DIELDRIN

Material Safety Data Sheet

Catalog Number: 157672
Revision date: 08-Mar-2005
Australia Hazardous Statement: Hazardous according to criteria of NOHSC

1. COMPANY DETAILS

Supplier: MP Biomedicals Australasia Pty Limited
Unit 12, 167 Prospect Hwy.
Seven Hills, NSW 2147 Aust.
Telephone Number: (02) 9838 7422
Fax Number: (02) 9838 7390
Emergency telephone number: (02) 9838 7422: hours: 8.30 AM to 5.00 PM
Australian Business Number (ABN): 31 106 467 109

2. IDENTIFICATION

Product name: DIELDRIN
Catalog Number: 157672
Synonyms: Alvit, Dieldrex
UN/Id No: 2761
Proper shipping name: Organochlorine, pesticide, solid, toxic
IATA Hazard Label(s): Toxic
Hazard Class 6.1
- Toxic substances - dermal
Subsidiary risk: No Subsidiary Risk allocated
Packing group: II
Emergency Action Code (Hazchem code): 2X
Poisons schedule No. (Aust)/Toxic Substance (NZ): S7 Dangerous Poison.
Recommended use: Research product for non-human use

Component Australia (AICS): DIELDRIN
60-57-1 (100) Present

3. PHYSICAL DESCRIPTION/PROPERTIES

Appearance and Odor: White crystalline solid or light brown dry flakes; odorless or mild chemical odor.
Physical state: Solid
Formula: C12H8Cl6O
Molecular weight: 380.93
Boiling point/range: Decomposes upon boiling.
Melting point/range: 177 °C
Density: 1.75 (water = 1)
Vapor pressure: Less than 8 x 10-7 mm Hg at 20 °C
7.78 x 10-7 mm Hg at 25 °C
4. INGREDIENTS

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS Number</th>
<th>Weight %</th>
<th>EC No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>60-57-1</td>
<td>100</td>
<td>200-484-5</td>
<td>T+; N</td>
</tr>
</tbody>
</table>

5. HAZARDS IDENTIFICATION

Australia Hazardous Statement: Hazardous according to criteria of NOHSC

Indication of Danger:
T+  - Very toxic.
N  - Dangerous For The Environment.

Risk Phrases:
R27 - Very toxic in contact with skin.
R40 - Limited evidence of a carcinogenic effect.
R53 - May cause long-term adverse effects in the aquatic environment.
R50 - Very toxic to aquatic organisms.
R48/25 - Toxic: danger of serious damage to health by prolonged exposure if swallowed.
R25 - Toxic if swallowed.

Safety Phrases:
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
S60 - This material and its container must be disposed of as hazardous waste.
S22 - Do not breathe dust.

S36/37 - Wear suitable protective clothing and gloves.

Category of Danger: Very Toxic, Dangerous for the environment, Carc. cat. 3

Poisons schedule No. (Aust)/Toxic Substance (NZ): S7 Dangerous Poison.

6. HEALTH HAZARD INFORMATION

HEALTH EFFECTS

EMERGENCY OVERVIEW: Harmful to flora, fauna, soil organisms and aquatic organisms. Very toxic: danger of very serious irreversible effects in contact with skin. May also have serious irreversible effects through inhalation or ingestion.

Principle routes of exposure: Skin
Inhalation: Harmful: possible risk of irreversible effects through inhalation.
Ingestion: Harmful: danger of serious damage to health if ingested.
Skin contact: Very Toxic: danger of serious damage to health by prolonged skin contact.
Eye contact: Risk of serious damage to eyes

Statements of hazard

Very toxic in contact with skin

FIRST AID

General advice: In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Inhalation: Move to fresh air. Call a physician immediately.

Skin contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove and wash contaminated clothing before re-use.

Ingestion: Call a physician immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Drink 1 or 2 glasses of water. Induce vomiting if person is conscious.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Protection of first-aiders: No information available

Notes to physician: None

Medical conditions aggravated by exposure: None known

7. PRECAUTIONS FOR USE

Section 8 Notes: TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health or, not cause undue discomfort to, nearly all workers.

Engineering measures: Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: Self-contained breathing apparatus
Hand protection: Pvc disposable gloves
Skin and body protection: Impervious clothing Long sleeved clothing
Eye protection: Safety glasses

Hygiene measures: Avoid contact with skin, eyes and clothing.

8. SAFE HANDLING INFORMATION

Storage: ROOM TEMPERATURE
Handling:
Use only in area provided with appropriate exhaust ventilation.

Safe handling advice:
Wear personal protective equipment. Remove and wash contaminated clothing before reuse.

Technical measures/storage conditions:
Keep containers tightly closed in a cool, well-ventilated place. Keep container tightly closed in a dry and well-ventilated place.

Stability:
Stable under recommended storage conditions.

Polymerization:
None under normal processing.

Hazardous decomposition products:
Chloride/Hydrochloric acid

Materials to avoid:
-

Conditions to avoid:
Exposure to air or moisture over prolonged periods.

Spills and Disposal:

Personal precautions:
Use personal protective equipment.

Environmental precautions:
Prevent product from entering drains.

Methods for cleaning up:
Sweep up and shovel into suitable containers for disposal.

Waste from residues / unused products:
Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

Contaminated packaging:
Do not re-use empty containers

Fire/Explosion Hazards:

Suitable extinguishing media:
Use dry chemical, CO2, water spray or "alcohol" foam

Specific hazards:
Burning produces irritant fumes.

Unusual hazards:
None known

Special protective equipment for firefighters:
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

Specific methods:
Water mist may be used to cool closed containers.

9. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity

<table>
<thead>
<tr>
<th>Components</th>
<th>RTECS Number:</th>
<th>Selected LD50s and LC50s</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>IO1750000</td>
<td>Inhalation LC50 Rat : 13 mg/m³/4H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral LD50 Rat : 38300 ug/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral LD50 Mouse : 38 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dermal LD50 Rabbit : 250 mg/kg</td>
</tr>
</tbody>
</table>

Chronic toxicity:
Chronic exposure may cause nausea and vomiting, higher exposure causes unconsciousness.

Local effects:
Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

Specific effects:
May include moderate to severe erythema (redness) and moderate edema (raised skin), nausea, vomiting, headache.

Carcinogenic effects:
Possible carcinogen

Mutagenic effects:
No data is available on the product itself.
Reproductive toxicity: No data is available on the product itself.

<table>
<thead>
<tr>
<th>Components</th>
<th>NIOSH - Health Effects</th>
<th>NIOSH - Target Organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td></td>
<td>CNS, liver, skin, kidneys (in animals: lung, liver, thyroid and adrenal gland tumors)</td>
</tr>
</tbody>
</table>

| 10. ECOLOGICAL INFORMATION |

Mobility: No data available
Bioaccumulation: No data available
Ecotoxicity effects: May cause long-term adverse effects in the aquatic environment.
Aquatic toxicity: No data available

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>Not Listed</td>
<td></td>
<td>Original entry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Germany VCI (WGK)</th>
<th>World Health Organization (WHO) - Drinking Water</th>
<th>Ecotoxicity - Fish Species Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>3</td>
<td>0.03 ug/L</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
<th>Ecotoxicity - Microtox Data</th>
<th>Ecotoxicity - Water Flea Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>Not Listed</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Components</th>
<th>EPA - ATSDR Priority List</th>
<th>EPA - HPV Challenge Program Chemical List</th>
<th>California - Priority Toxic Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>Rank (of 275): 018</td>
<td>Not Listed</td>
<td>Maximum concentration = 0.24 ug/L; continuous concentration = 0.056 ug/L</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Components</th>
<th>California - Priority Toxic Pollutants</th>
<th>California - Priority Toxic Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIELDRIN</td>
<td>Water and organisms = 0.00014 ug/L; organisms only = 0.00014 ug/L</td>
<td>Maximum concentration = 0.71 ug/L; continuous concentration = 0.0019 ug/L</td>
</tr>
</tbody>
</table>

| 11. TRANSPORT INFORMATION |

IMDG/IMO

Proper shipping name: Organochlorine, pesticide, solid, toxic

- IMDG - Hazard Classifications: Not Applicable
- IMDG - Marine Pollutants: Not Applicable
- IMDG - Marine Pollutants: Not Applicable
- IMDG - Regulated Substances: Not Applicable
- IMDG - Severe Marine Pollutants: Not Applicable

IMO-labels:

- Packing group: II
- Proper shipping name: Organochlorine, pesticide, solid, toxic
- UN/id No: 2761

ADR/RID

Australia Hazardous Statement: Hazardous according to criteria of NOHSC
Hazard Class: 6.1
Item: DIELDRIN
ADR/RID-labels: Toxic
UN/Id No: 2761
Emergency Action Code (Hazchem code): 2X
Proper shipping name: Organochlorine, pesticide, solid, toxic

ICAO:
Hazard Class: 6.1
Packing group: II
Proper shipping name: Organochlorine, pesticide, solid, toxic

12. REGULATORY INFORMATION

International inventories:

DIELDRIN
Australia (AICS): Present
Inventory - China: Present
EU EINECS List - 200-484-5; C12H8Cl6O
Japan - Specified Chemical Substances: CLASS I; Products prohibited from import when containing Dieldrin: (1) wood preservatives, wood insecticides and wood fungicides, (2) paints (only those for preservatives, insecticides or fungicides,

Korean KECL: Present
Philippines PICCS: Present
Contains: DIELDRIN
Indication of Danger:
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S22 - Do not breathe dust.

Safety Combination Phrases:
S36/37 - Wear suitable protective clothing and gloves.

Poisons schedule No. (Aust)/Toxic Substance (NZ): S7 Dangerous Poison.

13. OTHER INFORMATION

Prepared by: Health & Safety
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End of Safety Data Sheet