

Infosafe No™ 3NUDK	Issue Date : March 2024	ISSUED by NUFARMNZ
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 Product Name **PULSE® PENETRANT**

Section 1 - Identification

Product Identifier	PULSE® PENETRANT
Product Code	01777
Product Type	Adjuvant
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	An organosilicone penetrant for improved penetration and faster uptake of CRUCIAL®, WeedMaster®, Roundup® 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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Acute oral toxicity: Category 4 Acute dermal toxicity: Category 4 Acute inhalation toxicity: Category 4 Eye irritation Category 2 Specific target organ toxicity - repeated exposure: Category 2 Hazardous to the aquatic environment chronic Category 2
Signal Word (s)	WARNING
Hazard Statement (s)	H302 Harmful if swallowed H312 Harmful in contact with skin H320 Causes eye irritation H332 Harmful if inhaled H373 May cause damage to organs through prolonged or repeated exposure H411 Toxic to aquatic life with long lasting effects
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions.
Pictogram (s)	Health hazard, Environment



Precautionary Statement – Prevention	P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Precautionary Statement – Response	P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P314 Get medical advice/attention if you feel unwell.
 P330 Rinse mouth.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P363 Wash contaminated clothing before reuse.
 P391 Collect spillage.
 P501 Dispose of contents/container to an approved landfill.

Precautionary Statement – Disposal

Section 3 - Composition and Information on Ingredients

Chemical Characterization Liquid

Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Organomodified polydimethylsiloxane	134180-76-0	>800g/L

Section 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 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.

Section 5 - Firefighting Measures

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

Decomposition Temperature Information is not available.

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

Section 6 - Accidental Release Measures

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Spills and 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.

Section 7 - Handling and Storage

Precautions for Safe Handling	Avoid skin and eye contact and inhalation of spray mist. Use only outdoors in a well-ventilated area. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Is not required.
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.
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 HSN0 Regulations.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)	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.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Clear straw coloured liquid
Odour	Moderate polyether odour
Decomposition Temperature	Information is not available.
Melting Point	-50°C (pour point)
Boiling Point	>150°C at 100kPa
Solubility in Water	Disperses in water.
Specific Gravity	1.002 @ 25°C
pH	Information is not available.
Vapour Pressure	<1.33 hPa @ 20°C
Vapour Density (Air=1)	Heavier than air

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Evaporation Rate	<1
Odour Threshold	Information is not available.
Partition Coefficient: n-octanol/water	Information is not available.
Flash Point	143°C (pmcc)
Flammability	Non combustible material.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Relative Density	Information is not available.

Section 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.

Section 11 - Toxicological Information

Acute Toxicity - Oral	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
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for the formulated 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 Corrosion/Irritation	Mild skin irritant. Prolonged contact may result in minor irritation, transient local redness and swelling.

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Serious Eye Damage/Irritation	Mild eye irritant. Moderate redness of conjunctivae, iridal inflammation and tear production. Injury to the cornea is not expected.
Skin Sensitisation	Negative to guinea pigs.
Germ Cell Mutagenicity	Information is not available.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Information is not available.
STOT - Single Exposure	Information is not available.
STOT - Repeated Exposure	May cause damage to organs through prolonged or repeated exposure.
Subchronic/Chronic Toxicity	Oral Rat (14d) NOEL 300mg/kg
Health Hazard	Medical conditions aggravated by over exposure - exisiting dermatitis.
Chronic Effects	<p>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.</p> <p>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 in this type of aerosol exposure.</p>

Section 12 - Ecological Information

Persistence and Degradability	Not readily biodegradable.
Mobility	Information is not available.
Bioaccumulative Potential	Information is not available.
Other Adverse Effects	Information is not available.
Other Precautions	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Basis for Assessment	Toxic to aquatic organisms with long-lasting effects.
Acute Toxicity - Fish	LC50 (96h) rainbow trout 2.1mg/L

Section 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.

Section 14 - Transport Information

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UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (organommodified polydimethylsiloxane)
Hazard Class	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.

Section 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. This product does not require registration under the ACVM Act.
Packaging and Labelling	READ SAFETY DIRECTIONS BEFORE OPENING OR USING KEEP OUT OF REACH OF CHILDREN

Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS	December 2021.
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	Various changes and updates made to the document to comply with GHS7. ...End Of MSDS...

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