

Infosafe No™ 3NUDK	Issue Date : December 2016	ISSUED by NUFARMNZ
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 Product Name **PULSE® PENETRANT**

1. Identification

GHS Product Identifier	PULSE® PENETRANT
Product Code	01777
Product Type	Adjuvant
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	An organosilicone penetrant for improved penetration and faster uptake of Roundup®, WeedMaster® and other herbicides.
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

Other Information	6.1D acute toxicant, 6.4A eye irritant, 6.9B target organ toxicant, 9.1B aquatic toxicant, TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause eye irritation. May cause organ damage from repeated oral exposure at high doses. ECOTOXIC Toxic to aquatic organisms with long-lasting effects.
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3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Organomodified polydimethylsiloxane	Proprietary	>800g/L

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. Seek medical assistance. Remove contact lenses, if present and easy to do.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

5. Fire-fighting measures

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Suitable extinguishing media	Water fog, foam, carbon dioxide or dry chemical.
Unsuitable Extinguishing Media	No water jets or foam as these can cause frothing and increase fire intensity.
Hazards from Combustion Products	If involved in a major fire, could evolve oxides of carbon and silicon.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Specific hazards arising from the chemical	Do not direct a solid stream of water into hot, burning pools; this may cause frothing and increase fire intensity.
Hazchem Code	2X
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 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 product or washings from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling	Avoid skin and eye contact and inhalation of spray mist.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in the closed, original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Stores containing 1,000L of PULSE PENETRANT require secondary containment and are subject to signage, and more than 1,000L require emergency response plans.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure standard has been established for this product.
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles. When mixed with other products, follow the safety precautions for that product.
Hygiene Measures	After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash contaminated clothing and safety equipment.

9. Physical and chemical properties

Form	Liquid
Appearance	Clear straw coloured liquid
Odour	Moderate polyether odour
Melting Point	-50°C (pour point)
Boiling Point	>150°C at 100kPa
Solubility in Water	Disperses in water.
Specific Gravity	1.002 @ 25°C
Vapour Pressure	<1.33 hPa @ 20°C

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Vapour Density (Air=1)	Heavier than air
Evaporation Rate	<1
Flash Point	143°C (pmcc)
Flammability	Non combustible material.

10. Stability and reactivity

Reactivity	No significant decomposition products. Measurements at >150°C in presence of air have shown that small amounts of formaldehyde are formed due to oxidative degradation.
Chemical Stability	Stable under normal conditions of handling and storage.
Conditions to Avoid	Keep away from heat, flames, sparks and ignition sources.
Hazardous Decomposition Products	Combustion forms carbon dioxide and if incomplete, carbon monoxide and smoke. Water is also formed. Silica and other silicon compounds. Carbon monoxide poisoning produces headaches, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgement and unconsciousness followed by coma and death.
Possibility of hazardous reactions	No hazardous reactions known.
Hazardous Polymerization	Hazardous polymerisation will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) >2000 mg/kg for the formulated product
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for the formulated product
Acute Toxicity - Inhalation	LC50 Inhalation, 5% diluted aqueous solution: Rat = >11.78mg/L/4hr for a similar product
Ingestion	Mildly irritating to mucouse membranes but is unlikely to cause anything more than mild transient discomfort. Swallowing large amounts of concentrate may cause nausea and vomiting. Repeated ingestion may cause damage to the liver, kidneys, thyroid, male and female reproductive system and blood forming system.
Inhalation	May cause eye injury or irritation to the respiratory tract if high concentrations are inhaled.
Skin	Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.
Eye	Mildly irritating to eyes, but is unlikely to cause anything more than mild transient discomfort. Vapour may cause blurring of vision.
Skin Sensitisation	Negative to guinea pigs.
Health Hazard	Medical conditions aggravated by over exposure - exisiting dermatitis.
Chronic Effects	This material was not mutagenic in an Ames bacterial assay or in three mammalian test systems including the Chinese hamster ovary (CHO)/HGPRT gene mutation assay, a micronucleus cytogenetic assay in mice, and an in vitro mammalian cytogenetic test. In a repeated skin application study with rats, this material caused moderate skin irritation which resolved during a post-application recovery period. There was no evidence for percutaneous cumulative or specific organ toxicity. Findings from a 14-day dietary feeding study with rats show that the high dosage repeated ingestion of this material causes adverse effects on the male and female reproductive tracts. Additional effects seen in this dietary study were increased liver weight, altered blood cytology/chemistry, and thyroid enlargement (primarily hypertrophy, with some hyperplasia). Evidence of partial or complete recovery was found over a 28-day recovery period. Findings from a repeat 9-day aerosol inhalation toxicity study with rats show a no-observable effect level (NOEL) of less than 0.025mg/l. Symptoms of toxicity included rales, gasping, ocular opacity, prostration, hypothermia, reduced body weight gain and food consumption, changes in clinical pathology, decreased thymus weight, and microscopic lesions in the nasal cavity. It is not anticipated that the use of aqueous dilutions of this product would result

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Serious eye damage/irritation	in this type of aerosol exposure. Mild eye irritant. Moderate redness of conjunctivae, iridal inflammation and tear production. Injury to the cornea is not expected.
Skin corrosion/irritation	Mild skin irritant. Prolonged contact may result in minor irritation, transient local redness and swelling.
Subchronic/Chronic Toxicity	Oral Rat (14d) NOEL 300mg/kg

12. Ecological information

Persistence and degradability	Not readily biodegradable.
Known Harmful Effects on the Environment	No data available.
Other Precautions	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Basis for Assessment	EPA New Zealand have determined this product to be HSNO classification 9.1B - Toxic to aquatic organisms with long-lasting effects.
Acute Toxicity - Fish	LC50 (96h) rainbow trout 2.1mg/L

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

U.N. Number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (organomodified polydimethylsiloxane, >80%)
Transport hazard class(es)	9
Hazchem Code	2X
Packaging Method	-
Packing Group	III
EPG Number	-
IERG Number	47
IMO Marine Pollutant	Yes. Environmentally Hazardous Substance mark required.
IMDG EMS	F-A, S-F
Other Information	Do not carry more than 1L of Pulse Penetrant 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	Approved pursuant to the HSNO Act 1996, Approval Code HSR002503 See www.epa.govt.nz for approval controls.
Packaging & Labelling	This product is not required to be registered under the ACVM act. HARMFUL - keep out of reach of children
Hazard Rating Systems	NFPA/HMIS: 2-1-0
Hazard Category	HARMFUL * ECOTOXIC - Keep out of reach of children

16. Other Information



Safety Data Sheet

infosafe
CS: 1.7.2

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Date of preparation November 2012

or last revision of
SDS

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

The brand name WeedMaster is added to section 1 under Product use.

Revisions

Highlighted

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