

**SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

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**Chemical nature:** Iprodione is a dicarboximide derivative.  
**Trade Name:** **Sinon 500 SC Fungicide**  
**APVMA Code:** 66783  
**Product Use:** Agricultural fungicide for use as described on the product label.  
**Creation Date:** **May, 2012**  
**This version issued:** **October, 2015** and is valid for 5 years from this date.

**SECTION 2 - HAZARDS IDENTIFICATION****Statement of Hazardous Nature**

This product is classified as: N, Dangerous to the environment. Hazardous according to the criteria of SWA.

Not subject to the ADG Code when transported in Australia by Road or Rail in packages 500kg(L) or less; or IBCs (refer to SP AU01). However if transported by Air or Sea, this provision does not apply. Then the product is classed as Dangerous (Class 9 Environmentally Hazardous) by IATA and IMDG respectively. See details below and in Section 14 of this MSDS.

**Risk Phrases:** R40, R50/53. Limited evidence of a carcinogenic effect. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

**Safety Phrases:** S23, S36, S60, S24/25. Do not breathe vapours or spray mists. Wear suitable protective clothing. This material and its container must be disposed of as hazardous waste. Avoid contact with skin and eyes.

**SUSMP Classification:** None allocated.

**ADG Classification:** Class 9: Miscellaneous Dangerous Goods.

**UN Number:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**Emergency Overview**

**Physical Description & Colour:** White, viscous liquid suspension.

**Odour:** Weak, characteristic odour.

**Major Health Hazards:** Iprodione is not harmful by ingestion, with reported oral LD<sub>50</sub> values of 3500 mg/kg in rats, 4000 mg/kg in mice, and greater than 4400 mg/kg in rabbits. No dermal toxic effects were noted at doses of over 2500 mg/kg in the rat and at 1000 mg/kg in the rabbit, indicating slight toxicity by this route. Inhalation toxicity is also low for this compound. The 4-hour inhalation LC<sub>50</sub> for Iprodione is greater than 3.3 mg/L in the rat. Limited evidence of a carcinogenic effect.

**Potential Health Effects****Inhalation:**

**Short Term Exposure:** Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

**Long Term Exposure:** No data for health effects associated with long term inhalation.

**Skin Contact:**

**Short Term Exposure:** Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition product is unlikely to cause any discomfort in normal use.

**Long Term Exposure:** No data for health effects associated with long term skin exposure.

**Eye Contact:**

**Short Term Exposure:** This product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term eye exposure.

**Ingestion:**

**Short Term Exposure:** Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

**Long Term Exposure:** No data for health effects associated with long term ingestion.

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**Carcinogen Status:**

**SWA:** Iprodione is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans.

See the SWA website for further details. A web address has not been provided as addresses frequently change.

**NTP:** No significant ingredient is classified as carcinogenic by NTP.

**IARC:** No significant ingredient is classified as carcinogenic by IARC.

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS No	Conc,%	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )
Iprodione	36734-19-7	500g/L	not set	not set
Other non hazardous ingredients	various	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

**SECTION 4 - FIRST AID MEASURES****General Information:**

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

**Inhalation:** First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**Skin Contact:** Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

**Eye Contact:** No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

**Ingestion:** If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

**SECTION 5 - FIRE FIGHTING MEASURES**

**Fire and Explosion Hazards:** The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

**Extinguishing Media:** Suitable extinguishing media are carbon dioxide, dry chemical, foam, water fog. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used. Try to contain spills, minimise spillage entering drains or water courses.

**Fire Fighting:** If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus.

**Flash point:** Does not burn.

**Upper Flammability Limit:** Does not burn.

**Lower Flammability Limit:** Does not burn.

**Autoignition temperature:** Not applicable - does not burn.

**Flammability Class:** Does not burn.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Accidental release:** In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. No special recommendations for clothing materials. Eye/face protective equipment should comprise as a minimum, protective goggles. If there is a significant chance that vapours or mists are likely to build up in the cleanup area, we recommend that you use a respirator. Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned below (section 8).

Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains

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or waterways. Because of the environmentally hazardous nature of this product, special care should be taken to restrict release to waterways or drains. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Recycle containers wherever possible after careful cleaning. Refer to product label for specific instructions. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

## SECTION 7 - HANDLING AND STORAGE

**Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

**Storage:** Although this is classed as a Dangerous Good, you may not need a license to store it. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

### SWA Exposure Limits

### TWA (mg/m<sup>3</sup>)

### STEL (mg/m<sup>3</sup>)

Exposure limits have not been established by SWA for any of the significant ingredients in this product.

The ADI for Iprodione is set at 0.04mg/kg/day. The corresponding NOEL is set at 4mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, Sept 2011.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

**Ventilation:** This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

**Eye Protection:** Eye protection such as protective glasses or goggles is recommended when this product is being used.

**Skin Protection:** The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

**Protective Material Types:** We suggest that protective clothing be made from the following materials: PVC.

**Respirator:** Usually, no respirator is necessary when using this product. However, if you have any doubts consult the Australian Standard mentioned above.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

<b>Physical Description &amp; colour:</b>	White, viscous liquid suspension.
<b>Odour:</b>	Weak, characteristic odour.
<b>Boiling Point:</b>	More than 100°C at 100kPa
<b>Freezing/Melting Point:</b>	Below 0°C.
<b>Volatiles:</b>	Water component.
<b>Vapour Pressure:</b>	2.37 kPa at 20°C (water vapour pressure).
<b>Vapour Density:</b>	As for water.
<b>Specific Gravity:</b>	1.155 at 20°C
<b>Water Solubility:</b>	Completely soluble in water.
<b>pH:</b>	4.0-6.0 (as supplied) at 23°C
<b>Volatility:</b>	No data.
<b>Odour Threshold:</b>	No data.
<b>Evaporation Rate:</b>	As for water.
<b>Coeff Oil/water Distribution:</b>	3.0 at pH 3.0 and 6.0 (log P octanol/water for Iprodione)
<b>Autoignition temp:</b>	Not applicable - does not burn.

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## SECTION 10 - STABILITY AND REACTIVITY

**Reactivity:** This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

**Conditions to Avoid:** Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

**Incompatibilities:** strong acids, strong bases, strong oxidising agents.

**Fire Decomposition:** This product is likely to decompose only after heating to dryness, followed by further strong heating. Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. May form hydrogen chloride gas, other compounds of chlorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

**Polymerisation:** This product will not undergo polymerisation reactions.

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Toxicity:** An information profile for Iprodione is available at <http://extoxnet.orst.edu/pips/ghindex.html>

Toxicological Effects:

**Acute toxicity:** Iprodione is not harmful by ingestion, with reported oral LD<sub>50</sub> values of 3500 mg/kg in rats, 4000 mg/kg in mice, and greater than 4400 mg/kg in rabbits. No dermal toxic effects were noted at doses of over 2500 mg/kg in the rat and at 1000 mg/kg in the rabbit, indicating slight toxicity by this route. Inhalation toxicity is also low for this compound. The 4-hour inhalation LC<sub>50</sub> for Iprodione is greater than 3.3 mg/L in the rat.

**Chronic toxicity:** Rats given dietary doses of approximately 60 mg/kg/day over 1 1/2 years suffered no ill effects. Dogs fed approximately 60 mg/kg/day over 18 months also showed no adverse effects. In another study, beagle dogs fed dietary doses of about 2.3 mg/kg/day for 1 year showed liver and kidney weight increases. At doses starting at about 1.5 mg/kg/day, the dogs had decreased prostrate weights and changes within red blood cells (damage to the haemoglobin molecules). Females also had slight decreases in uterus weights. No effects were noted below 0.5 mg/kg/day dose.

**Reproductive effects:** Female rats were fed Iprodione over three successive generations showed no effects on reproduction at doses at and below 1.25 mg/kg/day. Based on these data, Iprodione is not likely to cause reproductive effects.

**Teratogenic effects:** There were no developmental effects noted in the offspring of pregnant rats receiving dietary doses of about 5.4 mg/kg/day. It appears that Iprodione is not likely to cause teratogenic effects at expected exposure levels.

**Mutagenic effects:** No data are currently available.

**Carcinogenic effects:** A 2-year feeding experiment with rats showed no increases in tumour formation or tumour precursors (neoplastic foci) at dietary doses of about 2.5 mg/kg/day. An 18-month study in mice showed cancer related effects at doses up to approximately 22 mg/kg/day. Current evidence on the carcinogenicity of Iprodione is inconclusive.

**Organ toxicity:** Target organs identified in animal studies include the reproductive system (prostate gland and uterus), liver, and kidneys.

**Fate in humans and animals:** No data are currently available.

There is no data to hand indicating any particular target organs.

## Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Iprodione	Conc>=1%: Xn; R40

## SECTION 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment. This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

**Effects on birds:** Iprodione is slightly toxic to wildfowl. The reported acute oral LD<sub>50</sub> in bobwhite quail is 930 mg/kg.

**Effects on aquatic organisms:** Iprodione is moderately toxic to fish species, with LC<sub>50</sub> values ranging from 2.25 mg/L in the sunfish to 6.7 mg/L in the rainbow trout. Reported bioconcentration factors of 50 to 360 in carp and other fish species indicate low bioconcentration potential.

**Effects on other organisms:** Iprodione is nontoxic to bees.

**Environmental Fate:**

**Breakdown in soil and groundwater:** The half-life of Iprodione in soil ranges from less than 7 to greater than 60 days. A representative half-life in most soils is estimated to be 14 days. These properties, combined with its short field half-life indicate a low potential to contaminate groundwater.

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**Breakdown in water:** The compound breaks down very rapidly in water under aerobic conditions; the rate is lesser, but still rapid under near-anaerobic conditions. The compound is readily degraded by UV light.

**Breakdown in vegetation:** The compound is rapidly broken down in the plant after is taken up by the roots and translocated. Iprodione alone or in combinations with several other fungicides was not toxic to plants (phytotoxic).

### SECTION 13 - DISPOSAL CONSIDERATIONS

**Disposal:** Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

### SECTION 14 - TRANSPORT INFORMATION

**Not subject to the ADG Code when transported by Road or Rail in Australia, in packages 500kg(L) or less; or IBCs, but classed as Dangerous by IATA and IMDG when carried by Air or Sea transport (see details below).**

**ADG Code:** 3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**Hazchem Code:** •3Z

**Special Provisions:** 179, 274, AU01

**Limited quantities:** ADG 7 specifies a Limited Quantity value of 5 L for this class of product.

**Dangerous Goods Class:** Class 9: Miscellaneous Dangerous Goods.

**Packaging Group:** III

**Packaging Method:** P001, IBC03, LP01

Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

### SECTION 15 - REGULATORY INFORMATION

**AICS:** All of the significant ingredients in this formulation are compliant with NICNAS regulations.

### SECTION 16 - OTHER INFORMATION

**This MSDS contains only safety-related information. For other data see product literature.**

#### Acronyms:

<b>ADG Code</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 <sup>th</sup> edition)
<b>AICS</b>	Australian Inventory of Chemical Substances
<b>SWA</b>	Safe Work Australia, formerly ASCC and NOHSC
<b>CAS number</b>	Chemical Abstracts Service Registry Number
<b>Hazchem Code</b>	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
<b>IARC</b>	International Agency for Research on Cancer
<b>NOS</b>	Not otherwise specified
<b>NTP</b>	National Toxicology Program (USA)
<b>R-Phrase</b>	Risk Phrase
<b>SUSMP</b>	Standard for the Uniform Scheduling of Medicines & Poisons
<b>UN Number</b>	United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This MSDS is prepared in accord with the SWA document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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### SAFETY DATA SHEET