1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Xlflo Seed Treatment

Other Names: Iprodione

Product Codes: None allocated

Recommended Use: Seed treatment for the control of brown leaf spot and the suppression of hypocotyl rot, in the first four weeks after emergence, in lupins, and for the control of hypocotyl rot in potatoes.

Chemical Family: Dicarboximide

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, NOT A DANGEROUS GOOD**
Classified according to the criteria of the National Occupational Health and Safety Commission (NOHSC).

Risk Phrases: R 40 Limited evidence of carcinogenic effect

Safety Phrases: See sections 4, 5, 6, 7, 8, 10, 12, 13

Poisons Schedule: S5

Dangerous Goods Class: 9 – Miscellaneous Dangerous Good. Not a 'Dangerous good' for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. If shipped by sea, the product is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE. See section 14.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Identity	Common Name(s) and Synonym(s)	CAS Number	Proportion by Weight
Iprodione	Iprodione	36734-19-7	10-<30% (250 g/L)
Hydrocarbon liquid	Hydrocarbon liquid	64742-56-9	30-60% (316g/L)
	Other ingredients	(non hazardous)	30-60% (471g/L)

Note: Australian and US Patents apply.

4. FIRST AID MEASURES

Ingestion: Wash out mouth with water. Do not induce vomiting. Give a glass of water. Keep patient at rest and seek medical advice.

Inhalation: If inhaled, remove to fresh air and keep at rest. Obtain medical advice if at all worried.

Eye Contact: Rinse immediately with clean water, including under eyelids, for at least 15 minutes and obtain medical advice.

Skin Contact: Remove contaminated clothing. Wash affected areas with plenty of soap and water. Seek medical aid if at all worried.

First Aid Facilities:	Ensure washing facilities are available.
Other information:	DO NOT attempt to give anything to a semi-conscious or unconscious person.
Advice to Doctor:	If poisoning occurs contact a doctor or Poison Information Centre. Phone Australia 131 126; New Zealand 03 4747 000, and follow the advice given. Show this Material Safety Data Sheet to a doctor.
	Symptoms: Nausea, vomiting, abdominal pain, diarrhoea, loss of co-ordination if swallowed. May irritate eyes or respiratory tract.
	Local contamination:
	Treatment should be symptomatic after decontamination.
	Systemic Poisoning:
	Initial treatment should be symptomatic and supportive.
	As this product contains a hydrocarbon solvent, care should be taken to prevent pulmonary aspiration.
	Anticonvulsant therapy is not appropriate.
	There is no specific antidote.
	Medical supervision should be continued for a minimum of 48 hours.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Carbon dioxide, water spray, dry agent, foam.
Hazards from Combustion Products:	In a fire, irritant and toxic fumes containing oxides of carbon and nitrogen, and hydrogen chloride may be released.
	Stable under normal conditions of use. Avoid extreme heat, strong acids, bases and strong oxidising agents. Incompatible with strong alkalies. Toxic compounds of carbon, nitrogen and chlorine may be given off when exposed to extreme heat or fire.
Precautions for Fire fighters and Special Protective Equipment:	This product itself does not burn. Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NSZ 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Whenever possible, bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage later in a safe manner.
HazChem Code:	Not applicable.
Additional Information:	None allocated.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Shut off or remove any sources of ignition.
Methods and Materials for Containment and Clean-Up Procedures:	Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 'Personal Protection'. Keep people and animals away. Contain spillage. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with absorbent material such as earth, sand or clay and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

7. HANDLING AND STORAGE

Precautions for Safe Handling:	Keep out of reach of children. Avoid contact with eyes and skin, and avoid inhalation of vapour or dust from treated seed. Wear suitable protective clothing, gloves and goggles. If product on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, goggles and contaminated clothing.
Conditions for Safe Storage:	Store in the closed, original container in a cool, secure, well-ventilated area. Do not store for prolonged periods in direct sunlight. Protect from frost. Store treated seed in clearly marked bags or silos, away from other grain, animal feed or foodstuffs, in a cool, dry storage area. Bags which have held treated seed should not be used for any other purpose.
Flammability:	This product is not flammable.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

National Exposure Standards:	There are not applicable exposure standards assigned by the National Occupational Health and Safety Commission.
Biological Limit Values:	None allocated.
Engineering Controls:	Control process conditions to avoid contact. Use local exhaust ventilation during manufacture. Use in a well-ventilated area only.
Personal Protective Equipment (PPE):	To avoid eye and skin contact, wearing the following personal protective clothing and equipment is recommended: **Respirator type:** Respiratory protection is not normally required. If inhalation is likely, an AS/NZS 1715/1716 approved respirator should be worn. Workers exposed to grain dust should wear a disposable dust mask. **Eye protection:** Safety goggles or face shield. **Glove type:** Elbow –length PVC gloves. **Clothing:** Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat. **Other Information:** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, goggles or face shield and contaminated clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark blue viscous suspension
Odour:	Negligible odour.
pH:	2.0-4.0
Melting Point:	Not available.
Boiling Point:	Greater than 100^{o}C
Vapour Pressure:	Not available.
Vapour Density:	Not available.
Flammability limits (%):	Not determined.
Solubility:	Miscible with water
Density:	1.037g/mL at 20^{o}C
Decomposition Temp:	Not available
Flashpoint:	Not flammable.
Partition coefficient (octanol/water):	Iprodione: Log P_{ow} = 3.0 (pH 3 and 5)

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal conditions of use, but may be unstable in conditions where the pH is 7 or higher.
Conditions to Avoid:	Avoid extreme heat.
Incompatible Materials:	Avoid strong acids, strong alkalis, and strong oxidising agents.
Hazardous Decomposition Products:	Toxic compounds of carbon, nitrogen and chlorine may be given off when exposed to extreme heat or fire.
Hazardous Reactions:	None
Polymerisation:	Not relevant.

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure:	**Swallowed:** Product toxicity is low but may be harmful if a large amount is swallowed. Possible symptoms include nausea, vomiting, abdominal pain and loss of co-ordination. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema. **Eye:** May be an eye irritant. **Skin:** The dermal toxicity of this product is low. However, skin contact should be avoided. May irritate and dry skin. **Inhaled:** May irritate upper respiratory tract.
Acute Health Effects:	**Oral toxicity:** LD_{50} rat:>2000 mg/kg (similar product) **Dermal toxicity:** LD_{50} rat>2000mg/kg (similar product) **Inhalation toxicity:** LC_{50} rat: >2.88mg/L (4 hour) (similar product)

Skin irritation: Non irritant (rabbit) (similar product)
Eye irritation: Non irritant (rabbit) (similar product)
Sensitisation: Non-sensitising (guinea pig) (similar product)

Chronic Health Effects: Lifetime feeding studies in rodents have shown an increased incidence of tumours in animals treated at the maximum tolerated dose. Iprodione has been classified as a Category 3 carcinogen according to the EU classification. Iprodione was not mutagenic in the Ames assay.

12. ECOLOGICAL INFORMATION

Ecological information This product is very toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment. It has a low hazard to birds, earthworms, bees and other beneficial insects. DO NOT contaminate streams, rivers or waterways with Xlflo Seed Treatment or the used containers.

Ecotoxicity:
Iprodione
Fish toxicity:
LC_{50} (96 hr) for rainbow trout 4.1 mg/L
LC_{50} (96 hr) for bluegill sunfish 3.7 mg/L
Daphnia toxicity:
Daphnia magna EC_{50} (48 h) 0.25 mg/L
Bird toxicity:
Acute oral LD_{50} for bobwhite quail > 2,000 mg/kg
Acute oral LD_{50} for mallard ducks 10,400 mg/kg

Environmental fate, persistence and degradability, mobility:
Aquatic, air or soil environmental hazards:
Iprodione is rapidly metabolised in soil with formation of carbon dioxide. DT_{50} (lab) 20-80 days; (field) 20-160 days. Koc 373-1551. Rate of degradation increases with successive treatments, and hence accumulation does not occur.

Abbreviations:
DT_{50}=time for 50% loss; half-life.
Koc = proportion of organic carbon in the soil

Other information: DO NOT contaminate streams, rivers or waterways with the chemical, used containers or bags which have held treated seed. DO NOT feed treated seed or otherwise expose wildlife or domestic birds.

13. DISPOSAL CONSIDERATIONS

Disposal Method(s): Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for the purpose, clear of waterways, desirable vegetation and tree roots. Returnable containers should be taken back to point of supply for refill or storage. Dispose of waste product through a reputable waste contractor.

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

14. TRANSPORT INFORMATION

UN Number: Not applicable.
UN Proper Shipping Name: Not applicable.
DG Class & Subsidiary Risk: Not applicable.
Packing Group: Not applicable.
EPG/GTEPG: Not applicable.
Special Precautions for User: None allocated.
HazChem Code: Not applicable.
Marine Pollutant: Yes. If the product is shipped by sea the classification is ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains iprodione), Class 9, UN 3082, Packing Group III

15. REGULATORY INFORMATION

Poisons Schedule: S5
Additional Information: APVMA Product No. 57981

16. OTHER INFORMATION

Date of Preparation:	November, 2006.
Revision Date:	August, 2008
Revision Number:	1
Revision Summary:	Rev 1 – Update of Chemtura contact details
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~END OF SAFETY DATA SHEET~