1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name/Identifier: HYFER MONOAMMONIUM PHOSPHATE INORGANIC FERTILIZER (16-18-0)

FPA Registration No: 1-1LF-7162

Recommended Use: Fertilizer

Recommended Restrictions: None Known

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer/Supplier: AGROTIGER PHILS. CORP.
Rm 205, 2nd flr. ONE Greenhills Shopping Plaza Bldg.
No. 5 Eisenhower St., Greenhills San Juan City
Metro Manila, Philippines 1504
Contact No. +632-7453096

2. HAZARD(S) IDENTIFICATION

Potential Health hazards

Eye contact	Dust may irritate the eyes.
Skin contact	Dust or powder may irritate the skin.
Ingestion	May cause discomfort if swallowed.
Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.

Signs and symptoms: Dusts may irritate the respiratory tract, skin and eyes.

Potential environmental effects: May cause long-term adverse effects in the environment.

Hazard(s) not otherwise classified (HNOC): None known

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	% Comp	CAS #
Monoammonium phosphate	55-60	7722-76-1
Diammonium phosphate	18-22	7783-28-0
Ammonium sulfate	23-27	7783-20-2
Coating	1-5	mixture

Composition comments

All concentrations are in percent by weight
This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

4. FIRST AID MEASURES

Inhalation	Move to fresh air. Get medical attention if any discomfort continues.
Skin contact	Wash contact areas with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Dust in the eyes: Do not rub eyes. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

Ingestion	Rinse mouth thoroughly. If ingestion of a large amount occurs, call a poison control center immediately. Get medical attention if any discomfort occurs.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do it without risk. Use water spray to prevent dust formation, absorb heat, keep containers cool and protect fire-exposed material.
Hazardous combustion products	Carbon oxides, Nitrogen Oxides, Phosphorus oxides, Sulfur oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. Use personal protection recommended in Section 8 of the MSDS.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. After removal flush contaminated area thoroughly with water. Never return spills to original containers for re-use.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.
Other information	Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Observe good industrial hygiene practices. Use work methods which minimize dust production. Keep the workplace clean.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed. Store in a well-ventilated place. Store in a cool, dry place. Store away from incompatible materials. Store in a cool, dry, well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Dust	TWA	3 mg/m^3	Respirable particles.
		10 mg/m^3	Inhalable particles.

Appropriate engineering controls	Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

Eye/face protection	Use tight fitting goggles if dust is generated.
Skin protection	Risk of contact: Wear appropriate clothing to prevent any possibility of skin contact.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear air supplied respiratory protection if exposure concentrations are unknown. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment before re-use. Keep working clothes separately. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Solid
Form	Granular solid
Color	Light Blue
Odor	Odorless
Odor threshold	Not available
pH	4 (10% solution)
Flammability (solid, gas)	Not available
Explosive properties	Not explosive
Oxidizing properties	Not oxidizing

10. ~~STABILITY AND REACTIVITY~~

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Moisture. High temperatures. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx). Phosphorus oxides. Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:	Ingredients:		
	Monoammonium phosphate:	Oral, rat LD50 (mg/kg):	>2000
		~~Dermal, rat LD50 (mg/m^3):~~	~~> 5000~~
		Inhalation, rat LD50 (mg/m^3):	> 5000
	Diammonium phosphate	Dermal, rat LD50 (mg/Kg):	> 5000
		Inhalation, rat LD50 (mg/m^3):	> 5000
	Ammonium sulfate	Oral, rat LD50 (mg/Kg):	2840
		Inhalation, rat LD50 (mg/m^3):	> 1000 , 8H

Acute effects	May cause discomfort if swallowed.
Sensitization	Not a skin sensitizer.
Local effects	Inhalation of dusts may cause respiratory irritation.
Chronic effects	Prolonged inhalation may be harmful.
Skin corrosion/irritation:	May cause irritation through mechanical abrasion.
Serious eye damage/ irritation:	May cause irritation through mechanical abrasion.
Carcinogenicity:	Not classifiable as to carcinogenicity to humans.
Mutagenicity	Not available.
Reproductive effects	Not available.
Teratogenicity:	No information available.
Neurotoxicity:	No information available.
Symptoms and target organs	Dusts may irritate the respiratory tract, skin and eyes.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Components		Species	Test Results
Monoammonium phosphate (Aquatic)			
Fish	LC50	*Oncorhynchus mykiss*	> 85.9 mg/L, 96-hours

Diammonium phosphate (Aquatic)			
Crustacea	LC50	Daphnia	1790 mg/l, 72 hours
Fish	LC50	Carp, hawk fish (*Cirrhinus mrigala*)	1700 mg/l, 96 hours
Ammonium sulfate (Aquatic)			
Fish	LC50	*Salmo gairdneri*	173 mg/l, 96 hours
Algae	EC50	*Chlorella vulgaris*	2700 mg/l, 18 days
Crustacea	EC50	Water flea (*Daphnia magna*)	> 100 mg/l, 96 hours

Ecotoxicity:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available.
Other adverse effects	May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms.

13. DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

DOT	Not regulated as dangerous goods.
IATA	Not regulated as dangerous goods.
IMDG	Not regulated as dangerous goods.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable. However, product ingredients are is covered under Appendix I of the IMSBC Code.

15. REGULATORY INFORMATION

Fertilizer and Pesticide Authority - Department of Agriculture	Regulated
Philippine National Police	Not regulated

Philippine Drug Enforcement Agency	Not regulated
~~Philippine Food and Drugs Administration~~	~~Not regulated~~

Based on available information, not classified as hazardous according to DENR DAO 2005-27 Revised Priority Chemical list and RA 6969 - The Toxic Substances & Nuclear & Hazardous Waste Control Act of 1992

This material is listed in the Philippine Inventory of Chemicals and Chemical Substances (PICCS)

16. OTHER INFORMATION

Issue date	15-April-2019
Revision date	-
Version #	01
List of abbreviations	ACGIH: American conference of governmental and industrial hygienist ~~CAS No.: Chemical Abstract Service Number~~ LC50: Lethal Concentration, 50%. LD50: Lethal Dose, 50%.
References	ECHA CHEM HSDB® - Hazardous Substances Data Bank

~~Methods of evaluation for the classification of mixtures~~

The classification of the mixture was set based on the regulation (US) HCS 1910.1200 [HCS 2012].

Other information

This information is based on our present knowledge and is provided according to the ~~relevant national regulations. This information is intended as a characterization of the~~ product in order to provide guidance for the relevant safety issues. However, this document does not provide any warranty, expressed or implied, regarding the properties of the product.

Prepared by:

26 Apr 2019

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Valid thru July 2021