SECTION 1. CHEMICAL IDENTIFICATION

Product Name: Pyridaben 20% WP
Company Name: SC NINGBO INTERNATIONAL LTD.
Common Name of A.I.: Pyridaben
Chemical Name: 2-tert-butyl-5-(4-tert-butylbenzylthio)-4-chloropyridazin-3(2H)-one (IUPAC)
Synonym: None
Chemical Family: Pyridazinone
Chemical Formula: C₁₉H₂₅ClN₂OS
Use: Insecticide, acaricide
Formulation: Wettable powder

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Cas No.</th>
<th>Concentration (w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyridaben</td>
<td>96489-71-3</td>
<td>20%</td>
</tr>
<tr>
<td>Other inert ingredients</td>
<td>/</td>
<td>80%</td>
</tr>
</tbody>
</table>

Ingredients not precisely identified are proprietary or non-hazardous.

SECTION 3. HAZARDS IDENTIFICATION

Hazard Classification
Hazardous. Dangerous for the environment.

Risk Phrases
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Phrases
S29/35 Do not empty into drains; dispose of this material and its container in a safe way.
S61 Avoid release to the environment. Refer to special instruction/Safety data sheets.

SECTION 4. FIRST AID MEASURES

First Aid Measures
Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting.
Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.
Skin Contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.

Note to Physician
There is no specific antidote. Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

Fire and Explosion
Flash Point: Not applicable
Autoignition Temperature: Not available
Flammability: Not flammable

Unusual Fire, Explosion and Reactivity Hazards
During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.
In Case of Fire
Use dry chemical, foam or CO2 extinguishing media. 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 runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures
In case of spillage it is important to take all steps necessary to:
• Avoid eye and skin contact.
• Avoid contamination of waterways

Methods and Materials for Containment and Clean Up
Procedure for spill:
(1) Keep all bystanders away.
(2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.
(3) Reposition any leaking containers so as to minimise further leakage.
(4) Dam and absorb spill with an absorbent material (e.g. sand or soil).
(5) Shovel the absorbed spill into drums.
(6) Disposal of the absorbed material will depend upon the extent of the spill.
  • For quantities up to 50Kg of product bury in a secure landfill site.
  • For quantities greater than 50Kg seek advice (use emergency contact number below) from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.
(7) Decontaminate the spill area with detergent and water and rinse with water

SECTION 7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and
domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Standards
No national exposure standards have been set for pyridaben technical.

Engineering Controls
Dust collectors need to be designed to trap and hold the potentially explosive and toxic particles.

Personal Protection
Will irritate the eyes and skin. Avoid contact with eyes. If product in eyes, wash it out immediately with water. When opening the container and preparing spray wear:
• cotton overalls buttoned to the neck and wrist (or equivalent clothing)
• elbow-length PVC gloves
• air respirators or self-contained breathing apparatus.
After each day’s use, wash gloves, goggles and contaminated clothing.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light tan powder</td>
</tr>
<tr>
<td>Odor</td>
<td>No specific odor</td>
</tr>
<tr>
<td>Melting Point</td>
<td>111-112 ºC (technical)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Density</td>
<td>0.45-0.60 g/cm³ (20ºC)</td>
</tr>
<tr>
<td>pH</td>
<td>5.0-8.0 (1% dispersion)</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>0.012 mg/l (24 ºC) (technical)</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.01 mPa (25 ºC) (technical)</td>
</tr>
</tbody>
</table>
SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage.
Hazardous Polymerization: Will not occur.
Conditions to Avoid: Avoid light
Materials to Avoid: Pyridaben is reducing agent, avoid oxidizer
Hazardous Decomposition Products: Will evolve toxic and irritant vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity/ Irritation Studies for End Product:
Acute Oral Toxicity: Practically Non-Toxicity
Rat: LD50: >5000 mg/kg.
Acute Dermal Toxicity: Low Toxicity
Rat: LD50: >5000 mg/kg.
Acute Inhalation Toxicity: Low Toxicity
Rat: LC50 (4 h): > 2.05 mg/L air.
Eye Irritation: Rabbit: Slightly irritating to eyes.
Skin Irritation: Rabbit: Slightly irritating to skin.
Sensitization: Guinea pig: Not a skin sensitizer.

Chronic (for Pyridaben technical)
No adverse effects in humans are expected when the product is handled and used according to the label.

SECTION 12. ECOLOGICAL INFORMATION

Ecological Information (for Pyridaben technical):
Birds: Practically non toxic to bird
Acute oral LD50 for bobwhite quail >2000 mg/kg.
Fish: Very highly toxic to fish
LC50 (96 h) for rainbow trout 1.4 µg/l.
Daphnia: Very highly toxic to daphnia
EC50 (48 h) 0.40 µg/l
Algae: Practically non-toxic to algae
EC50 (96h) for *Selenastrum capricornutum* >100 mg/l

Bees: Highly toxic to bees
LD50 (oral) 0.52 µg/bee.

Worms: Slightly toxic to earthworm
LC50 (14 d) 41 mg/kg soil.

Soil/Environment (for Pyridaben technical)
Readily degrades microbiologically in aerobic soils, DT50 <21 d; further degrades to polar products (including soil-bound residues) and CO2. In natural water, DT50 10 d (25 °C, in dark). DT50 for aqueous photolysis c. 30 min (pH 7).

SECTION 13. DISPOSAL CONSIDERATIONS

Single rinse before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

SECTION 14. TRANSPORT INFORMATION

Land transport ADR/RID
UN number: Not regulated
Proper Shipping Name: Not regulated
Class: Not regulated
Subsidiary Risk: Not regulated
Packaging group: Not regulated

Marine transport IMDG
UN number: 3077
ProperShipping Name: Environmentally hazardous substance, Solid, N.O.S. (contains Pyridaben)
Class: 9
Subsidiary Risk: Not regulated
Packaging group: III
Marine pollutant: Yes

Air transport ICAO/IATA
UN number: 3077
Proper Shipping Name: Environmentally hazardous substance, Solid, N.O.S. (contains Pyridaben)
Class: 9
Subsidiary Risk: Not regulated
Packaging group: III

SECTION 15. REGULATORY INFORMATION

EPCRA SARA Title III Classification:
Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard
Section 313 Toxic Chemicals: Not applicable

California Proposition 65
Not applicable

CERCLA/SARA 302 Report Quantity (RQ)
None.

RCRA Hazardous Waste Classification (40 CFR 261)
Not applicable

TSCA Status
Exempt from TSCA, subject to FIFRA

SECTION 16. OTHER INFORMATION

Revised Date: November 2, 2010
MSDS Number: SN583/20%WP

Revision Summary:
To reflect database modification (no substantive changes - only related to system).

This information is provided in good faith but without express or implied warranty. Buyer assumes all responsibility for safety and use not in accordance with label instructions.