

SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product: Starlan
Product Use: Insecticide
Restriction of Use: Refer to Section 15

New Zealand Supplier: **Adria Crop Protection Solutions**
Address: 407 State Highway 16
Kumeu 0841,
Auckland

Telephone: +64 9 412 9817
Fax: +64 9 412 9807
Website: www.adria.nz

**Emergency No: 0800 734 607 (24hr)3
0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 4th March 2021

Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR007662

Pictograms:



Toxic/Irritant Chronic Ecotoxic

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1C	H302	Harmful if swallowed.	Acute Tox. 4
6.9B	H373	May cause damage to organs through prolonged or repeated exposure.	STOT RE 2
9.1A	H410	Very toxic to aquatic life with long lasting effects.	Aquatic Chronic 1
9.2A	H421	Very toxic to the soil environment.	-
9.3B	H431	Very toxic to terrestrial vertebrates.	-
9.4A	H441	Very toxic to terrestrial invertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe fume, mist or spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Refer to Section 13.

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Content (%w/w)	CAS NUMBER.
Imidacloprid	60.00	138261-41-3
Not hazardous	To bal	

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on Skin	Take off contaminated clothing and wash before re-use. Wash affected areas with soap and water. If skin irritation occurs: Get medical advice/attention.
If Swallowed	Rinse mouth. If swallowed do NOT induce vomiting. Never give anything to an unconscious person. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed.

Symptoms:

Ingestion: Harmful if swallowed.

Inhalation: Not applicable.

Skin: Causes mild skin irritation.

Eye: Causes serious eye irritation.

Chronic: May cause damage to organs through repeated or prolonged exposure.

Treatment: No known specific antidote. Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	This product is not flammable or combustible.
Hazards from products	Products of combustion are toxic and or irritants. Specific hazards in a fire: Hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides.
Suitable Extinguishing media	Use water (not direct jet), foam, dry chemical, carbon dioxide or sand to extinguish fires.
Recommended protective clothing & Precautions for firefighters	Wear Self-contained breathing apparatus and appropriate chemical-protective clothing.
HAZCHEM CODE	2X

Section 6. Accidental Release Measures

Personal precautions:

Use protective clothing as per Section 8. Avoid contact with skin, eyes and clothing. Remove contaminated clothes and shoes immediately.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Spill and Disposal procedures:

Absorb spills with inert material and place in waste containers. Wash area with water and absorb with further inert material. Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal. Dispose of waste safely, according to local Council regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not breathe fume, mist or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear appropriate protective clothing, refer to section 8.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store securely out of reach of children.
- Store in original container tightly closed and in a locked, cool, dry, ventilated area away from foodstuffs, fertilisers and seeds and sources of ignition.
- Protect from extreme temperatures and direct sunlight.

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

No ingredients have exposure limits.

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls / Industrial Hygiene

Local exhaust and general ventilation must be adequate to meet exposure standards. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal Protection Equipment

Eyes	Chemical goggles or face shield with safety glasses.
Hands	Wear suitable gloves resistant to chemical penetration e.g. nitrile rubber gloves with a minimum thickness of 0.4 mm.
Skin	Body protection (chemical protection suit, boots) must be chosen depending on activity and possible exposure.
Respiratory	Wear respiratory protection if ventilation is inadequate. Use particle filter with medium efficiency for solid and liquid particles.
General	Keep away from food, drink and animal feedstuffs. No eating, drinking or smoking during use and wash hands and face before breaks and after work. Clean protective gear and contaminated equipment with soap or soda solution.

Section 9**Physical and Chemical Properties**

Appearance	Liquid
Colour	White
Odour	Characteristic
Odour Threshold	No data available
pH	5 - 9
Melting/Boiling Point	>100°C
Freezing Point	No data available
Flash Point	Not applicable
Flammability	Non-flammable
Upper and Lower Explosive Limits	Not applicable
Vapour Pressure	9x10 ⁻⁷ mPa @ 25°C
Vapour Density	No data available
Density	1.215 g/mL
Water Solubility	No data available
Ignition Temperature	No data available
Decomposition Temperature	Not available
Viscosity	Not available
Particle Characteristics	Not available
Surface tension	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	None known.
Conditions to Avoid	Avoid intense heat. Keep away from foodstuffs, acids and alkalis.
Incompatible Materials	None under normal conditions. Poisonous fumes may be released during fire.
Hazardous Decomposition Products	Specific hazards in a fire: Hydrogen chloride, hydrogen cyanide, carbon monoxide and nitrogen oxides.

Section 11 Toxicological Information**Acute Effects:**

Swallowed	LD50 (rat) 450 mg/kg
Dermal	LD50 (rat) >5000 mg/kg
Inhalation	LC50 (rat) 5.33 mg/L (4 hours)
Eye	No data available
Skin	No data available

Chronic Effects:

Carcinogenicity	No data available
Reproductive Toxicity	No data available
Germ Cell Mutagenicity	No data available
Aspiration	No data available
STOT/SE	No data available
STOT/RE	No data available

Individual component information:**Acute Toxicity:**

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
Imidacloprid (138261-41-3)	130mg/kg (mouse)	-	-

Section 12. Ecotoxicological Information

Ecological effects information	9.1A = Very toxic to aquatic life with long lasting effects. 9.2A = Very toxic to the soil environment. 9.3B = Toxic to terrestrial vertebrates. 9.4A = Very toxic to terrestrial invertebrates.
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available
Acute fish toxicity:	LC50 (96 hr) for rainbow trout is 83mg/L
Toxicity for daphnia:	EC50 (48hr) for daphnia is 85mg/L
Toxicity to algae:	EC50 (72 h): > 100 mg/l green alga (<i>Pseudokirchneriella subcapitata</i>)
Precautions:	Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method:

Triple rinse container and add residue to spray tank. Return empty container to an AgRecovery collection point for disposal.



Empty container precautions:

Avoid contamination of any water supply with chemical or empty container.

Precautions or methods to avoid: Avoid release to the environment.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012



Road, Rail, Sea and Air Transport

UN No	3082
Class - Primary	9
Packing Group	III
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE (IMIDACLOPRID)
Marine Pollutant	Yes
Special Provisions-Limited Quantities	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR007662

HSNO Classification: 6.1C, 6.9B, 9.1A, 9.2A, 9.3B, 9.4A

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Not required
Location Certificate	Not required
Signage Trigger Quantities (Schedule 3)	100L (9.1A)
Emergency Response Plan (Schedule 5)	100L (9.1A)
Secondary Containment (Schedule 5)	100L (9.1A)
Tracking (Schedule 26)	Not required
For all further controls	Refer to EPA www.epa.govt.nz for controls document - HSR100355

HSNO Additional Controls (Restrictions of use)	
77A	a). The substance must not be applied onto or into water. b). The person mixing or applying Starlan must be a "Qualified Contractor" or a "Qualified Person". The spray mixture may also be prepared by a "Qualified Loader". c). The method of application of the substance shall be limited to seed treatment.
Hazardous Property Controls Notice 2017	
HPC Notice Part 4 Clause 47	Equipment for class 9 substances must be appropriate
HPC Notice Part 4 Clause 48	Records of application of class 9 pesticides and plant growth regulators
HPC Notice Part 3	Hazardous substances in a place other than a workplace.
HPC Notice Part 4 Subpart A	Site and storage controls for class 9 substances
HPC Notice Part 4 Subpart C	Qualifications required for application of class 9 pesticides.
ACVM Act and Regulations	
ACVM Approval No See www.foodsafety.govt.nz for registration controls	P9851

Section 16 Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label. The data contained in this safety data sheet is based on our current knowledge and describes the product only with regard to safety requirements. The data does not describe the products properties. Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any existing laws and legislation are observed.

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer

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Please contact Adria, if further information is required.

Issue Date: 4th March 2021 Review Date: 4th March 2026