department of Transportation	
Proper Shipping Name:	Phosphoric Acid
Hazard Class:	8
UN Identification #:	1805
Packing Group:	III
Required Label(s):	Corrosive
Emergency Response Guide Number:	154
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:
Phosphoric Acid CAS No. 7664-38-2	CERCLA RQ (pounds): 5000 lbs (100% basis), 6667 lbs this product 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.
Phosphoric Acid CAS No. 7664-38-2	Appears on one or more of the following state hazardous substance lists: CA, FL, NJ, MA, MN, PA

SECTION 16. OTHER INFORMATION

Date of Revision:	12/20/2013, 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.