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| Infosafe No™ 3NU9I | Issue Date : August 2017 | ISSUED by NUFARMNZ |
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Product Name **DUPLOSAN® SUPER**

1. Identification

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| GHS Product Identifier | DUPLOSAN® SUPER |
| Product Code | 00192 |
| Product Type | Selective 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 |
| Email | info@nz.nufarm.com |
| Recommended use of the chemical and restrictions on use | Systemic post-emergence herbicide for use in wheat, barley, oats, grass crops and grass lawns against a wide range of broadleaf weeds. |
| 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. Hazard Identification

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| Other Information | 6.1D acute toxicant, 6.5B sensitiser, 6.9A target organ toxicant, 8.3A eye corrosive, 9.1D aquatic toxicant, 9.2A soil toxicant, 9.3B terrestrial vertebrate toxicant, TOXICITY Toxic - May cause organ damage from repeated oral or inhalation exposure at high doses. May be harmful if swallowed, inhaled or absorbed through the skin. May cause sensitisation from prolonged skin contact. CORROSIVE Danger - this product is corrosive and may cause eye damage. ECOTOXIC Harmful to aquatic organisms. Selective herbicide - very toxic to some plant species. Toxic to terrestrial vertebrates. |
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3. Composition/information on ingredients

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| Chemical Characterization | Liquid | | |
| Ingredients | Name | CAS | Proportion |
| | Dichlorprop-P (as the dimethylamine salt) | 104786-87-0 | 310 g/L |
| | MCPA (present as the dimethylamine salt) | 2039-46-5 | 160 g/L |
| | Mecoprop-P (as the dimethylamine salt) | 66423-09-4 | 130 g/L |

4. First-aid measures

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| 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. |

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Eye contact If a large area is affected seek medical assistance. Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses, if present and easy to do.

First Aid Facilities 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.

Advice to Doctor Treat symptomatically. (decontamination, vital functions), no known specific antidote.

5. Fire-fighting measures

Suitable extinguishing media Extinguish fire with the following: Water, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products If involved in a fire, it may emit carbon monoxide, nitrogen oxides and hydrogen chloride.

Special Protective Equipment for fire fighters Full protective clothing and self-contained breathing apparatus.

Specific Methods Keep up wind. Do not allow washings to reach sewage or effluent systems.

Other Information Location Certificate: Not applicable
 Hazardous Atmosphere Zone: Not applicable
 Number of Fire Extinguishers: Not applicable

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. Clean contaminated floors and objects thoroughly with water and detergent, observing environmental regulations.

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 when applied in a wide dispersive manner; or used by a commercial contractor. TRACKING: Is not required. RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.

Conditions for safe storage, including any incompatibilities Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers, pesticides and seeds. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 100L of DUPLOSAN SUPER require secondary containment, more than 1,000L require emergency response plans and 1,000L require signage.

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

Occupational exposure limit values No exposure standard has been established for this product. No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.

Appropriate engineering controls Handle in well ventilated areas, generally natural ventilation is adequate.

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| 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, washable hat, 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

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| Form | Liquid |
| Appearance | Brown liquid |
| Odour | Slight amine odour |
| Melting Point | Not applicable. Crystallization temp = ~-20°C |
| Solubility in Water | Soluble |
| Specific Gravity | 1.17g/mL @ 20°C |
| pH | 8-10 |
| Flash Point | Not flammable |
| Other Information | (SL) Soluble concentrate |

10. Stability and reactivity

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| Chemical Stability | Stable under normal conditions of handling and storage. |
| Incompatible Materials | acids and alkalis. |
| Hazardous Polymerization | Not known to occur. |

11. Toxicological Information

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| Acute Toxicity - Oral | LD50 (rat, F) = 615mg/kg for dichlorprop-P LD50 (mouse) = 439mg/kg for MCPA LD50 (mouse) = 1,050mg/kg for mecoprop-P |
| Acute Toxicity - Dermal | LD50 (rat) = >4,000mg/kg for dichlorprop-P LD50 (rat) = >4,000mg/kg for MCPA LD50 (rat) = >4,000mg/kg for mecoprop-P |
| Acute Toxicity - Inhalation | LC50 (rat) = >7.4mg/kg/4h for dichlorprop-P LC50 (rat) = >6.36mg/L/4h for MCPA LC50 (rat) = >5.6mg/L/4h for mecoprop-P |
| Skin Sensitisation | May cause skin sensitization. |
| Health Hazard | Symptoms of poisoning may include headache, nausea, vomiting and/or diarrhoea. |
| Chronic Effects | May cause damage to the liver, kidney, blood and hematopoietic system. |
| Serious eye damage/irritation | Severe irritant |
| Skin corrosion/irritation | Not irritating. |

12. Ecological information

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| Persistence and degradability | DT50 (aerobic) 3-13 days for Mecoprop-P DT50 <7 days after initial lag phase for MCPA DT50 21-25 days for dichlorprop (CAS 120-36-5) |
| Environmental Fate | Mecoprop-P in soil is degraded predominantly by micro-organisms to 4-chloro-2-methylphenol, followed by ring hydroxylation at the 6-position and ring opening. Duration of residual activity in soil is c. 2 months. MCPA in soil is degraded to 4-chloro-2-methylphenol, followed by ring hydroxylation and ring opening. Duration of residual activity in soil is c. 3-4 months, following an application rate of 3kg/ha. No environmental fate data available for dichlorprop-P. |
| Bioaccumulative Potential | This product is not bioaccumulative. |
| Acute Toxicity - Fish | LC50 (96h) trout = 100-220mg/L for dichlorprop-P LC50 (96h) rainbow trout = 89mg/L for MCPA dimethylamine salt |

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| Acute Toxicity - Daphnia | LC50 (96h) trout = 150-220mg/L for mecoprop-P EC50 (48h) = >100mg/L for dichlorprop-P EC50 (48h) = >100mg/L for mecoprop-P EC50 (48h) = >190mg/L for MCPA |
| Acute Toxicity - Algae | EC50 (72h): 676mg/L Pseudokirchneriella subcapitata for dichlorprop-P EC50 (72h): 23.9mg/L Anabaena flos-aquae for mecoprop-P EC50 (96h): 0.21mg/L Navicula pelliculosa for MCPA |
| Acute Toxicity - Other Organisms | Worm: LD50(14d) Eisenia foetida 494mg/kg soil(mecoprop-P) 325mg/kg soil(MCPA) 994mg/kg soil(dichlorprop-P) Birds: LC50 bobwhite quail c. 500mg/kg(mecoprop-P) 377mg/kg(MCPA) 250-500mg/kg(dichlorprop-P) Bees: Not toxic to honeybees LD50 (48h) = >25mg/bee (mecoprop-P DMA salt) LD50 = 0.104mg/bee(MCPA) LD40 (48h) = >25mg/bee (dichlorprop-P DMA salt) |

13. Disposal considerations

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| 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

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| Transport Information | It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs. |
| Storage and Transport | Not classified as Dangerous Goods for transport in New Zealand. |
| 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

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| National and or International Regulatory Information | Registered pursuant to the ACVM Act 1997, No. P4594 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR000417 See www.epa.govt.nz for approval controls. |
| Packaging & Labelling | HARMFUL * CORROSIVE * ECOTOXIC - keep out of reach of children |
| Hazard Rating Systems | NFPA/HMIS: 3-1-1 |
| Hazard Category | HARMFUL * CORROSIVE * ECOTOXIC - Keep out of reach of children |

16. Other Information

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| Date of preparation or last revision of SDS | July 2012 |
| 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 Highlighted | 5 yearly review carried out. Various changes and updates made to document. ...End Of MSDS... |

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