



MATERIAL SAFETY DATA SHEET

ZOLIAR® DF HERBICIDE

Date of Issue: June 2012

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product Name: Zoliar® 800 DF Herbicide
Other Names:
Recommended Use: A pre-emergence selective residual herbicide for a programmed approach to nutgrass and other grass and broadleaf weed control in cotton, asparagus, citrus, grapes, nuts, pome fruit and stone fruit.
Supplier: AgNova Technologies Pty Ltd
ACN: 097 705 158
Address: Suite 3/935 Station Street
Box Hill North Vic 3129 Australia
Telephone: (03) 9899 8100
Facsimile: (03) 9899 8500
Website: www.agnova.com.au
Contact: Managing Director
Emergency Telephone Number: 1800 033 111(24 hrs)

2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE – NON-DANGEROUS GOOD

Hazard Designation: Not classified as hazardous according to the criteria of NOHSC.
Risk Phrases: Not applicable
Safety Phrases: Not applicable
ADG Classification: This product is not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail.
SUSMP Classification: Exempt

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (w/w):
Norflurazon technical (min. 97%)	27314-13-2	82.5%
to give norflurazon		80.0%
Other ingredients determined not to be hazardous		to 100%

4. FIRST AID MEASURES



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If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Phone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.

Inhalation: Remove to fresh air. Rest.

Ingestion: If swallowed, contact a doctor or Poisons Information Centre

Skin contact: Avoid contact with skin. If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water.

Eye contact: Avoid contact with eyes. If product gets in eyes, wash it out immediately with water.

First Aid Facilities: Provide washing facilities in the workplace.

Medical attention: Treat symptomatically. No specific antidote known.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Fine water spray or foam.

Hazards from Combustion Products: In case of fire, product may release smoke or hazardous decomposition products.

Precautions for Fire Fighters: When fighting a major fire, wear an air-supplied respirator.



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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid contact with eyes and skin. Do NOT inhale dust or spray mist.

Environmental Precautions:

Avoid contamination of waterways.

Methods for Cleaning Up:

Keep all bystanders away. Wear full length clothing and PVC gloves. Reposition any leaking containers so as to minimize leakage.

For a product spill: sweep granule concentrate into a pile.

For a prepared spray spill: dam and absorb spill with an absorbent material (e.g. sand or soil).

Shovel the absorbed material or granule concentrate into drums.

Disposal of the absorbed material will depend upon the extent of the spill

- For quantities up to 50 kg of product bury in a secure landfill site
- For quantities greater than 50 kg seek advice from the manufacturer (use emergency contact number above) before attempting disposal. Contain in a secure location until disposal method is established.

Decontaminate the spill area with detergent and water and rinse with water.

7. HANDLING AND STORAGE

Handling: *Handling Precautions*

Avoid contact with eyes and skin. Do NOT inhale dust or spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Other Precautions:

None.

Storage:

Store in closed, original containers, in a dry, well ventilated area, as cool as possible, out of direct sunlight. Keep out of reach of children.

Provide washing facilities in the workplace.



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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:	No exposure standards have been set for the components of this product. <u>Exposure Potential:</u> Swallowing is unlikely under normal conditions of usage. Skin uptake and inhalation of spray mist are possible routes of exposure. This product is diluted with water prior to use as a spray. This diluted form is less toxic by all exposure routes. <u>Re-entry period:</u> Do not enter treated areas without protective clothing until spray has dried.
Engineering Controls:	No special requirements. Product is used outdoors.
Personal Protective Equipment:	Avoid contact with eyes and skin. Do NOT inhale dust or spray mist. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Beige-brown granules
Odour:	Odourless
Vapour Pressure:	< 1 mm Hg at 25 ⁰ C
Boiling Point:	Not applicable
Melting Point:	Not available
Flash Point:	Does not flash
Solubility:	Dispersible in water
Bulk density:	0.7 g/cm ³
pH (1% aqueous):	8.0
Behaviour in water:	Dispersible in water



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10. STABILITY AND REACTIVITY

Chemical Stability:	This product is non-flammable and non-explosive.
Hazardous Polymerisation:	None known
Conditions to Avoid:	Stable under normal storage conditions.
Incompatible Materials:	None known.
Hazardous Decomposition Products:	During a fire, this product may release smoke or hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

Oral Toxicity:	Low toxicity. Tests on rats indicate low toxicity following a single dose of a similar undiluted product. LD ₅₀ Oral (ingestion) Rat = 1140 mg/kg
Dermal Toxicity:	Low toxicity. Tests on rats indicate low toxicity due to skin contact with the norflurazon technical. LD ₅₀ Dermal (skin contact) Rat = > 2000 mg/kg
Inhalation Toxicity:	Low toxicity. Tests on rats indicate low toxicity due to inhalation of a similar formulation of undiluted product. LC ₅₀ (4 h) Rat = > 2600 mg/m ³
Skin Irritation:	Non-irritant
Eye Irritation:	Non-irritant
Sensitisation:	Based on results of norflurazon technical on guinea pigs – not a sensitiser
Mutagenicity:	Norflurazon technical has been extensively tested on laboratory mammals and in test tube systems. No evidence of any carcinogenic, mutagenic, teratogenic or reproductive effects has been found

Significant Data with Possible Relevance to Human Health

No data available.



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12. ECOLOGICAL INFORMATION

DO NOT contaminate ponds, irrigation channels, drains, streams, rivers or waterways with the chemical or used containers.

Norflurazon technical

Fish Toxicity: Toxic. LC₅₀ (96 h) rainbow trout > 20 mg/L
Daphnia Toxicity: No data available
Bird Toxicity: Low toxicity. LD₅₀ mallard ducks > 2510 mg/kg
Bee Toxicity: Non-toxic
Other: No data available

Environmental Fate, Persistence and Degradation: No data available

13. DISPOSAL CONSIDERATIONS

Dispose of empty used containers by single rinse before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN Number: Not classified as a dangerous good.
Proper Shipping Name: Not classified as a dangerous good.
Class and Subsidiary Risk: Not classified as a dangerous good.
Packing Group: Not classified as a dangerous good.
EPG: Not classified as a dangerous good.
Hazchem Code: Not classified as a dangerous good.



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15. REGULATORY INFORMATION

SUSMP: Exempt

APVMA: Registered according to the Agricultural and Veterinary Chemicals Act 1994.
APVMA Product Number: 63329

16. OTHER INFORMATION

Trademark Information: Zoliar® is a Registered Trademark of Syngenta Group Company.

Abbreviations and Acronyms: APVMA – Australian Pesticides and Veterinary Medicines Authority
NOHSC – National Occupational Health and Safety Commission
SUSMP – Standard for the Uniform Scheduling of Medicines and Poisons

Date of Preparation or Revision: June 2012.

Data Sources: Manufacturer product safety data and published data

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

The opinions expressed herein are those of qualified experts with the manufacturer. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of AgNova Technologies Pty Ltd, it is the user's obligation to determine the conditions of safe use of the product.

END OF MSDS