

Material Safety Data Sheet

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Infosafe No. 3NU6I Issue Date : March 2005 ISSUED by CRPCARE

Product Name : FUSION SUPER WG HERBICIDE - PART 1

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name FUSION SUPER WG HERBICIDE - PART 1
Product Code 0505 PART 1
Product Use For the control of certain grasses in crops as per the Directions for Use table on the label.
Company Name Crop Care Australasia Pty Ltd (ABN 53 061 362 347)
Address 77 Tingira Street Pinkenba
Queensland 4008 Australia
Emergency Tel. 1800 033 498
Telephone/Telex Number Tel: (07) 3867 9100 Fax: (07) 3867 9110
Product Type Group A Herbicide
Other Information This MSDS 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.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Solid

Ingredients	Name	CAS	Proportion
	Inert fillers		30-60 %
	Dispersants		10-30 %
	Fluazifop-p, present as the butyl ester	79241-46-6	212 g/kg

Other Information This MSDS describes the properties of PART 1 of the two pack product FUSION SUPER WG HERBICIDE. Refer to the MSDS for PART 2 for more information.

3. HAZARDS IDENTIFICATION

Possible risk of harm to the unborn child.
Other Information Poisons Schedule S6

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
If symptoms develop or persist, seek medical advice.

Ingestion If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust).
Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Rinse mouth and then drink plenty of water.
Seek medical advice immediately.

Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
If irritation persists, seek medical advice.

Eye If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice if irritation develops or persists.

First Aid Facilities If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.

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Hazardous Combustion Products If involved in a fire, it will emit oxides of carbon, oxides of nitrogen, oxides of sulfur and possibly fluorinated hydrocarbons.

Protective Equipment Breathable air apparatus should be worn when fighting a fire in which Fusilade WG is involved.

Other Information Prevent fire water from entering drains or water bodies.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal Recover the product by sweeping up or vacuuming without raising dust. Collect spilled material and waste in sealable open-top type containers for disposal.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

7. HANDLING AND STORAGE

Handling Avoid generating dusts while handling the product and mixing. If dusts are generated, it is advisable to wear a dust mask, refer Section 8.

Storage Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits The manufacturer has recommended the following exposure standard for fluazifop-P butyl: TLV (TWA) 0.5 mg/m³, STEL - mg/m³.

Respiratory Protection If dusts are present, wear a class P1 dust mask.

Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.

Eng. Controls Handle in well ventilated areas, generally natural ventilation is adequate. Avoid generating and inhaling dusts.

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.

Requirements Concerning Special Training NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials. By 1st September, 2005 all users must have received such training.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Brown granules

Solubility in Water Disperses in water.

Vapour Pressure 0.0033 mPa @ 20°C for fluazifop-P butyl

Partition co-efficient, n-octanol/water Kow Log P is 4.5

Flammability Non combustible material.

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions. Hydrolyses at pH >9.0.

Hazardous Polymerization Hazardous polymerisation is not possible.

Hazardous Reaction Keep away from strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Toxicology Information No harmful effects are expected if the precautions on the label and this MSDS are followed.

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Product Name : **FUSION SUPER WG HERBICIDE - PART 1**

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Inhalation	May cause irritation to the respiratory tract.
Ingestion	Possible symptoms of exposure to the concentrate include: nausea, vomiting and abdominal pains.
Skin	May irritate the skin.
Eye	May irritate the eyes.
Chronic Effects	Evidence from animal studies indicate that repeated or prolonged exposure to fluazifop-P butyl can result in liver and kidney disorders and developmental effects in an unborn child.
Reproductive Toxicity	Evidence from animal studies suggests the potential for developmental toxicity on repeated or prolonged exposure.
Mutagenicity	The weight of evidence indicates that fluazifop-P butyl does not present a mutagenic risk.
Carcinogenicity	The weight of the evidence is that fluazifop-P butyl is not carcinogenic.
Acute Toxicity - Oral	The following data is for the active ingredient, fluazifop-P butyl. LD50 (rat, female) 2451 mg/kg LD50 (rat, male) 3680 mg/kg LD50 (rabbit) 621 mg/kg
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for fluazifop-P butyl
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5.24 mg/l for fluazifop-P butyl
Eye Irritation	Mild eye irritant.
Skin Irritation	Mild skin irritant.
Skin Sensitisation	Product is not a skin sensitiser.
Other Information	The Australian Acceptable Daily Intake (ADI) for fluazifop-butyl for a human is 0.003 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.3 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, June 2004).

12. ECOLOGICAL INFORMATION

Known Harmful Effects on the Environment	Harmful to fish and other aquatic organisms.
Other Precautions	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Environ. Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	LC50 (96 hr) for rainbow trout is 1.07 mg/l for fluazifop-P butyl
Acute Toxicity - Daphnia	LC50 (48 hr) for daphnia is >1 mg/l for fluazifop-P butyl.
Acute Toxicity - Other Organisms	The following data is for the active ingredient, fluazifop-P butyl. Birds: Not toxic to birds. LD50 for mallard duck is >3528 mg/kg Bees: Not toxic to bees. LD50 >200 µg/bee.

13. DISPOSAL CONSIDERATIONS

Product Disposal	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemCollect).
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Product Name : **FUSION SUPER WG HERBICIDE - PART 1**

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Container Disposal Thoroughly wash out the inner and add washings to the spray tank. Dispose of washed inner and cardboard box in 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.

14. TRANSPORT INFORMATION

U.N. Number None Allocated

DG Class None Allocated

Hazchem Code None Allocated

Packing Group None Allocated

Storage and Transport Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. REGULATORY INFORMATION

Risk Phrase R63 Possible risk of harm to the unborn child.

Safety Phrase S13 Keep away from food, drink and animal feeding stuffs.

S2 Keep out of reach of children.

S36/37 Wear suitable protective clothing and gloves.

S46 If swallowed, seek medical advice immediately and show this container or label.

Poisons Schedule S6

Hazard Category Harmful

Packaging & POISON

Labelling KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

AICS (Australia) All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

Contact Person/Point Normal Hours: Mr Volker Maier Phone: (03) 9282 1000

After Hours: Shift Supervisor Phone: 1800 033 498

Revisions Highlighted First Issue

...End Of MSDS...

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Infosafe No. 3NU6J Issue Date : March 2005 ISSUED by CRPCARE

Product Name : FUSION SUPER WG HERBICIDE - PART 2

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name FUSION SUPER WG HERBICIDE - PART 2
Product Code 0505 PART 2
Product Use For the control of certain grasses in crops as per the Directions for Use table on the label.
Company Name Crop Care Australasia Pty Ltd (ABN 53 061 362 347)
Address 77 Tingira Street Pinkenba
Queensland 4008 Australia
Emergency Tel. 1800 033 498
Telephone/Telex Number Tel: (07) 3867 9100 Fax: (07) 3867 9110
Product Type Group A Herbicide
Other Information This MSDS 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.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Solid

Ingredients	Name	CAS	Proportion
	Talc	14807-96-6	>60%
	Butoxydim	13164-12-2	250 g/kg
	Dispersants		<10%

Other Information This MSDS describes the properties of PART 2 of the two pack product FUSION SUPER WG HERBICIDE. Refer to the MSDS for PART 1 for more information.

3. HAZARDS IDENTIFICATION

Harmful if swallowed.
Irritating to skin.
May cause harm to the unborn child

Other Information Poisons Schedule S5

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
If symptoms develop or persist, seek medical advice.

Ingestion If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.
Rinse mouth and then drink plenty of water.
Obtain medical advice.

Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.
If irritation persists, seek medical advice.

Eye If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice if irritation develops or persists.

First Aid Facilities If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

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Product Name : **FUSION SUPER WG HERBICIDE - PART 2**

Classified as hazardous according to criteria of NOHSC

Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.
Hazardous Combustible solid.
Combustion Products If involved in a fire, it will emit oxides of carbon, oxides of nitrogen and possibly sulfur oxides.
Protective Equipment Breathable air apparatus should be worn when fighting a fire in which this product is involved.
Other Information Prevent fire water from entering drains or water bodies.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal Recover the product by sweeping up or vacuuming without raising dust.
Collect spilled material and waste in sealable open-top type containers for disposal.
On-site disposal of concentrate is not acceptable.
Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions This product is a herbicide and spills can damage crops, pastures and desirable vegetation.

7. HANDLING AND STORAGE

Handling Avoid generating dusts while handling the product and mixing.
If dusts are generated, it is advisable to wear a dust mask, refer Section 8.
Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.
Storage Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits The manufacturer has recommended the following exposure standard for butroxydim:
TLV (TWA) 0.5 mg/m³, STEL - mg/m³.
NOHSC has set the following exposure standard for talc : TLV (TWA) 2.5 mg/m³, STEL - .
Respiratory Protection If dusts are present, wear a class P1 dust mask.
Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
Eng. Controls Handle in well ventilated areas, generally natural ventilation is adequate.
Avoid generating and inhaling dusts.
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.
Requirements Concerning Special Training NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials. By 1st September, 2005 all users must have received such training.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Off white granules
Odour Unpleasant, sickly odour
Melting Point 81°C for butroxydim
Solubility in Water Disperses in water.
Solubility of butroxydim is 6.9 mg/l @ 20°C
Vapour Pressure 1 x 10⁻³ mPa @ 20°C for butroxydim
Partition co-efficient, n-octanol/water Kow Log P is 1.9 (pH7 @ 25°C for butroxydim)
Flammability Combustible
Other Information pKa is 4.36

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Product Name: **FUSION SUPER WG HERBICIDE - PART 2**

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10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.
Hydrolyses slowly at pH <7.

Hazardous Polymerization Hazardous polymerisation is not possible.

Hazardous Reaction Keep away from strong oxidising agents.

11. TOXICOLOGICAL INFORMATION

Toxicology Information No harmful effects are expected if the precautions on the label and this MSDS are followed.

Inhalation May cause irritation to the respiratory tract.

Ingestion Possible symptoms of exposure to the concentrate include: nausea, vomiting and abdominal pains.

Skin Will irritate the skin.

Eye May irritate the eyes.

Chronic Effects Chronic exposure can cause damage to the liver.

Reproductive Toxicity At doses toxic to maternal animals, butroxydim has been shown to produce developmental toxicity in a number of species.

Mutagenicity The weight of evidence indicates that butroxydim does not present a mutagenic risk.

Carcinogenicity The weight of the evidence is that butroxydim is not carcinogenic.

Acute Toxicity - Oral The following data is for the active ingredient, butroxydim.
LD50 (rat, female) 3476 mg/kg
LD50 (rat, male) 1635 mg/kg

Acute Toxicity - Dermal LD50 (rat) >2000 mg/kg for butroxydim

Acute Toxicity - Inhalation LC50 (rat) (4hr) >2.99 mg/l for butroxydim

Eye Irritation Mild eye irritant.

Skin Irritation May cause irritation.

Skin Sensitisation Product is not a skin sensitiser.

Other Information The Australian Acceptable Daily Intake (ADI) for butroxydim for a human is 0.005 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.5 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, 'ADI List', TGA, June 2004).

12. ECOLOGICAL INFORMATION

Other Precautions Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.

Environ. Protection Spray drift can cause damage, read the label for more information.

Persistence / Degradability Average field half life of butroxydim is 9 days.

Acute Toxicity - Fish The following is data for the active ingredient, butroxydim.
LC50 (96 hr) for rainbow trout is >6.9 mg/l.
LC50 (96 hr) for bluegill sunfish is 8.8 mg/l.

Acute Toxicity - Daphnia LC50 (48 hr) for daphnia is >3.7 mg/l for butroxydim.

Acute Toxicity - Other Organisms The following data is for the active ingredient, butroxydim.
Birds: Not toxic to birds. LD50 for mallard duck is >2000 mg/kg
LD50 for bobwhite quail is 1221 mg/kg
Bees: Not toxic to bees. LD50 >200 µg/bee.

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Product Name : **FUSION SUPER WG HERBICIDE - PART 2**

Classified as hazardous according to criteria of NOHSC

13. DISPOSAL CONSIDERATIONS

- Product Disposal** On site disposal of the concentrated product is not acceptable.
Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemCollect).
- Container Disposal** Thoroughly wash out the inner and add washings to the spray tank. Dispose of washed inner and cardboard box in 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.

14. TRANSPORT INFORMATION

- U.N. Number** None Allocated
DG Class None Allocated
Hazchem Code None Allocated
Packing Group None Allocated
- Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

15. REGULATORY INFORMATION

- Risk Phrase** R22 Harmful if swallowed.
R38 Irritating to skin.
R61(2) May cause harm to the unborn child
- Safety Phrase** S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S36/37 Wear suitable protective clothing and gloves.
S46 If swallowed, seek medical advice immediately and show this container or label.
- Poisons Schedule** S5
- Hazard Category** Toxic, Irritant
- Packaging & Labelling** CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
- AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

- Contact Person/Point** Normal Hours: Mr Volker Maier Phone: (03) 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498
- Revisions Highlighted** First Issue
...End Of MSDS...