1. Identification

GHS Product Identifier: BATON®

Product Code: 00825

Product Type: Herbicide

Company Name: Nufarm NZ

Address: 6 Manu Street, Otahuhu
Auckland 2024 New Zealand

Telephone/Fax Number: Tel: 0-9-270 4150
Fax: 0-9-270-4159

Emergency phone number: 0800 651 911

Recommended use of the chemical and restrictions on use:
Non-volatile 2,4-D soluble granules for broadleaf weed control in cereals and new and established pasture.

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. Hazard Identification

Other Information:
6.1D acute toxicant, 6.3B skin irritant, 6.9A target organ toxicant, 8.3A eye corrosive, 9.1B aquatic toxicant, 9.2A soil toxicant, 9.3B terrestrial vertebrate toxicant,

TOXICITY
Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause mild skin irritation. May cause organ damage from repeated oral exposure at high doses.

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

ECOTOXIC
Toxic to aquatic organisms with long-lasting effects.
Selective herbicide - very toxic to some plant species.
Toxic to terrestrial vertebrates.

3. Composition/information on ingredients

Chemical Characterization

Ingredients: Solid

Name | CAS | Proportion
--- | --- | ---
2,4-D (present as the dimethylamine salt) | 2008-39-1 | 800g/kg
Other ingredients (considered non-hazardous) | | <10%

4. First-aid measures

First Aid Measures:
For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.

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 contact: Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary.
Remove contact lenses, if present and easy to do. Seek medical assistance even if there are no immediate symptoms. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Treat symptomatically.

5. Fire-fighting measures

Water fog, foam, carbon dioxide or dry chemical. May emit toxic fumes of hydrogen chloride, phosgene or amines if involved in fires or exposed to extreme heat. Full protective clothing and self-contained breathing apparatus.

6. Accidental release measures

Wear protective clothing. Clear area of unprotected personnel. Sweep up solids without generating dust (use water to dampen). Contain and absorb liquid spills with inert material and place in waste containers. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.

For appropriate personal protective equipment (PPE), refer Section 8. If product has spilt from water soluble bags and the possibility of dust generation exists, wear a suitable respirator.

This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

7. Handling and storage

Avoid skin and eye contact and inhalation of spray mist or dust. 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. RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept.

Application to drains, ditches and irrigation channels must only be made when these waterways are dry and at least one month is allowed to elapse before the channels are used to carry water.

The product is handled in a water soluble bag.

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

No exposure standards have been set for this product. WES TWA for 2,4-D(CAS 94-75-7) = 10 mg/m³ WES TWA for Dimethylamine = 18 mg/m³ and vapour = 10ppm
Safety Data Sheet

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Product Name BATON®

9. Physical and chemical properties

Form
Solid

Appearance
Brown granular powder

Odour
Fish like odour

Melting Point
140°C (2,4-D acid)

Boiling Point
Not applicable

Solubility in Water
Soluble in water.

pH
6.5 - 7.5

Vapour Pressure
1.9 x 10^-5 Pa (2,4-D acid, 25°C)

Partition Coefficient: n-octanol/water
Kow Log P is -1.01 (pH9, 25°C)

Density
>680kg/m³

Flash Point
Not flammable

Flammability
Non combustible material.

Explosion Properties
Dust explosion possible if in powder or granular form, mixed with air.

Oxidising Properties
Not oxidising

Other Information
pKa is 2.77

10. Stability and reactivity

Chemical Stability
Stable under normal conditions of handling and storage.

Conditions to Avoid
Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-D and largely de-activate the product and cause blockages in spray equipment.

The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour.

Dimethylamine is moderately toxic, LD50 (oral, rat) is 660 mg/kg and a TLV of 2 ppm (TWA) has been set.

Keep away from strong oxidising agents.

Possibility of hazardous reactions
Hazardous polymerisation is not possible.

11. Toxicological Information

Toxicology Information
No harmful effects are expected if the precautions on the label and this MSDS are followed.

Acute Toxicity - Oral
LD50 (rat) 625 mg/kg for 2,4-D dimethylamine salt

LD50 (rat) 2,115 mg/kg for 2,4-D dimethylamine salt

Acute Toxicity - Dermal
LC50 (rat) (4hr) >3.5 mg/l for 2,4-D dimethylamine salt

Acute Toxicity - Inhalation
Ingestion
Not a likely route of exposure.

Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.
Inhalation
- Prolonged contact with the concentrate may cause irritation.
- Prolonged contact with the concentrate may result in absorption of 2,4-D in harmful amounts.

Skin
- Will irritate the eyes.
- Prolonged contact with the concentrate may cause damage to the eye. Prolonged and repeated skin contact may result in skin sensitisation.

Eye
- Severe irritant

Skin Sensitisation
- The weight of the evidence is that 2,4-D is not carcinogenic.

Carcinogenicity
- Chronic Overexposure: Repeated absorption of relatively large amounts of 2,4-D presents a risk to the liver and kidneys.

Chronic Effects
- The Australian Acceptable Daily Intake (ADI) for 2,4-D 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 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: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2014).

12. Ecological information

Persistence and degradability
- 2,4-D dimethylamine salt is not rapidly degradable
- 2,4-D dimethylamine salt is not bioaccumulative

Bioaccumulative Potential
- Do not spray in high winds.
- Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
- Spray drift can cause damage, read the label for more information.

Environmental Protection
- LC50 (96hr) for zebrafish is >1000 mg/l for formulated product
- LC50 (96hr) for rainbow trout is 100 mg/l for 2,4-D dimethylamine salt
- LC50 (48hr) for daphnia is >1,128 mg/l for the formulated product.
- EC50 (5d) for Selenastrum capricornutum = 33.2 mg/l for 2,4-D.
- Chronic NOEC (14d) for duckweed = 0.27mg/L for 2,4-D dimethylamine salt

Acute Toxicity - Fish
- Birds: Not toxic to birds. Oral LD50 bobwhite quail is 500mg/kg for 2,4-D dimethylamine salt
- Bees: Not toxic to bees. LD50 (contact) >100µg/bee, (oral) c. 94µg/bee for 2,4-D dimethylamine salt
- Plants: EC25(14d) mustard seedling is 0.00543mg/kg for 2,4-D dimethylamine salt

13. Disposal considerations

Product Disposal
- To avoid disposal all attempts should be made to utilise the product completely in accordance with its registered use. Dilute unusable product according to the label and pour onto fallow land. Prevent the product entering natural water sources.

Container Disposal
- Ensure container is completely empty. Burn in an appropriate incinerator if circumstances, such as wind direction, permit. Otherwise crush and bury in an appropriate landfill.

14. Transport information

Transport Information
- It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

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| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. - (contains 2,4-D, 80%) |
| Transport hazard class(es) | 9 |
| Hazchem Code | 2X |
| Packaging Method | - |
| Packing Group | III |
| EPG Number | - |
| IERG Number | 47 |
| IMO Marine Pollutant | F-A, S-F |
| IMDG EMS | 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

| Packaging & Labelling | HARMFUL * CORROSIVE - keep out of reach of children  ECOTOXIC |
| Hazard Rating Systems | NFPA/HMIS: 3-1-1 |

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  5 yearly review carried out. Various changes and updates made to document. |
| Revisions Highlighted | Supersedes SDS issued November 2011 |
| Other Information | ...End Of MSDS... |