

SAFETY DATA SHEET

Nuflor®

Section 1: Identification of the Substance and Supplier

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| Product name | Nuflor Liquid containing 26 - 36% florfenicol |
| Recommended use | Broad spectrum antibacterial formulation for cattle and swine |
| Company details | MSD Animal Health, 33 Whakatiki Street, Upper Hutt Phone: 0800 800 543 Fax: 0800 808 100 Website: www.msd-animal-health.co.nz Hours: 8 am – 5 pm, Mon – Fri |
| Emergency telephone | 0800 764 766 (0800 POISON) 24 hours human health 0800 243 622 (0800 CHEMCALL) 24 hours |
| Date of preparation | September 2011 |

Section 2: Hazards Identification

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| Hazard classifications | 6.3A, 6.4A, 6.8A, 6.9B, 9.1A |
| Priority identifiers | DANGER Ecotoxic |
| Secondary identifier | 6.3A May cause skin irritation 6.4A May cause eye irritation 6.8A May damage fertility or the unborn child from repeated oral exposure 6.9B May cause organ damage from repeated oral exposure at high doses 9.1A Very toxic to aquatic organisms with long-lasting effects |
| Risk & Safety Phrases | R62 Possible risk of impaired fertility R63 Possible risk of harm to the unborn child R36/38 Irritating to eyes and skin R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |

Section 3: Composition/Information on Ingredients

| Chemical name | CAS number | Concentration |
|------------------------|------------|---------------|
| Florfenicol | 73231-34-2 | 30% |
| N-Methyl-2-Pyrrolidone | 872-50-4 | 20-30% |
| Propylene Glycol | 57-55-6 | 10-20% |

Section 4: First Aid Measures

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| Necessary first aid measures | SKIN CONTACT In case of skin contact, while wearing protective gloves, carefully remove any contaminated clothing, including shoes, and wash skin thoroughly with soap and water. If irritation or symptoms occur or persist, consult a doctor. EYE CONTACT In case of eye contact, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and |
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continue rinsing eyes for at least 15 minutes. If irritation occurs or persists, consult a doctor.

INGESTION Rinse mouth and drink a glass of water. Do not induce vomiting unless under the direction of a qualified medical professional or Poison Control Centre. If symptoms persist, consult a doctor.

INHALATION Remove to fresh air. If any trouble breathing, get immediate medical attention. Administer artificial respiration if breathing has ceased. If irritation or symptoms occur or persist, consult a doctor.

Required instructions For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.

Notes for medical personnel Inhalation: remove to fresh air & provide oxygen if breathing is difficult

Section 5: Fire Fighting Measures

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| Type of hazard | Not classified as flammable |
| Fire hazard properties | Not applicable |
| Regulatory requirements | Not applicable |
| Extinguishing media and methods | Carbon dioxide (CO ₂), extinguishing powder or water spray |
| Hazchem code | 3Z |
| Recommended protective clothing | Wear full protective clothing and self-contained breathing apparatus (SCBA). |

Section 6: Accidental Release Measures

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| Emergency procedures | Wear chemical resistant gloves and overalls, facemask or goggles. Prevent further spillage. Adsorb spilled product and place in sealable container for disposal. Wash down affected area with water plus detergent. Absorb and collect washings and place in the same sealable container for disposal. Seek advice from the local authority regarding disposal. Avoid contamination of any water source or soil with product or empty container. |
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Section 7: Handling and Storage

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| Precautions for safe handling | Avoid contact with skin, eyes, and mucosa. Keep containers adequately sealed during material transfer, transport, or when not in use. See Section 8 (Exposure Controls) for additional guidance. |
| Regulatory requirements | Signage required where quantities greater than 100L are present. Emergency response plan required where quantities greater than 100L are present. |
| Handling practices | Avoid contact with skin. Keep containers adequately sealed during material transfer, transport, or when not in use. |
| Approved handlers | Not required |
| Conditions for safe storage | Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Keep container sealed when not in use. Keep out of reach of children. |
| Store site requirements | Store at 4°C to 25°C. |
| Packaging | PG III |

Section 8: Exposure Control/Personal Protection

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| Workplace exposure standards | N-Methyl-2-pyrrolidone TWA 25ppm (103 mg/m ³) STEL 75ppm (309mg/m ³) Propylene glycol (vapour & particulates) TWA 150ppm (474mg/m ³) |
| Application in the workplace | Ensure adequate ventilation. Keep container sealed when not in use. |
| Exposure standards outside the workplace | No TEL is set for this substance at this time EEL Not applicable |
| Personal protection | Wear chemical resistant gloves, facemask or goggles. |

Section 9: Physical and Chemical Properties

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| Appearance | Clear, light yellow to straw coloured, somewhat viscous solution |
| Boiling Point | 100°C |
| Melting/Softening point | Not applicable |
| Vapour Pressure | Not determined |
| Specific Gravity | 1.0 |
| Solubility (H ₂ O) | Soluble |
| Percent Volatiles | Not determined |
| Evaporation Rate | Not determined |

Section 10: Stability and Reactivity

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| Stability of the substance | Stable under normal conditions. |
| Conditions to avoid | Open flames and high temperatures. |
| Material to avoid | Avoid strong acids, bases and oxidisers |
| Hazardous decomposition products | Carbon oxides (COx) |

Section 11: Toxicological Information

Acute effects for individual ingredients only

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| TEL | No TEL is set for this substance at this time. |
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Chronic effects for individual ingredients only

Florfenicol: Toxicity studies with repeated doses were conducted in mice (13 weeks, rats (7, 14, 28 days and 13, 52 weeks) and dogs (14, 28 days and 13, 52 weeks). Toxic effects reported for rats were changes in haematologic parameters and atrophy of testes. For dogs, an increase in liver weights was observed. The dog was the most sensitive species and the NOEL was 1 mg/kg bw/day. [EMEA]

N-Methyl-2-Pyrrolidone: Moderately irritating to human skin with prolonged or repeated exposure [IUCLID 2000]

N-Methyl-2-Pyrrolidone: Irritating to eyes [IUCLID 2000]

N-Methyl-2-Pyrrolidone: Male reproductive toxicity has been manifested as reductions in the male fertility index in a multigeneration study in rats. Female reproductive toxicity has been manifested as reductions in the female fecundity index in a multigeneration study in rats. Developmental toxicity has been manifested as resorptions, malformations, reduced litter size, reduced postnatal survival and reduced pup body weight in experimental animals [U.S EPA]

Section 12: Environmental Information

Effects for individual ingredients only

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| AQUATIC | Florfenicol: 48hr LC50 0.0955 mg/L (<i>Penaeus vannamei</i> - Whiteleg shrimp) [ECOTOX] Florfenicol: 96hr EC50 1.5 mg/L (<i>Selenastrum capricornutum</i>) |
| EEL | No EEL is set for this substance at this time |

Section 13: Disposal Considerations

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| Disposal information | Disposal Dispose of unused contents in a suitable landfill. Avoid contamination of any water source or the environment with product or empty container. Container Disposal Dispose of empty container by burying in a suitable landfill or recycle. |
| Reference | Current version of NZS 8409 Management of Agrichemicals |

Section 14: Transport Information

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| Relevant information | UN3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Florfenicol) MARINE POLLUTANT Class 9 PG III Limited quantities: 5L Maximum quantity for own agricultural use: 1000L |
| Other requirements | Refer to Haznote. |

Section 15: Regulatory Information

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| Regulatory status | HSNO Approval Code: HSR002210 For a full controls see www.epa.govt.nz ACVM registration number: A7819. For conditions of registration see www.foodsafety.govt.nz RESTRICTED VETERINARY MEDICINE |
| HSNO and ACVM controls | Signage: 100 Litres Emergency Plan: 100 Litres |

Section 16: Other Information

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| Additional information | Nuflor is a registered trademark. |
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