

[SAFETY DATA SHEET]

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name/Identifier: HYFER AMMOSUL INORGANIC FERTILIZER (20-0-0)
FPA Registration No: 1-1LF-7161
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

Physical hazards Not classified.
Health hazards Eye contact Not classified.
Skin contact Not classified.
Ingestion Not classified.
Inhalation Not classified.
Label elements
Hazard symbol Not applicable.
Signal word Not applicable.
Hazard statement Harmful to aquatic life.
Precautionary statement
Prevention Avoid release to the environment.
Response Control spill to waterways.
Storage Store away from incompatible materials.
Disposal Dispose of contents/container to hazardous or special waste collection point.
Hazard(s) not otherwise classified (HNOC) None known
Supplemental information Not applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | % Comp | CAS # |
|-------------------|--------|-----------|
| Ammonium sulphate | 95-100 | 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 If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms, call a poison center/doctor.

[SAFETY DATA SHEET]

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| Skin contact | Wash with plenty of water. If skin irritation occurs, get medical attention. Wash contaminated clothing before reuse. |
| Eye contact | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. |
| Ingestion | Rinse mouth with water. Call a poison center / doctor if you feel unwell. |
| Most important symptoms/effects, acute and delayed | <p>Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.</p> <p>Skin contact: No known significant effects or critical hazards. Prolonged contact with dust may cause skin irritation.</p> <p>Ingestion: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Individuals with asthma may be at increased risk from exposure to ammonium sulfate.</p> <p>Inhalation: Ingestion may cause gastrointestinal irritation with sore throat, abdominal pain, nausea, diarrhea, and vomiting. Systemic ammonia poisoning is possible if sufficient absorption occurs.</p> |
| Indication of immediate medical attention and special treatment needed | In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. |

5. FIRE FIGHTING MEASURES

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| Suitable extinguishing media | Non-combustible. Use extinguishing media suitable for surrounding materials. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | <p>No specific fire or explosion hazard.</p> <p>Decomposition products may include the following materials:</p> <ul style="list-style-type: none">- Nitrous oxides- Sulfur oxides- Ammonia amines |
| Special protective equipment and precautions for firefighters | Use NIOSH approved self-contained breathing apparatus with full facepiece operated in the pressure demand mode and protective clothing to prevent contact with skin and eyes. |
| Fire fighting equipment/instructions | Use water spray to cool fire exposed containers. Do not spray water directly on material unless adequate containment is provided to control runoff. |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing dust. Put on appropriate personal protective equipment. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable materials. |
| Methods and materials for containment | Small spill: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Large spill: Approach the release from upwind; ventilate the area. Contain the spill and prevent entry into sewers, water courses, basements or confined areas. Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. |
| Environmental precautions | Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). |

7. HANDLING AND STORAGE

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| Precautions for safe handling | Put on appropriate personal protective equipment. Avoid breathing dust. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Minimize dust generation and accumulation. Use with adequate ventilation. Avoid contact with skin, eyes and clothing. Do not breathe dusts or ingest material. Wash thoroughly after handling. Launder contaminated clothing before reuse. |
| Conditions for safe storage, including any incompatibilities | Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep container tightly closed. Incompatible materials: Oxidizers, peroxides, potassium chlorate, potassium nitrate, sodium nitrate, sodium hypochlorite, metal chlorates, strong bases. Accidental mixing with oxidizers like potassium chlorate, potassium nitrate or potassium nitrite may result in an explosion hazard during fires. Avoid contact or mixing with calcium carbonate (lime) or cement products, due to release of ammonia vapor. Corrosive to carbon steel, copper and copper alloys. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits No exposure limit value is known for ammonium sulfate. A TWA of 10 mg/m³ (ACGIH) or 15 mg/m³ (OSHA PEL) total dust and 3 mg/m³ (ACGIH) or 5 mg/m³ (OSHA PEL) respirable dust is required for all particulates not otherwise regulated

Recommended monitoring: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to the OSHA Technical Manual for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Appropriate engineering controls Provide natural or mechanical ventilation sufficient to maintain airborne concentrations below the recommended exposure levels.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses with side shields. Indirectly vented chemical safety goggles are recommended for protection against nuisance dust.

Skin protection

Hand protection 4-8 hours (breakthrough time): Butyl rubber, PVC.

Other

Wear clothing to minimize skin contact; including long sleeved shirt and pants, boots, lab coat, apron or coveralls. Wear appropriate work gloves when handling material to prevent skin contact.

Respiratory protection Not required in adequately ventilated areas. For exposure above the TLV, use NIOSH approved dust respirator for needed protection. A self-contained breathing apparatus should be used in emergencies situations or instances where the exposure levels are not known. Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Hygiene measures: Wash hands, forearms and face thoroughly after handling product. Remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Always observe good personal hygiene measures, such as washing

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state Solid

Form Granular solid

[SAFETY DATA SHEET]

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|---------------------------|------------------------------------------------------------------|
| Color | Orange |
| Odor | Odorless |
| Odor threshold | Not applicable. |
| pH | 4.5 - 5.5 (concentration 10%) |
| Flammability (solid, gas) | Not applicable. |
| Vapor pressure | Not applicable. |
| Flash point | Not applicable. |
| Solubility | Easily soluble in cold water Insoluble in methanol and actone |
| Solubility in water | 76 g/100 ml (20°C) |
| Explosive properties | Not explosive |
| Oxidizing properties | Not oxidizing |

10. STABILITY AND REACTIVITY

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| Reactivity | No specific test data related to reactivity available for this product or its ingredients. |
| Chemical stability | Stable under normal conditions of use and storage. |
| Possibility of hazardous reactions | Under normal conditions of storage and use, hazardous reactions will not occur. |
| Conditions to avoid | Avoid heat (to prevent decomposition) and dust levels above the TLV. |
| Incompatible materials | Oxidizers, peroxides, potassium chlorate, potassium nitrate, sodium nitrate, sodium hypochlorite, metal chlorates, strong bases. Avoid contact or mixing with calcium carbonate (lime) or cement products, due to release of ammonia vapor. Corrosive to carbon steel, copper and copper alloys. |
| Hazardous decomposition products | May release ammonia, oxides of sulfur, oxides of nitrogen, and oxides of carbon. |

11. TOXICOLOGICAL INFORMATION

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| Acute toxicity: | Dermal, rat LD50 (mg/kg): > 2000 Oral, rat LD50 (mg/kg): 4540 Inhalation, rat LC50 (mg/m ³): > 1000, 8 hours |
| Skin corrosion/irritation: | Non-irritating to the skin. |
| Serious eye damage/irritation: | Non-irritating to the eyes. |
| Respiratory or skin sensitisation: | Not sensitizing |
| Carcinogenicity: | No indications for carcinogenicity. Ammonium sulfate is not listed as a carcinogen by the National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA). |
| Teratogenicity: | No indications for mutagenicity. |
| Mutagenicity: | Non-mutagenic for bacteria and/or yeast. |
| Reproductive toxicity | No indications for reproduction toxicity. |

[SAFETY DATA SHEET]

Potential acute health effects Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
 Ingestion: No known significant effects or critical hazards. Skin contact: No known significant effects or critical hazards.
 Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: Adverse symptoms may include the following:
 Respiratory tract irritation
 Coughing

Ingestion: No specific data.

Skin contact: No specific data.

Eye contact: Adverse symptoms may include the following:
 Irritation
 Redness

General: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity: No known significant effects or critical hazards.

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental effects: No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

| Species | Exposure | Effects | Results |
|---------------------------------------------------------------------------------------|---------------------------------------|-----------|----------------------------------------|
| Daphnia | 48 hours, Fresh water | Mortality | Acute EC50 =169 mg/l |
| Fish - Salmo gairdneri (new name: Oncorhynchus mykiss) | 96 h, Fresh water, Flow through | Mortality | Acute LC50 = 141 to 165 mg/L |
| Fish - Rainbow trout, Donaldson trout - Oncorhynchus mykiss - 6.2 cm - 2.1 g | 96 hours | Mortality | Acute LC50 = 39 to 44 mg/L |
| Perna Viridis (green mussel, seawater) | 96 h, Static, saltwater | Mortality | Mortality Acute EC50 = 47.7 mg/L |

Persistence and degradability

Readily

Bioaccumulative potential

Low

Mobility in soil

No data available.

Other adverse effects

No known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

- Disposal instructions The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. ~~Dispose of empty container and unused material~~ according to applicable federal, state, and local regulations. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
- Hazardous waste code Not regarded as hazardous waste.
- ~~Waste from residues /~~
unused products Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.
- Contaminated packaging The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill ~~should only be considered when recycling is not feasible.~~

14. TRANSPORT INFORMATION

- DOT Not regulated as dangerous goods.
IATA Not regulated as dangerous goods.
~~IMDG~~ ~~Not regulated as dangerous goods.~~
Transport in bulk Not available.
according to Annex II of
MARPOL 73/78 and
the IBC Code

15. REGULATORY INFORMATION

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| 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)

FOREIGN INVENTORY STATUS: Listed on:

- Canadian DSL
- Canadian Ingredient Disclosure List
- European EINECS (EINECS No.: 231-984-1)
- Japanese ENCS (ENCS No.: 1-400)
- Korean ECL (ELC Serial No.: KE-01743)
- Australian AICS
- Swiss Giftliste 1 (SWISS No.: G-1121)

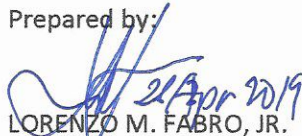
16. OTHER INFORMATION

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 Literature data and/or investigation reports
ECHA CHEM
HSDB® - Hazardous Substances Data Bank

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.

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Valid thru July 2021