

Material Safety Data Sheet

CS: 1.4.93

Page: 1 of 5

Infosafe No™ 3NU80

Issue Date : July 2010

ISSUED by CRPCARE

Product Name **Arrow C Seed Dressing Flowable**

Not classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name Arrow C Seed Dressing Flowable
Product Code 5707
Product Type Group C Fungicide
Group 3A Insecticide
Company Name Crop Care Australasia Pty Ltd (ABN 53 061 362 347)
Address Unit 15/16 Metroplex Avenue Murarrie
Queensland 4172 Australia
Emergency Tel. 1800 033 498 (24hr Australia)
Telephone/Fax Number Tel: +61 7 3909 2000
Fax: +61 7 3909 2010
Recommended Use Flowable seed dressing for treatment of wheat and barley and for protection against insect pests of stored grain as per the directions for use table on the label.
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. HAZARDS IDENTIFICATION

Hazard Classification Not classified as hazardous
NON-HAZARDOUS SUBSTANCE.
NON-DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase(s) Not classified as hazardous
Safety Phrase(s) S2 Keep out of reach of children.
S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

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

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.

Material Safety Data Sheet

CS: 1.4.93

Page: 2 of 5

Infosafe No™ 3NU80 Issue Date : July 2010 ISSUED by CRPCARE

Product Name **Arrow C Seed Dressing Flowable**

Not classified as hazardous

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

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES

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

Hazards from Combustion Products Non-combustible.

Special Protective Equipment for fire fighters If involved in a fire, the dehydrated components may emit hydrogen fluoride and oxides of nitrogen.

Specific Hazards Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

Emergency Action in case of Fire Considered low risk due to water content, however upon evaporation of water the product is combustible.

Other Information If exposed to fire, keep container cool by spraying with water. If possible, remove other containers from the area of fire.

Other Information STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

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

Precautions for Safe Handling Seed treated with this product must not be used for human consumption or be allowed to contaminate seed intended for human consumption.

Conditions for Safe 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.

Other Information 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.

Other Information Always read the label and any attached leaflet before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standard for this product has been set, however, an exposure standard has been recommended by the supplier for flutriafol at 1.5 mg/m³.

Engineering Controls Handle in well ventilated areas, generally natural ventilation is adequate.

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.

Hygiene Measures After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Requirements Concerning Special Training After each day's use, wash contaminated clothing and safety equipment.

Requirements Concerning Special Training Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. PHYSICAL AND CHEMICAL PROPERTIES

Material Safety Data Sheet

CS: 1.4.93

Page: 3 of 5

Infosafe No™ 3NU80	Issue Date : July 2010	ISSUED by CRPCARE
--------------------	------------------------	-------------------

Product Name **Arrow C Seed Dressing Flowable**

Not classified as hazardous

Form	Liquid
Appearance	Green liquid
Boiling Point	~100°C (water)
Solubility in Water	Disperses in water.
Specific Gravity	1.06
pH Value	5 - 6
Vapour Pressure	Flutriafol 7.1 x 10 ⁻⁶ mPa @ 20°C; Cypermethrin 2 x 10 ⁻⁴ mPa @ 20°C.
Octanol/Water Partition Coefficient	Kow Log P is 2.3 for flutriafol and 6.6 for cypermethrin
Flammability	Non combustible material.

10. STABILITY AND REACTIVITY

Chemical 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 (in significant quantities) can result in liver damage.
Reproductive Toxicity	Data indicates no teratogenic effects for flutriafol. At doses toxic to maternal animals, flutriafol has been shown to produce developmental toxicity in a number of species. 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 1 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 Office of Chemical Safety, 'ADI List', December 2008). ADI for cypermethrin is 0.05 mg/kg/day, NOEL 5 mg/kg/day.

12. ECOLOGICAL INFORMATION

Persistence / Degradability	Average field half life of cypermethrin is 60 days. Flutriafol 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.
------------------------------------	--

Material Safety Data Sheet

CS: 1.4.93

Page: 4 of 5

Infosafe No™ 3NU80	Issue Date : July 2010	ISSUED by CRPCARE
--------------------	------------------------	-------------------

Product Name **Arrow C Seed Dressing Flowable**

Not classified as hazardous

Known Harmful Effects on the Environment	The product is applied to seed for sowing - use pattern restricts movement into the environment. Harmful to fish.
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.
Acute Toxicity - Fish	The following is data for the active ingredient, flutriafol. LC50 (96hr) for rainbow trout is 61 mg/l. The following is data for the ingredient, cypermethrin. LC50 (96hr) for rainbow trout is 0.00069 mg/l
Acute Toxicity - Daphnia	LC50 (48hr) for flutriafol is 78 mg/l. LC50 (48 hr) for cypermethrin is 0.0003 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. 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 (ChemClear®). 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

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
Storage and Transport	Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.
UN Number (Sea Transport)	For bulk shipments as Class 9, use UN 3082, HazChem code 2Z. 3082
IMO Class/Packing Group	Class 9
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains cypermethrin)

15. REGULATORY INFORMATION

Poisons Schedule S6

Material Safety Data Sheet

CS: 1.4.93

Page: 5 of 5

Infosafe No™ 3NU80	Issue Date : July 2010	ISSUED by CRPCARE
--------------------	------------------------	-------------------

Product Name **Arrow C Seed Dressing Flowable**

Not classified as hazardous

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

Date of preparation or last revision of MSDS Revised 29/07/2010

Contact Person/Point Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498

Revisions The MSDS was reviewed. Minor changes were made to the information.

Highlighted Product is now a DG for sea transport.
...End Of MSDS...

© Copyright ACOHS Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XFO and any other electronic files rendered by an Infosafe system for Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd. The compilation of MSDS's displayed is the intellectual property of Acohs Pty Ltd.

Copying of any MSDS displayed is permitted for personal use only and otherwise is not permitted. In particular the MSDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of MSDS without the express written consent of Acohs Pty Ltd.