

Material Safety Data Sheet

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Infosafe No. 3NU57 Issue Date : December 2004 ISSUED by CRPCARE

Product Name : **Armour C Seed Dressing Flowable**

Not classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name Armour C Seed Dressing Flowable
Product Code 5107
Product Use Seed dressing for treatment of wheat and barley 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 C Fungicide
Group 3A Insecticide
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 Liquid

Ingredients	Name	CAS	Proportion
	Cypermethrin	52315-07-8	4 g/L
	Other non hazardous ingredients		30-60 %
	Water		30-60 %
	Flutriafol	76674-21-0	100 g/L

3. HAZARDS IDENTIFICATION

Other Information Poisons Schedule 6

4. FIRST AID MEASURES

Inhalation Over-exposure by inhalation is improbable. Check for other causes of observed symptoms and 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.

Skin If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water.
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.

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 If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.

Specific Hazards Considered low risk due to water content, however upon evaporation of water the product is combustible.

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Hazardous Non-combustible.
Combustion Products If involved in a fire, the dehydrated components may emit oxides of carbon and oxides of nitrogen.
Emergency Action in case of Fire If exposed to fire, keep container cool by spraying with water. If possible, remove other containers from the area of fire.
Protective Equipment Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).
Collect spilled material and waste in sealable open-top type containers for disposal.
Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.
If product has dried out and the possibility of dust generation exists, wear a suitable respirator.
Environmental Precautions Use earthen bunds or absorbent bunding to prevent spreading of spillage.
Prevent from entering drains, waterways or sewers.

7. HANDLING AND STORAGE

Handling Seed treated with this product must not be used for human consumption or be allowed to contaminate seed intended for human consumption.
Storage Store in the closed, original container in a cool, well ventilated area.
Do not store for prolonged periods in direct sunlight.
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.
Store in a locked enclosure.
Treated seed, when stored, should be kept apart from other seed. The containers should be clearly marked to indicate the contents have been treated with this product.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits No exposure standards have been set for this product or the active ingredients.
Personal Protective Equipment It is good practice to wear suitable personal protective equipment (PPE).
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.
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 Green liquid
Solubility in Water Disperses in water.
Specific Gravity (H₂O=1) 1.06
pH Value 5 - 6
Vapour Pressure 7.1 x 10⁻⁶ mPa for flutriafol @ 20°C;
2 x 10⁻⁴ mPa for cypermethrin @ 20°C.

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Partition co-efficient, Kow Log P is 2.3 for flutriafol and 6.6 for cypermethrin
n-octanol/water

Flammability Non combustible material.

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Hazardous Polymerization Hazardous polymerisation is not possible.

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 include: nausea, vomiting and gastrointestinal discomfort and diarrhoea.

Skin May irritate the skin.

Eye May irritate the eyes.

Chronic Effects Evidence from animal studies indicate that repeated or prolonged exposure to flutriafol can result in embryo/foeto toxic effects and liver disorders.

Reproductive Toxicity Data indicates no teratogenic effects.
Studies in animals have shown that repeated or prolonged exposure to flutriafol may have reproductive effects (not teratogenic).
NOEL: 10 mg/kg/day (rat); and NOEL 7.5 mg/kg/day (rabbit).

Carcinogenicity Data indicates no carcinogenic effects.

Acute Toxicity - Oral LD50 (rat) 1140 mg/kg for flutriafol
LD50 (rat) 250 - 4150 mg/kg for cypermethrin

Acute Toxicity - Dermal LD50 (rat) >1000 mg/kg for flutriafol

Acute Toxicity - Inhalation LC50 (rat) (4hr) 1.6 mg/l for flutriafol
LC50 (rat) (4hr) 2.5 mg/l for cypermethrin

Eye Irritation Mild eye irritant.

Skin Irritation Mild skin irritant.

Skin Sensitisation Skin contact may produce skin sensations such as numbing, burning and tingling. These sensations are reversible and usually subside within 12 hours.

Other Information The Australian Acceptable Daily Intake (ADI) for flutriafol for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.05 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).

The Australian Acceptable Daily Intake (ADI) for cypermethrin for a human is 0.05 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 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

Known Harmful Effects on the Environment Harmful to fish.

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Other Precautions	Do not contaminate dams, waterways or sewers with this product or the containers which have held this product. Do not feed or expose treated seed to wildlife and domestic animals, particularly birds.
Persistence / Degradability	Average field half life of cypermethrin in soil is 60 days. The product is essentially insoluble in water and has low mobility in soil. There is evidence of rapid degradation in soil and hydrolysis in water. The expected half life in water is 5 days. The product is applied to seed for sowing - use pattern restricts movement into the environment.
Acute Toxicity - Fish	The following is data for the active ingredient, flutriafol. LC50 (96 hr) for rainbow trout is 61 mg/l. The following is data for the ingredient, cypermethrin. LC50 (96 hr) for rainbow trout is 0.00069 mg/l
Acute Toxicity - Daphnia	LC50 (48 hr) for flutriafol is 78 mg/l. LC50 (48 hr) for cypermethrin is 0.00015 mg/l.
Acute Toxicity - Other Organisms	Not toxic to birds. LD50 for (flutriafol) mallard ducks, female is >5,000 mg/kg LD50 for (cypermethrin) mallard ducks is >10,000 mg/kg No threat to bees as product is used as a seed dressing.

13. DISPOSAL CONSIDERATIONS

Product Disposal	On site disposal of the concentrated product is not acceptable. Seed treated with this product must not be used for human or animal consumption or be allowed to contaminate seed intended for human or animal consumption. Seed should not be left exposed on the ground (particularly during sowing). Destroy treated seed not intended for sowing.
Container Disposal	Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage. Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

	It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.
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

Safety Phrase	S2 Keep out of reach of children. S46 If swallowed, seek medical advice immediately and show this container or label.
Poisons Schedule	S6

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Packaging & Labelling	POISON 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 The MSDS was reviewed. Minor changes were made to the information.
...End Of MSDS...