



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Advance Seed Treatment
Other Names: Carboxin/cypermethrin
Product Codes: D735 / PP383
Recommended Use: Seed treatment of wheat, barley, oats and triticale, for control of fungal diseases at planting and for protection against insect pests of stored grain.
Chemical Family: Anilide
Supplier: Chemtura Australia Pty Ltd
ABN: 005 225 507
Street Address: Level 7, 435 King William Street
Adelaide South Australia 5000
Telephone Number: 61 8 8112 0900
Facsimile Number: 61 8 8112 0999
Emergency Telephone: 1800 033 111 (24-hour service)

2. HAZARDS IDENTIFICATION

Hazard Classification: **HAZARDOUS SUBSTANCE, NON-DANGEROUS GOOD**
Classified according to the criteria of the National Occupational Health and Safety Commission (NOHSC).

Risk Phrases: **Cypermethrin component:**
Toxic (T):
R 25 Toxic if swallowed.

Safety Phrases: None allocated.

Poisons Schedule: S5
Dangerous Goods Class: None allocated.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Identity	Common Name(s) and Synonym(s)	CAS Number	Proportion by Weight
Carboxin	Carboxin	5234-68-4	30-60% (400g/L)
Cypermethrin	Cypermethrin	52315-07-8	<10% (3.2g/L)

Note: Australian and US Patents apply.

4. FIRST AID MEASURES

Ingestion: If patient is fully conscious, administer large quantities of water. Seek medical advice.
Inhalation: Remove to fresh air. If breathing difficulties occur, seek medical advice.
Eye Contact: Hold eye(s) open and flush with water for 15 minutes. Seek medical advice.
Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and launder before reuse. Seek medical advice.
Additional information: If poisoning occurs contact a doctor or Poison Information Centre. Phone Australia 131 126; New

Zealand 03 4747 000.

First Aid Facilities:

Eye wash station.

Advice to Doctor:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Water spray or dry chemical. Contain runoff.

Hazards from Combustion Products:

Not flammable, however, in case of fire protect against inhalation of combustion products. On combustion, there is production of oxides of sulphur and nitrogen, and maybe traces of oxides of chlorine and hydrogen chloride. Reacts with strong acids and alkalis and oxidising agents.

Precautions for Fire fighters and Special Protective Equipment:

None allocated.

HazChem Code:

None allocated.

Additional Information:

None allocated.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:

If there is a contamination of crops or waterways, advise emergency services or State Department.

Methods and Materials for Containment and Clean-Up Procedures:

Use personal protective equipment as outlined above. Absorb onto inert material. Transfer into secure containers for proper disposal Prevent entry into waterways, drains or confined areas. Do not reuse the containers for any purpose.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

This material is a scheduled product and must be stored, maintained and used according to the relevant regulations.

Conditions for Safe Storage:

Store in original container, away from seeds, fertilizers, animal and human feedstuffs, and strong acids or alkalis and oxidizing agents. Keep dry and out of direct sunlight. Store below 40°C. Keep containers closed when not in use.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Standards:

Recommend hygiene standard (TWA) for cypermethrin = 0.5 mg/m³

Biological Limit Values:

No biological limit allocated.

Engineering Controls:

Sufficient ventilation to minimise vapour exposure. Ensure ventilation is adequate to maintain air concentrations below cypermethrin exposure standard. Keep containers closed when not in use.

Personal Protective Equipment (PPE):

Avoid all personal contact. When using, do not eat, drink or smoke. Wear cotton overall buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves, face shield and disposable face mask. In the absence of adequate ventilation, use a respirator fitted with an agricultural chemical cartridge(s). After use and before eating, drinking, smoking or using the toilet, wash hands, arms and face thoroughly with soap and water. Launder clothing and other protective equipment before storing or re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Red-purple liquid

Odour:

Faint odour

pH:

Not available.

Melting Point:

Gels

Boiling Point:

102°C

Vapour Pressure:

15 mm Hg (@20°C)

Solubility:

56% @ 20°C

Specific Gravity (Water = 1):

1.16

Decomposition Temp:

Not available.

Flammability Limits (%):

No data available.

Flashpoint: 105°C

10. STABILITY AND REACTIVITY

Chemical Stability: Light stable at ambient temperatures and pressures. Will thicken irreversibly with heat.
Conditions to Avoid: Strong acids and alkalis.
Incompatible Materials: Incompatible with strong acids and alkalis. Cypermethrin reacts with oxidizing agents.
Hazardous Decomposition Products: None available.
Hazardous Reactions: Autoignition temperature 338°C.
Evaporation rate: 0.11 (butyl acetate = 1)
Polymerisation: Not relevant.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:

Acute Health Effects:

Swallowed: Slightly toxic. May cause vomiting and headaches.
Acute oral LD₅₀ (rat) = 3820 mg/kg carboxin technical
= 263 mg/kg cypermethrin technical

Eye: Contact with eyes can cause severe irritation (carboxin technical).
Skin: Carboxin has a low dermal toxicity but due to the presence of cypermethrin, transient tingling, burning or numbness may be caused on exposed skin areas.
Acute dermal LD₅₀ (rabbit) > 8,000 mg/kg carboxin technical
> 2,000 mg/kg cypermethrin technical.

Inhaled: Individuals with respiratory problems should avoid inhalation exposure.
Acute Inhalation LC₅₀ (rat) > 20 mg/L/1hr

Chronic Health Effects:

Skin: Carboxin has a low dermal toxicity but due to the presence of cypermethrin, repeated or prolonged skin contact may lead to irritant contact dermatitis.
Inhaled: Chronic inhalation may cause lung damage.
Toxicology: Studies in animals have shown that repeated doses of carboxin and cypermethrin do not produce mutagenic or teratogenic effects. Studies in animals have shown that repeated doses of carboxin does not show carcinogenic effects, however, studies with cypermethrin are inconclusive. Therefore, cypermethrin may be a weak or possible carcinogen at very high dose rates. Long term exposure may cause liver damage.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Not toxic to birds. Carboxin is not toxic to bees. Cypermethrin is highly toxic to bees. LD50 = 0.03 - 0.13 µg/kg.
Moderately toxic to fish:
Carboxin Rainbow Trout LC50(96 hour) > 0.1mg/L
Cypermethrin Rainbow Trout LC50 (96 hour) = 0.0082 mg/L
Bluegill Sunfish LC50 (96 hour) = 0.0018mg/L

Persistence/Degradability: Soil/environment DT50 in soil c.24h. K_{oc} 373 (carboxin)

Mobility: Not available.

13. DISPOSAL CONSIDERATIONS

Disposal Method(s): **For disposal after intended use:** Triple or preferably, pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots.

For disposal after spill or accident: Dispose of sealed containers at an approved local waste disposal site.

Precautions for Landfill or Incineration: Empty containers and product should not be burnt.

14. TRANSPORT INFORMATION

UN Number: None allocated.

UN Proper Shipping Name: None allocated.

DG Class & Subsidiary Risk: None allocated.

Packing Group: None allocated.

EPG/GTEPG: None allocated.

Special Precautions for User: None allocated.

HazChem Code: None allocated.

Other Information: Not classed as a Dangerous Good by the Australian Code for the Transport of Dangerous Goods by Road or Rail. This material is a Schedule Poison and must be stored, maintained and used according to the relevant regulations.

15. REGULATORY INFORMATION

Poisons Schedule: S5

Additional Information: APVMA Product Number: 53399

16. OTHER INFORMATION

Date of Preparation: April, 2006

Revision Date: July, 2008

Revision Number: 1

Revision Summary: Rev 1 - Update of Chemtura contact details

Disclaimer: This information is given without warranty or representation. Chemtura Australia Pty Ltd does not assume any legal responsibility for same, nor does Chemtura Australia Pty Ltd give permission, inducement or recommendation to practice any patented invention without a licence. It is offered solely for consideration, investigation and verification. Before using any product, always read the label carefully.

Advance® is a registered trademark of Chemtura Corporation.

~END OF SAFETY DATA SHEET~