

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier:

Trade name: Emerald Turf
MAPP: 17590

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Use: Fungicide

1.3. Details of the supplier of the safety data sheet:

Manufacture/Supplier: Agrigem Limited
Fen Road
Owmbly-by-Spital
Market Rasen
LN8 2DA
United Kingdom

Telephone 0044 1673 252677

Email: sales@agrigem.co.uk

1.4. Emergency Telephone no:

Emergency telephone no.:

0870-600-6266 [UK National Poisons
Control Information Service (NPIS)
Centre]
01-8379964/66 [Poisons Information Centre,
Beaumont Hospital, Beaumont, Dublin 9,
Ireland]

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Carcinogenicity: Category 2
H351 Suspected of causing cancer.
Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.
Chronic aquatic toxicity: Category 1

H410 Very toxic to aquatic life with long lasting effects.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Carc.Cat.3, R40

N Dangerous for the environment, R50/53

2.2. Label Elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required

Hazardous components which must be listed on the label:

- Iprodione



Signal word: Warning

H351	Suspected of causing cancer.
H410	Very toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
EUH208	Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non- hazardous waste.

2.3. Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Mixture

Chemical nature

Suspension concentrate (=flowable concentrate)(SC) Iprodione 255 g/l

Hazardous components

R-phrase(s) according to EC directive 67/548/EEC

Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS- No. / EC-No.	Classification		Conc. [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
Iprodione	36734-19-7 253-178-9	Carc.Cat.3 R40 N; R50/53	Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	25.00
Polyarylphenyl ether phosphate	90093-37-1 618-446-5	Xi; R36	Eye Irrit. 2, H319	> 1.00 – < 3.00
Tributyl phenol polyglycol ether	9046-09-7 618-560-5	Xn; R22 Xi; R41 N; R51/53	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411	> 0.10 – < 2.50
Ethoxylated polyarylphenol	99734-09-5 619-457-8	R52/53	Aquatic Chronic 3, H412	> 1.00 – < 25.00
Paraffin oil	72623-86-0 276-737-9	Not classified	Asp. Tox. 1, H304	> 10.00
1,2-Propanediol	57-55-6 200-338-0	Not classified	Not classified	> 1.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5 220-120-9	Xn; R22 Xi; R38, R41 R43 N; R50	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	> 0.005 – < 0.05

Further information

Iprodione	36734-19-7	M-Factor: 1 (acute)
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For the full text of the R-phrases/ Hazard statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice Move out of dangerous area. Remove contaminated clothing immediately and dispose of safely.

Inhalation Move to fresh air. Keep patient warm and at rest. If symptoms persist, call a physician.

Skin contact Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Ingestion When swallowed accidentally, do not induce vomiting, get medical help. Rinse mouth. Keep patient warm and at rest.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

4.3. Indication of any immediate medical attention and special treatment needed

Treatment There is no specific antidote. Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

5.2. Special hazards arising from substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

Further information Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Contain the spread of the fire-fighting media.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Precautions Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke.

6.2. Environmental precautions

Do not allow to get into surface water, drains and ground water. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Clean floors and contaminated objects with plenty of water.

Additional advice Check also for any local site procedures.

6.4. Reference to other sections

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion No special precautions required

Hygiene measures When using, do not eat, drink or smoke. Remove soiled clothing immediately and clean thoroughly before using again. Contaminated work clothing should not be allowed out of the workplace. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. Wash hands immediately after work, if necessary take a shower.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Protect from freezing.

Advice on common storage

Keep away from food, drink and animal feedingstuffs

Suitable materials

HDPE (high density polyethylene)

7.3. Specific end use(s)

Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Iprodione	36734-19-7	2 mg/m ³ (TWA)		OES BCS*
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m ³ /150 ppm (TWA)	12 2011	EH40 WEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m ³ (TWA)	12 2011	EH40 WEL

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2. Exposure controls

Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet.
In all other cases the following recommendations would apply.

Respiratory protection

Respiratory protection is not required under anticipated circumstances of exposure. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance

Hand protection

Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0,4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 6 suit.
If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible.
Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Form	liquid, suspension
Colour	green
pH	3.0 - 5.0 at 1 % (23 °C) (deionized water)
Flash point	>100 °C No flash point - Determination conducted up to the boiling point.
Density	ca. 1.02 g/cm ³ at 20 °C
Water solubility	dispersible
Viscosity, dynamic	40 - 100 mPa.s at 20 °C
Viscosity, kinematic	66 mm ² /s at 20 °C
Surface tension	31 mN/m at 20 °C
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive

9.2 Other information

Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

Thermal decomposition Stable under normal conditions.

10.2. Chemical stability

Stable under recommended storage conditions

10.3. Possibility of hazardous reactions

No hazardous reactions when stored and handled according to prescribed instructions.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Store only in the original container

10.6. Hazardous decomposition products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity	LD50 (rat) > 2,000 mg/kg
Acute dermal toxicity	LD50 (rat) > 2,000 mg/kg
Skin irritation	No skin irritation (rabbit)
Eye irritation	No eye irritation (rabbit)
Sensitisation	Non-sensitizing. (guinea pig) OECD Test Guideline 406, Buehler test

Assessment repeated dose toxicity

Iprodione caused specific target organ toxicity in experimental animal studies in rats in the following organ(s): adrenal gland

Assessment Mutagenicity

Iprodione was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment Carcinogenicity

Iprodione caused at high dose levels an increased incidence of tumours in the following organ(s): liver, testes. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Assessment toxicity to reproduction

Iprodione did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Iprodione caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Iprodione are related to maternal toxicity.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish	LC50 (Rainbow trout (<i>Oncorhynchus mykiss</i>)) 24 mg/l Exposure time: 96 h
Toxicity to aquatic Invertebrates	EC50 (Water flea (<i>Daphnia magna</i>)) 0.25 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient iprodione.
Toxicity to aquatic plants	EC50 (<i>Scenedesmus subspicatus</i>) 12.8 mg/l Exposure time: 72 h

12.2. Persistence and degradability

Biodegradability	Iprodione: not rapidly biodegradable
Koc	Iprodione: Koc: 202 – 543

12.3. Bioaccumulative potential

Bioaccumulation Iprodione: Bioconcentration factor (BCF) 70
Does not bioaccumulate.

12.4. Mobility in soil

Mobility in soil Iprodione: Moderately mobile in soils

12.5. Results of PTB and vPvB assessment

PBT and vPvB assessment Iprodione: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6. Other adverse effects

Additional ecological information No other effects to be mentioned

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment methods

Product In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

Contaminated packaging Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.
Add washings to sprayer at time of filling. Dispose of empty and cleaned packaging safely.
Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.
Return large containers to supplier.
Follow advice on product label and/or leaflet.
Section 14: Transport information

Waste key for the unused product 020108 agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION

14.1. ADR/RID/ADN

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IPRODIONE SOLUTION)
Transport hazard class(es)	9
Packing group	III
Environm. Hazardous Mark	YES
Hazard no.	90

Tunnel Code E

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

14.2. IMDG

UN number 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(IPRODIONE SOLUTION)
Transport hazard class(es) 9
Packing group III
Marine pollutant YES

14.3. IATA

UN number 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(IPRODIONE SOLUTION)
Transport hazard class(es) 9
Packing group III
Environm. Hazardous Mark YES

14.4. UK 'Carriage' Regulations

UN number 3082
Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(IPRODIONE SOLUTION)
Transport hazard class(es) 9
Packing group III
Environm. Hazardous Mark YES
Emergency action code 3Z

14.5. Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.6. Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code

No transport in bulk according to the IBC Code.

SECTIONS 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

UK and Northern Ireland Regulatory References

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

Transport

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)

Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)

Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

Supply and Use

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)

Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009 Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)

EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits Control of Pesticide Regulations 1986

Dangerous Substances and Explosive Atmospheres Regulations 2002

Waste Treatment

Environmental Protection Act 1990, Part II

Environmental Protection (Duty of Care) Regulations 1991

The Waste Management Licensing Regulations 1994 (as amended)

Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)

Landfill Directive

Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94) Water Resources Act 1991

Anti-Pollution Works Regulations 1999

Further information

WHO-classification: III (Slightly hazardous)

15.2. Chemical safety assessment

A chemical safety assessment is not required

SECTION 16: OTHER INFORMATION

Text of R-phrases mentioned in Section 3

- R22 Harmful if swallowed.
- R36 Irritating to eyes.
- R38 Irritating to skin.
- R40 Limited evidence of a carcinogenic effect.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

Disclaimer: The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with. The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given. The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet