MATERIAL SAFETY DATA SHEET

MACSPRED EUCMIX GR GRANULAR HERBICIDE

SECTION 1 - IDENTIFICATION

Product Name:	**MACSPRED EUCMIX™ GR GRANULAR HERBICIDE**
Other names:	None
Recommended Use:	**A herbicide for the control of certain annual and perennial *Eucalyptus globulus, E. regnans* and *E. nitens* plantations.**
Company:	Macspred Pty Ltd ABN 85 011 029 495
Address:	13 Kennedys Drive Delacombe, Ballarat VIC 3350
Telephone Number:	(03) 5335 8522
Emergency Telephone Number:	(03) 5335 8522

SECTION 2 - HAZARDS IDENTIFICATION

Hazards classification:	**Not hazardous according to NOHSC List of Designated Hazardous Substances**
ADG:	Not a dangerous good
Poisons Schedule:	S5 – according to Standard for Uniform Scheduling of Drugs and Poisons

SECTION 3 - COMPOSITION

Ingredients

Chemical entity	CAS number	Proportion
Terbacil	5902-51-2	4.4%
Sulfometuron methyl	74222-97-2	0.2%
Inerts		95.4%

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS) or are Australian Pesticides and Veterinary Medicines Authority (APVMA) approved active constituents.

SECTION 4 – FIRST AID MEASURES

Swallowed:	DO NOT induce vomiting. If swallowed contact a doctor or Poisons Information Centre (Phone Australia :131126).
Skin:	Wash contaminated skin with plenty of water. Remove contaminated clothing and wash before re-use. If irritation occurs seek medical advice.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention.
Inhaled:	Remove person to fresh air and keep at rest until fully recovered. Seek medical advice if effects persist.

Advice to Doctor
Treat symptomatically

SECTION 5 – FIRE FIGHTING MEASURES

Fire/Explosion Hazards
Dangerous decomposition or Combustion Products
Thermal decomposition
Extinguish fire with foam and water spray. If area is heavily exposed to fire and if conditions permit let fire burn itself out since water may increase the contamination hazard. Fine dust dispersed in air (particularly in confined spaces) may ignite if exposed to high temperature ignition source. Fire fighters to wear full protective clothing such and self contained breathing apparatus
Hazardous decomposition products
None known
Hazardous reactions
None known
Extinguishing Media
Extinguish fire with foam and water spray

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills and Disposal
DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Pick up bulk material by sweeping or other effective means and place into drums. Do not flush with water. Cleanup crew should wear rubber gloves, protective clothing, boots and eye goggles. Dispose of by burying in an approved landfill site.

Disposal
(1) After intended use:
Shake empty into application equipment. Destroy empty bags by puncturing or shredding them. Dispose of empty bags at a local authority landfill. If no landfill is available, bury the containers below 500 mm in a licensed/ approved disposal site. Empty containers and product should not be burnt.
(2) After spill or accident
Dispose of sealed containers at approved local waste disposal site.

SECTION 7 – HANDLING AND STORAGE

Storage and Transport
Keep container tightly closed. Store in a cool, well-ventilated area away from foodstuffs.

This product is not a dangerous good

Dangerous Goods / Hazardous Substances Regulation
This product is subject to the following regulations:
- Australia Code for the Transport of Dangerous Goods by Road and Rail
- State/Territory Storage of Dangerous Goods Regulations
- State/Territory Hazard Substances Regulations
- Standard for the Uniform Scheduling of Drugs and Poisons

SECTION 8 – EXPOSURE CONTROLS

Exposure Standards
None established for formulated product.

Ingredient	TWA mg/m^3
Terbacil AEL (Du Pont)	10 mg/m^3 (8 and 12 hour TWA)
Sulfometuron methyl AEL (Du Pont)	10 mg/m^3 (8 hour TWA)

Engineering Control
Use only with adequate ventilation.

Personal Protective Measures
Avoid contact with eyes and skin. When pouring granules into application equipment wear a dust mask and face shield or goggles. Wear protective goggles, rubber gloves, boots and overalls during handling and mixing. Avoid breathing dust.

Flammability
Fine dust dispersed in air (particularly in confined spaces) may ignite if exposed to high temperature ignition source.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Description/Properties

Form:	Granules
Colour:	Beige
Odour:	None
Melting point (°C):	Not available
Boiling point (°C):	Not applicable
Bulk Density:	1.3
Vapour Pressure:	Not applicable

Other Properties

Chemical group:	mixture sulfonylurea and uracil

SECTION 10 – STABILITY AND REACTIVITY

No specific stability or reactivity risks known.

SECTION 11 – TOXICOLOGICAL INFORMATION

No information available for the formulated product

Acute:	Swallowed:	Moderate to Low toxicity through this route Acute oral LD_{50} rat: >5000 mg/kg (sulfometuron methyl) Acute oral LD_{50} female rat: 934 mg/kg (terbacil) Acute oral LD_{50} male rat: 1255 mg/kg (terbacil)
	Eye:	May cause irritation
	Skin:	Very Low toxicity through this route Acute dermal LD_{50} rabbit >2,000 mg/kg (sulfometuron methyl) Acute oral LD_{50} rabbit > 5,000 mg/kg (terbacil) Based on the active ingredients, this product would not be a skin irritant or sensitiser.
	Inhaled:	Low toxicity through this route. May cause irritation.
Chronic:		None established for formulated product.

Terbacil:
In a two year rat feeding study the no observable effect level was 50ppm. Heptacellular hypertrophy was transitory at 250ppm and persistent at the highest dose which was escalated step-wise from 2,500 to 10,000ppm during the study. Decrease body weight was also noted at 2,500 - 10,000 ppm. No evidence of compound related oncogenicity was observed.
In a 2 year mouse feeding study, the no-observable effect level was 50 ppm.
Heptacellular hypertrophy was noted in males at 1,250 ppm and in both males and females at the highest dose which was increased from 5,000 to 7,000 at week 54. An increased incidence of hyperplastic liver nodules was also noted in males at 5,000 - 7,500 ppm. No compound related oncogenic effects were observed.
In a 2-year dog feeding study the no observable effect level was 250 ppm; a slight increase in relative liver weight was noted at the highest dose which escalated stepwise from 2,500 to 10,000 ppm during the study.
No adverse on rat reproduction or lactation performance was observed during a 3-generation, 6 litter study at 0, 50 and 250 ppm. No abnormal histopathology was noted on examination of the F3B litters at weaning.
In a rat dietary study at 0, 250, 1,250 and 5,000 ppm, terbacil was not teratogenic at any dose tested but produced embryotoxic effects at 1,250 and 5,000 ppm.
Human health effects of overexposure by eye contact may initially include eye irritation and discomfort, tearing or blurring of vision. Based on data from animal tests ingestion of high doses may cause abnormal liver function as detected by laboratory tests.

Sulfometuron methyl:
Chronic Toxicity
Oral feeding -
NOEL in rat (2 year) 50 ppm; not oncogenic
NOEL in dog 200 ppm; anaemia; haemolytic effect on erythrocytes at 1000ppm and 5000 ppm.
Reproduction
NOEL in rat 500 ppm (2-gen); decreased bodyweight and pup counts at 5000ppm.

SECTION 12 – ECOLOGICAL INFORMATION

Information on ecological effects:
Terbacil: Slightly toxic to rainbow trout (LC_{50} 46.2 mg/L) and *D. magna* (LC_{50} 65 mg/L)
Practically non-toxic to birds and bees.
Sulfometuron methyl: Slightly toxic to fresh water fish - Rainbow trout and Bluegill Sunfish LC_{50} > 12.5 mg/L. Almost non-toxic to *D. magna*
Practically non-toxic to birds and bees.

SECTION 13 - DISPOSAL CONSIDERATIONS

Shake empty into application equipment. Destroy empty bags by puncturing or shredding them.
Do not dispose of undiluted chemicals on site. Dispose of empty bags at a local authority landfill. If no landfill is available, bury the containers below 500mm 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.

SECTION 14 - TRANSPORT INFORMATION

UN Number:	Not assigned
ADG:	Not a dangerous good

SECTION 15 – REGULATORY INFORMATION

Not hazardous according to NOHSC List of Designated Hazardous Substances
Product registered by Australian Pesticides and Veterinary Medicines Authority
Sulfometuron methyl assessed as S5 by National Drugs and Poisons Scheduling Committee.
Terbacil exempt from scheduling.

SECTION 16 –OTHER INFORMATION

Revised July 2004
Literary references:

1) Standard for the Uniform Scheduling of Drugs and Poisons – Commonwealth Department of Health and Aging
2) Australian Inventory of Chemical Substances (AICS)

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
CAS number	Chemical Abstracts Service Registry Number
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

Please read all labels carefully before using product.