MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION
Company: DEVIDAYAL (SALES) LIMITED,
P.O. BOX 6219, Devidayal Estate,
1" Floor, Reay Road,
Mumbai - 400 010, (INDIA)
Tel: 91-22-23714913
Fax: 91-22-23742708
E-mail: exports@devidayalagro.com
Visit us: www.devidayalagro.com

Product use: A Pyrethroid Insecticide
CAS NO.: 52315-07-8

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Composition</th>
<th>% W/V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cypermethrin Technical (92%)</td>
<td>12.02%</td>
</tr>
<tr>
<td>Solvent –C-IX</td>
<td>79.69%</td>
</tr>
<tr>
<td>Normal Butanol</td>
<td>00.55%</td>
</tr>
<tr>
<td>Emulsifier- (Blend of polyoxyethylene Glycol ether and calcium alkyl benzene sulphonate)</td>
<td>07.74%</td>
</tr>
</tbody>
</table>

Total 100.00%

3. HAZARDS IDENTIFICATION
Physical hazards: Combustible liquid
Health hazards: Irritant (eye, skin sensitization), Harmful (oral). Inhalation (TLV). Irritating to respiratory system.

4. FIRST AID MEASURES
IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. If redness, itching or a burning sensation develops, have eyes examined and treated by medical personnel. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

IF ON SKIN:
Wash material off the skin with plenty of soap and water. If redness, itching or a burning sensation develops, get medical attention.

IF SWALLOWED:
Avoid the ingestion of water or other beverages while vomiting. If the victim is conscious, wash out mouth with water. Vomiting should only be induced under the direction of a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus. Rinse mouth and administer water.

IF INHALED:
Remove victim to fresh air. Apply artificial respiration if breathing has ceased or shows signs of failing. Obtain medical attention.

MEDICAL ADVICE:
Inducing vomiting to remove this preparation from the stomach can increase the risk of chemical pneumonitis and pulmonary edema due to aspiration of stomach contents.

5. FIRE FIGHTING MEASURES
EXPECTING MEDIA: Water fog, alcohol foam, carbon dioxide, dry chemical or halogenated agents. Water spray should be used to cool containers.

PROTECTIVE EQUIPMENT: Self-contained breathing apparatus with full facepiece and protective clothing.

NFPA RATING
Health: 2 Fire: 2 Reactivity: 0

Unusual fire and explosion hazards: Combustible liquid by OSHA 29 CFR 1910.1200. If heated above the flash point, heavy vapors can flow along surfaces to distant ignition sources and flash back. Possible toxic smoke, vapors, fallout and runoff water can result from fires depending on extent of combustion and presence of other combustible materials. Contaminated buildings, areas, and equipment must be properly decontaminated before reuse.

Special precautions or other comments: Follow procedures specified in the National Fire Protection Association codes and standards for handling combustible liquids. Prevent skin and eye contact. Avoid breathing vapors or aerosols.

6. ACCIDENTAL RELEASE MEASURES
PERSONAL PRECAUTIONS:
Recommended steps to be taken when concentrate material is released or spilled: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. Use adequate ventilation and wear a properly fitted half face or full face NIOSH/MSHA respirator approved for pesticides. Wear proper protective clothing, gloves made of materials such as rubber or neoprene, and chemical protective eye protection. Recommended steps to be taken when diluted concentrate material is released or spilled: Keep unprotected persons and animals out of the spill area. Make sure the area is adequately ventilated for large spills. Wear proper protective clothing, waterproof gloves and eye protection. Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely.

2
Ensure suitable personal protection (including respiratory protection) during removal of spillages. Wear suitable protective clothing and eye protection to prevent skin and eye contact.

ENVIRONMENTAL PRECAUTIONS:
Washings must be prevented from entering surface water drains.

ADDITIONAL INFORMATION:
PROCEDURES FOR CLEANING UP:
1. Spread a suitable absorbent such as clay on the spill, and shovel into an open drum.
2. Generously cover the contaminated areas with common household detergent. Using a stiff brush and small amounts of water, work the detergent into the remaining spilled material forming a slurry. Brush the slurry into cracks and crevices and allow to stand for 2-3 minutes. Be careful to completely avoid skin or eye contact. Do not splatter on oneself or bystanders.
3. Spread absorbent on the slurry liquid and shovel mixture into the open drum.
4. Repeat #2 and 3 if necessary.
5. Rinse with a small amount of water and use absorbent to collect the wash solution. Shovel into the drum.
6. Seal drum and dispose of contaminated material in a facility permitted for hazardous waste. Large spills should be handled according to a spill plan.

7. HANDLING AND STORAGE
SAFE HANDLING ADVICE:
Do not get on skin or clothing. Avoid contact with eyes. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

REQUIREMENTS FOR STORAGE ROOMS:
Keep original containers, tightly closed, out of reach of children.
Keep away from food, drink and animal feeding stuffs. Containers should be stored in a cool, dry, well-ventilated area away from flammable materials and sources of heat or flame. Exercise due caution to prevent damage to or leakage from the container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits
OSHA PEL 1,2,4-trimethylbenzene: TWA 25 ppm

ACGIH TLV 1,2,4-trimethylbenzene: TWA 25 ppm

ACGIH TLV Extracts (petroleum), light paraffinic distillate solvent
8-hour TWA 5 mg/m³

EYE PROTECTION:
MANUFACTURING: Chemical tight goggles; full faceshield in addition if splashing is possible.
END-USER: When making applications of diluted material in non-ventilated spaces or when rodling or subslab injecting, wear protective eyewear (goggles and/or safety glasses with side shields and/or face shield).

BODY PROTECTION:
MANUFACTURING: When handling or when exposure to concentrate is possible, wear long-sleeved shirt and long pants, waterproof gloves, shoes and socks, face shield and chemical-resistant apron. Remove contaminated clothing and wash before rewearing. Wash separately from other laundry.

END-USER: When handling concentrate during mixing wear coveralls over minimum of short pants and short sleeve shirt or chemical-resistant apron, chemical-resistant gloves, socks and chemical-resistant footwear. After concentrate is diluted, applicators may wear regular work clothes, socks, shoes and water-resistant gloves.

RESPIRATORY PROTECTION:
MANUFACTURING: Use MSHA-NIOSH approved respirator for pesticides.
END-USER: When making applications of diluted material in non-ventilated spaces, refer to label for recommended MSHA-NIOSH approved respirators to use.

Other protective equipment:
MANUFACTURING: Eyewash station and safety shower in manufacturing work area. Use ventilation adequate to maintain safe levels in manufacturing workplace.

VENTILATION: Use ventilation adequate to maintain safe levels.

9. PHYSICAL AND CHEMICAL PROPERTIES
Form: liquid.
Color: Light Yellow to Yellow colour clear liquid
Odor: Odourless
Vapor Pressure: \(2.0 \times 10^{-4}\) mPa (20°C)
Specific gravity: 0.90-0.935
Solubility: Emulsifiable in/with water.
Acidity: 0.15% Max

10. STABILITY AND REACTIVITY
HAZARDOUS REACTIONS (CONDITIONS TO AVOID)
Stability: Stable under normal conditions.
Hazardous polymerization: Will not occur.

HAZARDOUS REACTIONS (MATERIALS TO AVOID): strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion products - Carbon dioxide, carbon monoxide, nitrogen oxides, sulfur oxides, ammonia, halogens, halogen acids, possible trace amounts of carbonyl halide.

11. TOXICOLOGICAL INFORMATION
ACUTE TOXICITY (LETHAL DOSES)
LC50 Oral rats: 250-4150 mg/kg
Additional inform.: Moderately toxic

LD50 Dermal rabbit/rat (both genders): > 2460 mg/kg
LC50 Inhalation rats: 2.5 mg/l
GENERAL INFORMATION ABOUT ACUTE OR OTHER TOXICITIES

Other effects of overexposure:

Ingestion can induce nausea, vomiting, abdominal pain and diarrhea. Large doses ingested may cause disturbance of the nervous system. Skin exposures may cause a skin sensation called paresthesia, which is usually described as tingling, itching, burning, prickling, glowing, flushing, numbness or a chapped feeling. There is no evidence of any long-term or cumulative effects on the skin. Symptoms may develop shortly after exposure or can be delayed up to four hours and can persist between 2 and 30 hours following contact. The effect may result from transferring the material to the face from contaminated gloves and hands.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

Additional info: This material is extremely toxic to fish and other aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Do not contaminate waterways by cleaning of equipment or by disposal of wastes. Untreated effluent should not be discharged where it will drain into lakes, streams, or ponds.

CONTAINER DISPOSAL: Empty container retains product residue. Observe all hazard precautions. Do not distribute or make available, furnish or reuse empty container except for storage and shipment of original product. Remove all product residue from containers by triple rinsing or equivalent and puncture or otherwise destroy empty containers before disposal. For non-refillable end-use plastic containers: Complete empty container into application equipment then triple rinse (or equivalent). Then offer for recycling or puncture and dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state and local authorities.

14. TRANSPORT INFORMATION

FLASH POINT: Above 24.5°C
UN NO.: 3351,
IMO CLASS: 6.1,
IMDG PG: 6220,
Packing: III,
MARINE POLLUTANT: YES,

PROPER SHIPPING NAME: PESTICIDES, LIQUID, TOXIC, N.O.S.
(CONTAINS CYPERMETHRIN),

15. REGULATORY INFORMATION

HAZARDOUS INGREDIENTS:
CYPERMETHRIN TECHNICAL, Solvent
16. OTHER INFORMATION
All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. DEVIDAYAL SALES LIMITED assumes no responsibility whatsoever from the use of this data in accordance with those stated or otherwise.
MATERIAL SAFETY DATA SHEET

Product Name: CYPERMETHRIN 25 % E.C

SECTION 1: CHEMICAL IDENTIFICATION

Material name: CYPERMETHRIN 25 % E.C
Other designations: (RS) a Cyano -3 -phenoxy benzyl (1,RS) -cis trans-3(2-2
dichlorovinyl) 2,2-dimethyl cyclopropane carboxylate.
Description: Synthetic pyrethroid.
CAS no. : 52315-07-8
UN id.no. : 3351
UN hazard class: 6.1
EEC no.(hazchem): 1RX
ADR hazard id.no: 66
Manufacturer: DEVIDAYAL (SALES) LTD.

SECTION 2: COMPOSITION OF FORMULATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>CypermethrinTechnical(92%)</td>
<td>23.11 %</td>
</tr>
<tr>
<td>Solvent</td>
<td>68.39 %</td>
</tr>
<tr>
<td>Butanol</td>
<td>00.50 %</td>
</tr>
<tr>
<td>Emulsifier</td>
<td>08.00 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview
Yellowish viscous, odorless semi-solid at 25 OC. Thermal decomposition may form toxic gases. For larger exposures or fire, wear personal protective equipments. Highly toxic to fish and aquatic organisms. Keep away from drains and water sources.

Potential Health Hazards:
Harmful if inhaled or swallowed. Dust, mist or vapor irritating to eyes and respiratory tract. May cause skin irritation. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.
SECTION 4: FIRST AID MEASURES

IF INHALED: Remove person from exposure area to fresh air. Give artificial respiration, preferably mouth to mouth. If not breathing difficulty or discomfort occurs or persists get medical attention.

IF ON SKIN: Take off contaminated clothing. Wash skin with plenty of soap and water.

IF SWALLOWED: Do not induce vomiting unless to to do it. Immediately contact physician, Poison Control or an emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person.

IF IN EYES: Hold eye open and rinse with plenty of water for 15 to 20 minutes. If irritation continues, call a doctor.

ANTIDOTE: Give symptomatic treatment as per symptoms and cause.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point (°C): 43 °C
Auto ignition Temperature (°C): N/A
Explosive Range in Air (% v): Lower (LEL) - N/A, Higher (UEL) - N/A

Fire Fighting:
Media: Water spray, foam, dry chemical powder and carbon dioxide.
Wear personal protective equipment. Minimize the amount of water used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spills: Stop flow of spilled material using soil or sand - bags. Use activated carbon to absorb spilled substance that is dissolved.

SECTION 7: HANDLING AND STORAGE

GENERAL PROCEDURES: Store in a cool dry, well ventilated place in original container away from children and animals. Keep away from food, animal feed, other pesticides, fertilizers and drinking water. Prevent eating, drinking, tobacco use and cosmetic application in areas where there is a potential for exposure to the material.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROL: Use local exhaust ventilation at all processes locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

PERSONAL PROTECTIVE EQUIPMENT:

EYE AND FACE PROTECTION - Safety goggles or face shield. Storing facility should be equipped with eye wash facility and safety shower.
CLOTHING - Long sleeved shirt and long pants, shoes plus socks, chemical resistant headgear for overhead exposures.
GLOVES - Wear waterproof gloves.
USER SAFETY RECOMMENDATIONS - Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change in to clean clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight: 416.32
Boiling Point at 20mm Hg. °C: N/A
Refractive Index at 25°C: N/A
Appearance: Light yellow to amber colour clear liquid

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions
Incompatibility: strong oxidisers, acids, bases.
Thermal Decomposition Products: toxic fumes of Hydrogen cyanide, chlorine & oxide of Nitrogen & carbon
Hazardous polymerization: will not occur.
SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Oral LD 50 (rat, ) – 256.23 mg/kg body weight
   Dermal LD 50 (rat) - >2000mg/kg body weight
   Inhalation LC 50 (rat) - 5.18 mg/l of air
   Eye Irritation (rabbit) – Mild Irritant
   Skin Irritation (rabbit) – Mild irritant
   Sensitization (guinea pig) – Moderate-sensitiser

SECTION 12: ECOLOGICAL INFORMATION

Environmental Summary –
Cypermethrin is highly toxic to fish and aquatic organisms.
Cypermethrin is also toxic to bees.

SECTION 13: DISPOSAL CONSIDERATION

Waste – Dispose of in accordance with applicable Federal, State, local laws and regulations.
Container – Do not re-use the container. Dispose of empty containers in a sanitary landfill or incineration so as to avoid environmental or water pollution.

SECTION 14: TRANSPORT INFORMATION

UN No. - 3351
IMDG - 6219
Class - 6.1
Packing Group – III
Marien Pollutant - yes
Label – Toxic M.P.
EMS No.- 6.1-02
SECTION 15: REGULATORY INFORMATION

UNITED STATES
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

SECTION 302 EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):
Not listed

SECTION 311 HAZARD CATEGORIES (40 CFR 370): Immediate, Delayed

SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370):
The threshold planning quantity (TPQ) for this product, if treated as a mixture, is 10,000 lbs. This product contains the following ingredients with a TPQ of less than 10,000 lbs.: None

SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372): There are no ingredients in this product which are subject to Section 313 reporting requirements.

CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT): Listed.

SECTION 16: OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. DEVIDAYAL SALES LIMITED assumes no responsibility whatsoever from the use of this data in accordance with those stated or otherwise.
Product Name: CHLORPYRIFOS 48% EC

SECTION 1: CHEMICAL IDENTIFICATION

Product Name: CHLORPYRIFOS 48% EC
Chemical Name: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) Phosphorothioate
Common Name: Chlorpyrifos
CAS No.: 2921-88-2
Pesticide Class: Organophosphate
Molecular Formula: C_{13}H_{17}Cl_3NO_3PS

SECTION 2: COMPOSITION OF FORMULATION

Chlorpyrifos A.I. 48.00%
Emulsifiers 8.00%
Solvent 44.00%
TOTAL 100.00%

SECTION 3: HAZARDS IDENTIFICATION

Flash Point: 43°C
Explosion sensitivity to impact: None
Explosion Sensitivity to Static Electricity: None
Combustible Material: Yes
Explosive Material: None
Hazardous Polymerization: None
Flammable Material: Yes
Oxidizer: None
Corrosive Material: Yes
SECTION 4: HEALTH HAZARDS DATA

Route Of Entry: 1. Absorption through Skin 2. Inhalation 3. Ingestion

Effects Of Exposure / Symptoms: Moderate irritation of eyes, skin and respiratory tract. A single prolonged exposure is not likely to cause absorption through skin in harmful amounts. Single dose oral toxicity is moderate. However, if large amounts are swallowed can cause even death. Excessive exposure may cause cholinesterase inhibition.

Permissible Exposure Limits: ACGIH TLV - 0.2 mg/m3 TWA (skin)

NIOSH REL - 0.2mg/m3 TWA, 0.6mg/m3

STEL (skin)
Acute LD50 Oral Rat: 262 mg/Kg
Acute Dermal LD50 Rabbit: > 2000 mg/kg
NFPA Hazard Signals Health - (2) Flammability - (2) Reactivity - (1) Special - (-)

SECTION 5: FIRE FIGHTING MEASURES

Fire Extinguishing Media: Foam, Dry Chemical, Carbon dioxide, water spray
Special Procedures: Use self-contained breathing apparatus.
Unusual Hazard: Rapid decomposition occurs above 130°C. Violent rupture may occur due to over pressurization at high temperatures generated during fire.

SECTION 6: FIRST AID MEASURES

First Aid Measures

Eyes: Flush with plenty of water for at-least 15 min.
Skin: Remove contaminated clothing and wash affected part with soap and water
Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration.
Ingestion: If conscious have victim drink water or milk. Do not induce vomiting.

Obtain Medical Attention immediately.

Antidotes / Dosage Inject atropine 1V or 1M (0.4-2.0 mg/Kg) every 15 min. until atropinised. 2-PAM may be therapeutic if used early; however use it only in conjunction with atropine.
SECTION 7: HANDLING AND STORAGE

Handling: Wear chemically impervious gloves such as neoprene or nitrile. Wear safety glasses/goggles or face shield. Use mechanical ventilation should be used when handling this product in enclosed spaces. Read and observe all precautions and instructions on the label.

Storage: Store in original containers, up right and closed. Store in areas that are cool, dry and well ventilated. Store away from seeds, fertilizers and animal feed stuffs

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Use PVC or Rubber gloves, gumboots, goggles / face shield and overalls. Use breathing apparatus if required.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Colour: Light Amber
Odour: Mercaptan
Solubility in water at 30 °C: Forms Emulsion
Specific Gravity at 25 °C: 1.07-1.095
Acidity: Max. 0.05%

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions.
Incompatibility with Other Material: None
Reactivity: Chlorpyriphos undergoes exothermic decomposition at approx. 130°C.

Hazardous Reaction Products: HCl, ethyl sulfide, diethyl sulfide, Nox
SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Highly toxic to aquatic life, birds. Persistence Bio-concentration potential is moderate. The photolysis half-life of Chlorpyrifos is 3-4 weeks.

SECTION 13: DISPOSAL CONSIDERATION

SPILLS

Steps To Be taken: Stop leak if safe to do so. Contain spillage. Absorb in sawdust or sand for disposal. Eliminate all sources of ignition. Cordon off area. Stay upwind. Use personal protective equipment.

Waste Disposal

Method: Detoxify the affected area with alkaline solution. Dispose in accordance with the state laws.

SECTION 14: TRANSPORT INFORMATION

SHIPPING AND SELECTED REGULATIONS

DOT SHIPPING LABEL: POISON

PROPER SHIPPING NAME: PESTICIDE, LIQUID, TOXIC, (CHLORPYRIPHOS),

HAZARD DETAILS:

- FLASH POINT: 43°C,
- CLASS: 6.1,
- IMDG PAGE: 6220,
- UN: 3017,
- PACKING GROUP: III,
- RQ MARINE POLLUTANT
SECTION 15: REGULATORY INFORMATION

Poisons Schedule: Not Scheduled
Packaging & Labeling: READ SAFETY DIRECTIONS BEFORE OPENING OR USING
AICS: All of the components in this product are listed on the Australian Inventory of Chemical Substances.

SECTION 16: DISCLAIMER

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MATERIAL SAFETY DATA SHEET

SECTION – 1: PRODUCT IDENTIFICATION

Active Ingredient (%): Propiconazole (25%)
Chemical Class: Triazole Derivative Fungicide
CAS No.: 60267-90-1
Chemical Family: azole
UN No.: 3082
Chemical Name: 1-[(2-C(dichlorophenyl)-4-propyl-1, 5-dioxolan-2-yl)methyl]-1H-1,2,4-triazole
Product Use: A broad spectrum, emulsifiable concentrate fungicide for control of a wide range of diseases in a variety of registered crops. For further details, please refer to product label.

SECTION – 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Propiconazole Tech.</td>
<td>25%</td>
</tr>
<tr>
<td>Emulsifier</td>
<td>12%</td>
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<tr>
<td>Solvent</td>
<td>63%</td>
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<tr>
<td>Total</td>
<td>100%</td>
</tr>
</tbody>
</table>

SECTION – 3: HAZARDS IDENTIFICATION

Symptoms of Acute Exposure
Harmful if inhaled. May cause eye, skin and respiratory irritation. Exposure to high vapour levels may cause headache, dizziness, numbness, nausea, incoordination, or other central nervous system effects.

Hazardous Decomposition Products
Hydrogen cyanide.

Unusual Fire, Explosion and Reactivity Hazards
Combustible liquid. Can release vapours that form explosive mixtures at temperatures at or above the flash point. Heavy vapours can flow along surfaces to distant ignition sources and flash back. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Potential Health Effects
Relevant routes of exposure: Skin, eyes, mouth, lungs.
SECTION - 4: FIRST AID MEASURES

IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital. Have the product container, label or Material Safety Data Sheet with you, a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure.

EYE CONTACT: Flush eyes with clean water, holding eyelids apart for a minimum of 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Obtain medical attention immediately if irritation persists.

SKIN CONTACT: Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes.

INHALATION: Move victim to fresh air. If not breathing, then give artificial respiration, preferably mouth-to-mouth, if possible call doctor for treatment advice.

INGESTION: If swallowed, immediately contact doctor or nearest hospital for treatment advice. Do not induce vomiting unless directed by a physician. Do not give any liquid to the person. Call doctor for treatment advice.

NOTES TO PHYSICIAN:
There is no specific antidote if this product is ingested. Treat symptomatically.
Contains petroleum distillate - vomiting may cause aspiration pneumonia. Induction of emesis is not recommended due to the large amount of petroleum solvent in this product, which could cause chemical pneumonitis if aspirated.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED:
Persons with preexisting dermatitis, respiratory disorders, or an allergic history should use extra care in handling this product.

SECTION - 5: FIRE FIGHTING MEASURES

Flash point and method: 43 °C.
Upper and lower flammable (explosive) limits in air: Lower: 1.8% Upper: 11.7%.
Auto-ignition temperature: Not Available.
Flammability: Combustible liquid.
Hazardous combustion products: Toxic, flammable fumes are released by thermal decomposition in a fire. Thermal decomposition products may include hydrogen cyanide.

Conditions under which flammability could occur: Can release vapours that form explosive mixtures at temperatures at or above the flash point. Heavy vapours can flow along surfaces to distant ignition sources and flash back. Keep fire exposed containers cool by spraying with water.
Extinguishing media: Use foam, carbon dioxide, dry powder, halon extinguishing or water fog or mist, (avoid use of water jet). Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water run-off can cause environmental damage. Contain run-off with, for example, temporary earth barriers.

Sensitivity to explosion by mechanical impact: No.
Sensitivity to explosion by static discharge: Yes.

SECTION - 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Use adequate ventilation and wear equipment and clothing as described in Section 8 and/or the product label.

Procedures for dealing with release or spill: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Pump or scoop large amounts of liquid into a disposable container. Absorb remaining liquid or smaller spills with clay, sand or vermiculite. Scoop or sweep up material and place into a disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory authority.

SECTION - 7: HANDLING AND STORAGE

Handling practices: KEEP OUT OF REACH OF CHILDREN. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours or spray mist. Wear full protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Protect product, wash or rinse water, and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people.

Appropriate storage practices/requirements: Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose containers to temperatures above 40 °C. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

SECTION - 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Applicable control measures, including engineering controls: This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

CONSULT THE PRODUCT LABEL FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS.

Personal protective equipment for each exposure route:

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling and before eating, drinking, applying cosmetics or handling tobacco.

INGESTION: Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

EYES: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

SKIN: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

INHALATION: A respirator is not normally required when handling this substance. A combination particulate/organic vapour respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapour (OV) cartridge or canister with any R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.
SECTION - 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear yellow liquid.
Formulation Type: Emulsifiable concentrate.
Odour: Aromatic solvent odour.
Vapour pressure and reference temperature: 4.2 x 10^-7 mm Hg @ 25 °C
(Propiconazole Technical).
Vapour density: Not available.
Boiling point: Not available.
Melting point: Not available.
Freezing point: -40 °C.
Specific gravity or density: 0.96-0.98 g/cm³ @ 25 °C.
Evaporation Rate: Not available.
Water/oil partition coefficient: Log P = 3.65 (Propiconazole Technical).
Odour threshold: Not available.
Viscosity: 5.1 cps (or mPas) @ 21 °C.

SECTION - 10: STABILITY AND REACTIVITY

Chemical stability: Stable under normal use and storage conditions.
Conditions to avoid: Keep away from heat or open flames.
Incompatibility with other materials: Nitric acid, sulfuric acid, strong oxidizing and reducing agents.
Hazardous decomposition products: Hydrogen cyanide.
Hazardous polymerization: Will not occur.

SECTION - 11: TOXICOLOGICAL INFORMATION

Acute toxicity/Irritation Studies (Finished Product)
Ingestion: Low Acute Toxicity Oral (LD₅₀ Rat): 2,105 mg/kg body weight
Dermal: Low Acute Toxicity Dermal (LD₅₀ Rabbit): 4,250 mg/kg body weight
Inhalation: Slightly Acutely Toxic Inhalation (LC₅₀ Rat): > 1.0 mg/l air - 4 hours
Eye Contact: Moderately Irritating (Rabbit)
Skin Contact: Moderately Irritating (Rabbit)
Skin Sensitization: Potential Skin Sensitizer (Guinea Pig) (Based on the technical)

Reproductive/Developmental Effects
Propiconazole Technical: None observed.

Chronic/Subchronic Toxicity Studies
Propiconazole Technical: None observed.

Carcinogenicity
Propiconazole Technical: Long-term exposure of mice to high dose levels of propiconazole produced an increase in liver tumors in male mice. Propiconazole is not considered to be carcinogenic.
Other Toxicity Information

None.

Toxicity of Other Components

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the "other components" in the formulation.

1, 2, 4-Trimethylbenzene

Inhalation of 1, 2, 4-trimethylbenzene at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress and coma. Effects of chronic exposure to this solvent can include blood disorders (anemia, leukopenia) and kidney or liver damage.

Naphthalene

Exposure to naphthalene can cause cataracts, liver damage, kidney failure, respiratory failure, hematuria, anemia, damage to red blood cells, leukocytosis, or coma.

Carcinogen Status:

NTP: Anticipated Carcinogen
IARC: Group 2B Possible Human Carcinogen

Petroleum Solvent

Inhalation of vapours at high concentrations can cause central nervous system effects (dizziness, headache), irritation to eyes or respiratory tract.

Target Organs

Active Ingredients
Propiconazole Technical: Liver, skin, eye.

Inactive Ingredients
1, 2, 4-Trimethylbenzene: CNS, liver, kidney, blood, respiratory tract, skin, eye
Naphthalene: Eye, liver, kidney, respiratory tract, blood, CNS
Petroleum Solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, Skin

SECTION – 12: ECOLOGICAL INFORMATION

Summary of Effects

The active ingredient, propiconazole, is practically nontoxic to plants, birds and insects, but is very toxic to aquatic life.

Eco-Acute Toxicity

Propiconazole Technical:
Green Algae 5-Day LC50: 1.6 ppm
Invertebrates (Daphnia magna) 48-hour LC50/EC50: 4.8 ppm
Fish (Rainbow Trout) 96-hour LC50/EC50: 0.85 ppm
Bird (Mallard Duck) 14-Day LC50: 2,510 mg/kg

Environmental Fate

The active ingredient, propiconazole, has a low bioaccumulation potential, low mobility, and low to moderate persistence in soil and water. The Dissipation half-life in soil is 70 days. The main route of degradation is by microbial degradation and formation of bound residues.
SECTION – 13: DISPOSAL CONSIDERATIONS

Waste disposal information: Do not reuse empty containers unless they are specifically designed to be re-filled. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

SECTION – 14: TRANSPORT INFORMATION

UN NUMBER: 3082
ADR/RID:
Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazole 25%)
Hazard ID: 90
Label: 9
Item number: 110 (c)
IMDG/IMO:
Packaging group: III
Label of class: 9 Marine pollutant
Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazole 25%)
ICAO/IATA:
Packaging group: III
Label of class: 9
Marine pollutant
Shipping name: Environmentally hazardous substance, liquid, n.o.s (Propiconazole 25%). Shipping information such as shipping classification:

SECTION – 15: REGULATORY INFORMATION

Symbol: Xn
Indication of danger: Harmful, Irritant.
Risk phrases:
R 22 Harmful if swallowed.
R 36/38 Irritating to eyes and skin.
Safety phrases:
S2 Keep out of reach of children.
S4/9/49 Keep only in the original container in a cool, well-ventilated space.
S24/25 Avoid contact with skin and eyes.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S46 If swallowed, seek medical advice immediately and show this container or label.
SECTION - 16: OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein.

This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.
# International Air Waybill

**Emirates**

**Shipment Information**

- **Shipment Type**: Prepaid
- **Shipment Value**: XXX
- **Declared Value**: XXX
- **INR**: XXX
- **RCF**: XXX

**Shipment Details**

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<th>No. of Pieces</th>
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<td>2966.00</td>
<td>2966.00</td>
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</tbody>
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- **Shipment Description**: Said to contain

- **Organophosphorus pesticide, solid, toxic (Chlorpyrifos)**
  - UN: 2763, CLASS 6.1, PG II
- **Pyrethroid pesticide, liquid, toxic (Cypermethrin)**
  - UN: 3362, CLASS 6.1, PG II
- **Environmentally hazardous substance, liquid, n.o.e. (Propiconazole)**
  - UN: 3362, CLASS 6.1, PG III

**Other Charges**

- **ARRA**: 449.00
- **BAC**: 4.00
- **CG**: 50.00
- **CCR**: 4125.00

**Total Charges**

- **Total Prepaid**: 6659.00
- **Total Collect**: 4550.00

**Currency Conversion Rates**

- **Conversion Rates**: [Details not visible]

**Shipment Details**

- **Shipment Remarks**: [Details not visible]

**Signatures**

- **Shipper's Signature**: [Signature]
- **Shipper's Agent's Signature**: [Signature]
- **Consignee's Signature**: [Signature]
- **Consignee's Agent's Signature**: [Signature]

**Date**: 10th July 2014

**Location**: HOMEBAT, INDIA

**Code**: 176 - 0304 8640

**Notes**: [Details not visible]