

MATERIAL SAFETY DATA SHEET

Introductory Details

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Date of preparation : 13 August 2004

Date revised : 21st September 2007

SECTION 1 : CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product Name : AMIGROW
Trade Name : AMIGROW
Chemical Name : $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, $\text{MnSO}_4 \cdot \text{H}_2\text{O}$, H_3BO_4 , $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$, Na_2Mo_4 , and
extract of fermentation
Molar Mass : -
Chemical Family : -
Manufacturer's Code : -
Use : Organic base liquid foliar fertilizer

1.2 Company Identification

Supplier

Name and Address : Pulsar Internasional Corporation
Shiroyamate 1-31-1, Hachioji, Tokyo, Japan.
Telephone Number : + 81-426-66-1662
Emergency Telephone Number : + 81-426-63-2104

Importer / Distributor

Name and Address : Agricultural Chemical (M) Sdn. Bhd.
962, Lorong Perusahaan 8, Taman Perindustrian Perai,
13600 Perai, Penang, Malaysia.
Telephone Number : 604-3907988
Emergency Telephone Number : 604-3907988

1.3 Contact Point

Designation : Ms. Cheong Wai Ching, Product Support Manager /
Ahmad Labib bin Yusof, Administrative Assistant
Tel. No. : 604-3907988

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SECTION 2 : COMPOSITION/INFORMATION ON INGREDIENT

Chemical Name	CAS No.	Proportion (%)	Exposure Limit	Toxicity Data
MgSO ₄ • 7H ₂ O	7487-88-9	28.3	No data available	No data available
MnSO ₄ • H ₂ O	10034-96-5	0.6		
H ₃ BO ₄	10043-35-3	0.7		
ZnSO ₄ • 7H ₂ O	7733-02-0	1.7		
Na ₂ Mo ₄	7631-95-0	0.04		
Fermentation extract	-	68.66		
Arsenic (As)	-	< 10mg/L		
Cadmium (Cd)	-	< 1mg/L		
Chromium (Cr)	-	< 5mg/L		
Nickel (Ni)	-	4.9 – 5.9mg/L		
Titanium (Ti)	-	< 1mg/L		

SECTION 3 : PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Organic aqueous liquid with dark brown color
Odour	: Slightly fermentation odour
Solubility	: Well soluble in water
Boiling Point	: Not established
Melting Point (°C)	: Not established
Vapour Pressure (mmHg at 25°C)	: Not established
Percentage Volatiles	: Not established
Evaporation Rate	: Not established
Vapour Density	: Not established
Specific Gravity	: 1.14
Flash Point	: Not established
Autoignition Temperature	: Not established
Flammable Limit (%)	: Not established
pH	: 4.0

SECTION 4 : HAZARD IDENTIFICATION

Not classified as hazardous under CPL regulations.

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SECTION 5 : FIRST AID MEASURES

- Ingestion : Induce vomiting after drinking 1 or 2 glasses of water. Do not induce vomiting or give anything by mouth to an unconscious patient. Get medical attention.
- Eye Contact : Immediately flush with plenty of water. Get medical attention if irritation persists.
- Skin Contact : Remove contaminated clothing and wash skin thoroughly with soap and water.
- Inhalation : Remove patient to fresh air immediately.
- Notes to Physician : Not specified.

SECTION 6 : FIRE FIGHTING MEASURES

- Extinguishing Media : Foam, CO₂, dry chemical.
- Fire Fighting Instruction : Fire fighters should wear full-faced self-contained breathing apparatus and protective clothing.
- Special Hazards : In the fire caused by other reason, the drums of this product can explode in the fire simply because of volume expansion.

SECTION 7 : ACCIDENTAL RELEASE MEASURE

Leak and/or Spill : Soak up with absorbent material and remove to disposal area.

SECTION 8 : HANDLING AND STORAGE

- Handling : Read the label before use. Wear protective rubber gloves while handling.
- Storage : Store in original container, tightly closed, in a cool dry and well-ventilated place, out of reach of children. Keep away from foodstuffs and animal feeds. Avoid direct sun light.

SECTION 9 : EXPOSURE CONTROL AND PERSONAL PROTECTION

- Exposure Limit : Not specified
- Engineering Measures : Not specified
- Personal Protection :
- Respiratory Protection : None specified
 - Eye Protection : Safety goggles
 - Skin Protection : Protective rubber gloves.

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SECTION 10 : STABILITY AND REACTIVITY

Conditions to Avoid : No data available
Incompatibles : Bordeaux
Decomposition Products : No data available
Hazardous Polymerization : No data available
Stability : Stable under normal condition.

SECTION 11 : TOXICOLOGICAL INFORMATION

Toxicity Data : No data available
Carcinogenicity : No data available
Reproductive Effect : No data available
Effects of Overexposure : No data available
Chronic Effects : No data available
Target Organs : No data available
Medical Conditions Generally Aggravated by Exposure : No data available

SECTION 12 : ECOLOGICAL INFORMATION

Mobility & Bioaccumulation : No data available
Biodegradability : No data available
Aquatic Toxicity : No data available

SECTION 13 : DISPOSAL INFORMATION

Dispose of according with local regulation.

SECTION 14 : TRANSPORT INFORMATION

Follow the precaution indicated in the storage and handling section. Follow all regulations in your country.

International and national regulatory requirement : None
Packaging information : Not specified
Other special requirements : Not specified

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SECTION 15 : REGULATORY INFORMATION

CPL Regulations : Not classified as hazardous under CPL regulations.

SECTION 16 : OTHER INFORMATION

- a. The base of the product is aqueous liquid extract of fermentation. The fermented raw materials are wheat, soybean, molasses and fish. The microbes used for this fermentation are natural local fauna of southern Brazilian conditions. This liquid is not hazardous to any mammals and human being.
- b. The mixed elements are commonly used "micro-elements fertilizers".
- c. Considering to the above a. and b., the product is naturally safe product.

Reference :

- a. MSDS - Amigrow, date : 2nd June 2004
Pulsar International Corporation
- b. MSDS – Orgamin, date : 2007/01/19
Pulsar International Corporation
- c. Guidelines for The Classification of Hazardous Chemicals, DOSH 1997
- d. Guidelines for The Formulation of A Chemical Safety Data Sheet, DOSH 1997
- e. Guidelines for Labelling of Hazardous Chemicals, DOSH 1997

To the best of our knowledge, the information contained herein is accurate. However, we cannot assume any liability whatsoever for the accuracy or completeness of the information contained herein.