



ADVICE SUMMARY

APPLICATION FOR REGISTRATION OF A CHEMICAL PRODUCT

Product name: METEOR HERBICIDE
Applicant: AMGROW PTY LTD
Product number: 67974
Application number: 57210

Purpose of Application and Description of Use: Registration of a 960 g/L Metolachlor, emulsifiable concentrate product for the pre-emergent control of certain annual grasses in turf.

Active Constituent(s): METOLACHLOR

Regulatory Decision:

To grant the application subject to the following conditions:

Standard Conditions of Registration/Approval

1. Containers must meet AgVet Code Regulation 18
2. Agricultural products must meet Active Constituents Quality Assurance Requirements
3. Label must contain a Date of Manufacture and Batch Number

For full conditions, refer to Standard Conditions for Applications on the APVMA website.

ADVICE

Australian Government Department of Health and Ageing, Office of Chemical Safety

The OCS has conducted the toxicological & OHS assessment for the proposed herbicide product Meteor Herbicide, containing metolachlor at 960 g/L, formulated as an emulsifiable concentrate (EC) intended for the control of certain annual grasses, including Winter grass (*Poa annua*), Summer grass (*Digitaria sanguinalis* or *Digitaria ciliaris*), and Crowsfoot grass (*Eleusine indica*) in turf.

The toxicological assessment established the acute hazard profile for the proposed product. The ADI for metolachlor is 0.08 mg/kg bw/d and was established in 1987 based on a NOEL of 7.5 mg/kg bw/d (300 ppm) from a 6-month dog dietary study for slight bodyweight depression, slower decrease in alkaline phosphatase in both sexes and reduced food consumption in males at the next highest dose of 1000 ppm and using a 100-fold safety factor. No ARfD was established, and there were no new data submitted to establish an ARfD for metolachlor. Metolachlor is listed in the Schedule 5 of the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) with no cut-offs or exceptions. The product contains 960 g/L metolachlor and therefore classified as a Schedule 5 poison.

Based on the findings of the toxicological studies evaluated the product has low acute oral, acute dermal and acute inhalational toxicity. It is not a skin irritant, but it is a moderate eye irritant and a skin sensitiser.

The toxicology data and other information on the product provided and considered in this assessment justify the recommendations made and the Safety Directions established in the present evaluation. No warning statements and precautionary statements are required to appear on product label.

The OCS therefore recommended to the APVMA that there are no objections on human health grounds to registration of the product, Meteor Herbicide, containing metolachlor at 960 g/L, formulated as an emulsifiable concentrate (EC). Furthermore the proposed use of "Meteor Herbicide" will not be an undue health hazard to humans according to the criteria stipulated in Section 14 of the Ag/Vet Code Act of 1994.

Data relied on to provide the advice

Data No	Data Source*	Author(s)	Title	Date	Data Type	Data Sub-type	Authorising Party	Inherited Application No.
82630	S	Moore, G.E.	Acute dermal toxicity study in rats - limit test	24 February 2004	Toxicology	Acute dermal studies, active	Farmoz Pty Ltd	
82634	S	Sander, A.	Metolachlor 960 ec: acute eye irritation in the rabbit	21 May 2004	Toxicology	Acute eye irritation studies, active	Farmoz Pty Ltd	

Data No	Data Source*	Author(s)	Title	Date	Data Type	Data Sub-type	Authorising Party	Inherited Application No.
82631	S	Moore, G.E.	Acute inhalation toxicity study in rats - limit test	24 February 2004	Toxicology	Acute inhalation studies, active	Farmoz Pty Ltd	
82629	S	Moore, G.E.	Acute oral toxicity up and down procedure in rats	24 February 2004	Toxicology	Acute oral studies, active	Farmoz Pty Ltd	
82632	S	Moore, G.E.	Primary skin irritation study in rabbits	24 February 2004	Toxicology	Acute skin sensitisation studies, active	Farmoz Pty Ltd	
82633	S	Moore, G.E.	Dermalsensitization study in guinea pigs (buehler method)	24 February 2004	Toxicology	Acute skin sensitisation studies, active	Farmoz Pty Ltd	

State/External Efficacy Reviewer

Six efficacy and phytotoxicity trials in NSW and Queensland were conducted on three target weeds including winter grass, crowsfoot grass and summer grass

These trials compared the efficacy of a number of rates of Meteor Herbicide with at least one industry standard herbicide, and an untreated control.

Assessment was based on weed counts and percentage weed cover. Pre-emergent efficacy was evaluated on turf species up to 115 days after treatment in a range of turf grass situations including golf course fairways and parks. A specific phytotoxicity trial was conducted on commonly used turf grass species using a Spectrum TCM 500 Turf Colour Meter (score 0-9 dead to deep green).

The trials used scientific methodology and appropriate assessment parameters. The weeds and crops were appropriately identified and the rates applied in the trials encompassed the proposed label rate. The trials incorporated 3 or 4 replicates, the industry standards and untreated controls. Results were analysed using standard statistical procedures (ANOVA, LSD).

For wintergrass, two trials in NSW and Queensland indicated that Meteor Herbicide at 0.5, 1, 2 and 3 L/ha was equally effective to the commercial standard at 1.75 and 3.5L/ha providing pre-emergent control up to 115 days after treatment. No phytotoxicity was observed on host turf species including Queensland Blue couch, Common couch and Kikuyu. For crowsfoot grass, three trials indicated that Meteor herbicide at 0.25, 0.5, 1, 2 and 3L/ha was equally effective to the commercial standard at 2.5 L/ha providing pre-emergent control up to 88 days after treatment. No phytotoxicity was observed on host turf species including, Common couch and Kikuyu. For summer grass, one trial in NSW indicated that Meteor Herbicide at 0.5, 1, 2 and 3 L/ha was equally effective to the commercial standard at 1.75 and 3.5 L/ha providing pre-emergent control up to 88 days after treatment. No phytotoxicity was observed on host turf species including, Common couch and Kikuyu. The results of the trial program therefore indicated that 1-2 L/ha would effectively control or suppress the target weeds.

The reviewer therefore recommended that the proposed product would be effective as claimed on the proposed label.

Considering the efficacy reviewer's advice, the APVMA is satisfied that the use of the product would be effective and safe when used in accordance with the proposed label instructions.

Data relied on to provide the advice

Data No	Data Source*	Author(s)	Title	Date	Data Type	Data Sub-type	Authorising Party	Inherited Application No.
82621	S	A. Leggett	Meteor herbicide efficacy for pre-emergent control of poa annua in a turf situation and observations of phytotoxicity	27 October 2011	Efficacy and safety	Efficacy	Applicant	
82622	S	A. Leggett	Meteor herbicide efficacy for pre-emergent control of digitaria sanguinalis in a turf situation and observations of phytotoxicity	20 April 2012	Efficacy and safety	Efficacy	Applicant	
82623	S	R. Martinez	Pre-e winter grass efficacy and phytotoxicity trial	28 November 2011	Efficacy and safety	Efficacy	Applicant	
82624	S	R. Martinez	Pre-e crowsfoot grass efficacy and phytotoxicity trial	15 January 2011	Efficacy and safety	Efficacy	Applicant	
82625	S	R. Martinez	Pre-e crowsfoot grass efficacy and phytotoxicity trial	14 February 2012	Efficacy and safety	Efficacy	Applicant	
82626	S	A. Leggett	Meteor herbicide efficacy for pre-emergent control of eleusine indica in a turf situation and observations of phytotoxicity	12 April 2012	Efficacy and safety	Efficacy	Applicant	
82620	S	A. Leggett	Efficacy summary for meteor herbicide	07 May 2012	Efficacy and safety	Efficacy	Applicant	
82627	S	J. Hull	Phytotoxicity testing	05 May 2011	Efficacy and safety	Phytotoxicity and crop safety	Applicant	

* S = Data submitted with the application