Material Safety Data Sheet

Product Name: AGRITONE 750®

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: AGRITONE 750®
Product Code: 00066
Product Type: Selective herbicide
Company Name: Nufarm NZ
Address: 6 Manu Street, Otahuhu
Auckland 2024 New Zealand
Emergency Tel.: 0800 651 911
Telephone/Fax Number: Tel: 0-9-270 4157
Fax: 0-9-270 4159
Email: www.nufarm.co.nz

Recommended Use: Selective herbicide for the control of many broadleaf weeds in established pastures, grass playing fields and lawns, and in cereals, grass seed and linseed crops.

Other Information: This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. HAZARDS IDENTIFICATION

Classification:
Classified as Dangerous Goods according to the LTSA New Zealand.

Risk Phrase(s):
6.1D acute toxicant, 6.9A target organ toxicant, 8.3A eye corrosive, 9.1A aquatic toxicant, 9.2A soil toxicant, 9.3B terrestrial vertebrate toxicant,

TOXICITY:
Toxic may cause liver damage from repeated oral exposure at high doses. May be harmful if swallowed, inhaled or absorbed through the skin.

CORROSIVE:
Danger - this product is corrosive and may cause eye damage.

ECOTOXIC:
Toxic to aquatic organisms.
Selective herbicide - very toxic to some plant species.
Toxic to terrestrial vertebrates.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization:
Components:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Casein</td>
<td>9000-71-9</td>
<td>0-10 %</td>
</tr>
<tr>
<td>Water</td>
<td>to volume</td>
<td></td>
</tr>
<tr>
<td>MCPA (present as the dimethylamine salt)</td>
<td>2039-46-5</td>
<td>750g/L</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.

Ingestion: Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.

Skin: Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.

Eye: Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.

First Aid Facilities: Facilities storing or utilizing this material should be equipped with an

Print Date: 17/09/2008

Page: 1 of 5

Nufarm NZ

September 2008

ISSUED by NUFARMNZ
5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media**
Choose extinguishing media to suit the burning material.
Water fog, foam, carbon dioxide or dry chemical.

**Special Protective Equipment for firefighters**
Full protective clothing and self-contained breathing apparatus.

**Specific Methods**
Keep up wind. Do not allow washings to reach sewage or effluent systems. Keep containers cool with water spray.

**Specific Hazards**
May emit toxic fumes of hydrogen chloride or phosgene if material is involved in fires or subjected to extreme heat. Breathable air apparatus may have to be worn if material is involved in fires in confined spaces.

**Hazchem Code**
2X

**Other Information**

6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal**
Wear protective clothing. Clear area of unprotected personnel. Contain liquid spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.

**Personal Protection**
For appropriate personal protective equipment (PPE), refer Section 8.

**Environmental Precautions**
Prevent from entering drains, waterways or sewers.
This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

7. HANDLING AND STORAGE

**Precautions for Safe Handling**
Avoid skin and eye contact and inhalation of spray mist.

**APPROVED HANDLER:** This product must be under the control of an approved handler if applied in a wide dispersive manner, or used by a commercial contractor.

**TRACKING:** Is not required

**RECORD KEEPING:** Records of use as described in NZS 8409 Management of Agrichemicals, must be kept for 3 years.

**BEWARE:** Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.

**Conditions for Safe Storage**
Keep out of reach of children.
Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
Stores containing 100L of Agritone 750 require secondary containment and are subject to signage, and more than 100L require emergency response plans.

**Other Information**
Always read the label and any attached leaflet before use.
Aggregate Storage Volume Thresholds:
When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards**
No exposure limits have been set for this product.
WES TWA for dimethylamine = 10ppm and 18mg/m3

**Engineering Controls**
No special ventilation required. When working with the concentrate in confined spaces, it is recommended that forced ventilation be used to remove traces of dimethylamine vapour from the working atmosphere.
Avoid skin and eye contact and inhalation of spray mist.

**Personal Protective Equipment**
When opening the container, preparing spray and using the prepared spray wear safety goggles, waterproof gloves, cotton overalls buttoned to the neck and wrist, and boots.

**Hygiene Measures**
Do not eat, drink or smoke while using.
Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Dark brown liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>'Ammonia like' odour</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;100°C (water)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.18g/mL</td>
</tr>
<tr>
<td>pH Value</td>
<td>9 - 10</td>
</tr>
<tr>
<td>Vapour Pressure</td>
<td>MCPA (DMA salt) considered practically non-volatile</td>
</tr>
<tr>
<td>Flammability</td>
<td>Non flammable</td>
</tr>
<tr>
<td>Explosion Properties</td>
<td>N/A</td>
</tr>
<tr>
<td>Other Information</td>
<td>(SL) Soluble concentrate</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

- **Chemical Stability**: When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture.
- **Hazardous Reactions**: May react violently with strong oxidising material such as chlorine. If strong alkalies such as caustic soda are added, dimethylamine vapour will be released. Dimethylamine is moderately toxic, LD50 (oral, rat) 700 mg/Kg and a TLV of 10ppm (TWA). Dimethylamine vapour is heavier than air and flammable. The addition of strong acids will precipitate MCPA acid as a solid. This will reduce the efficacy of the herbicide and cause blockages of the spray equipment.

11. TOXICOLOGICAL INFORMATION

**Toxicology Information**

- **MPCA TECHNICAL**: MCPA is considered to be of moderate toxicity to man. There have been very few reported acute toxic effects on users over many years. Several deaths have been recorded, but all of these have been deliberate suicide, generally using the sodium salt.
- **Inhalation**: Not considered a serious hazard because MCPA (dimethylamine salt) is practically non-volatile; however, inhalation of spray mists should be avoided.
- **Ingestion**: The concentrate is considered harmful if swallowed, when classified according to the Worksafe Criteria. The spray solution is not considered a significant hazard due to the relatively low toxicity of the diluted product.
- **Skin**: The concentrate may cause irritation.
- **Eye**: The concentrate may cause severe irritation and probable damage if contact is prolonged.
- **Chronic Effects**: Liver and kidney damage has been noted in laboratory animals but only after excessive doses. Acute Over Exposure: Headache, nausea and vomiting with possible twitches and spasms in extreme cases.

**Acute Toxicity - Oral**

- LD50 (rats): 700 - 1160mg/kg

**Acute Toxicity - Dermal**

- LD50 for rats >4000 mg/kg

**Acute Toxicity - Inhalation**

- LC50 (rat) (4hr) >6.36 mg/l

**Other Information**: The Australian Acceptable Daily Intake (ADI) for MCPA for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.1 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', December 2007).
12. ECOLOGICAL INFORMATION

Persistence / Degradability
In soil, MCPA is degraded to 4-chloro-2-methylphenol, followed by ring hydroxylation and ring opening. DT50 <7 days after initial 'lag phase'. Duration of residual activity in soil c.3-4 months, following an application rate of 3kg/ha.

Environmental Fate
In animals, MCPA is rapidly absorbed and excreted almost exclusively in the urine, with only a small proportion in the faeces.

Environ. Protection
Do not contaminate dams, rivers or streams with pesticide or used containers.

Acute Toxicity - Fish
LC50 (rainbow trout): 50 - 560mg/L (96 hours)

Acute Toxicity - Daphnia
LC50 >100mg/L

Acute Toxicity - Algae
EC50 (96hr) = 0.21mg/L (Navicula pelliculosa)

Acute Toxicity - Other Organisms
Oral LD50 (bobwhite quail): 377mg/kg
Not considered toxic to bees. LD50 = 0.104mg/bee

13. DISPOSAL CONSIDERATIONS

Product Disposal
Dispose of product only by using according to the label, or at an approved landfill.

Container Disposal
Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. TRANSPORT INFORMATION

Transport Information
It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

U.N. Number
3082

Proper Shipping Name
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (MCPA, 75%)

DG Class
9

Hazchem Code
2X

Packaging Method
-

Packing Group
III

EPG Number
-

IERG Number
47

IMO Marine Pollutant
Yes. Marine Pollutant mark required.

IMDG EMS
F-A, S-F

Other Information
Do not carry this product on a passenger service vehicle. Segregation: Check the Latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. REGULATORY INFORMATION

National and or International Regulatory Information
Registered pursuant to the ACVM Act 1997, No. P7493
See www.nzfsa.govt.nz/acvm/ for registration conditions
Approved pursuant to the HSNO Act 1996, Approval Code HSR000381
See www.ermanz.govt.nz for approval controls

Packaging & Labelling
HARMFUL * CORROSIVE * ECOTOXIC - keep out of reach of children

Hazard Rating Systems
NFPA/HMIS: 2-0-1

16. OTHER INFORMATION

Contact Person/Point
IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr TollFree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
Revisions  The SDS was reviewed. Minor changes were made to the information.
Highlighted
Other Information  Supersedes SDS issued December 2006

...End Of MSDS...