

Material Safety Datasheet

1. Identification of the substance/preparation and company/undertaking

Product

Trade Name: FERNPATH IPEX

Recommended Uses: Agricultural Herbicide

Company

Manufacturer / Supplier: Agriguard Ltd
 Address: Unit 3, Block B, Tally House, Broomfield Business Park
 Malahide, Co. Dublin, Ireland
 Telephone Number: +353-1-8462044
 Fax Number: +353-1-8462489
 e-mail: info@agriguard.ie
 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)

2. Composition/Information on Ingredients

Component	CAS Registry No.	EINECS ELINCS No.	Conc. %w/w	R phrase*	Symbol
Isoproturon 3-(4-isopropylphenyl)-1,1-dimethylurea (IUPAC)	34123-59-6	251-835-4	46.1	Carc. Cat 3: R40, R22 R50/53	Xn N
Diflufenican 2', 4'-difluoro-2-(α,α,α -trifluoro- <i>m</i> -tolylxy)nicotinilide (IUPAC)	83164-33-4	-	4.7	R52/53	-
Propylene glycol 1, 2-Propanediol (IUPAC)	57-55-6	200-338-0	>1.0 - <5.0	R36/38	Xi

*Reference section 16

3. Hazards Identification

Limited evidence of a carcinogenic effect.
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Material Safety Datasheet

4. First Aid Measures

Skin Contact: Wash thoroughly with soap and water . Remove all contaminated clothing immediately. If symptoms persist seek medical advice.

Eye Contact: Irrigate immediately with water for at least 15 minutes. If symptoms persist seek medical advice.

Inhalation: Remove to fresh air. Consult a physician

Ingestion: Do not induce vomiting. Rinse mouth thoroughly with water. If symptoms persist seek medical attention.

Further Information: Advice to physician:

Brief summary of symptoms and signs

Local contamination: No symptoms reported

Systemic poisoning: Potential for cyanosis with headache and dizziness due to methaemoglobinaemia following large exposures/ingestion of large amount.

Treatment:

Local contamination: Symptomatic after decontamination

Treat as documented above under 'first aid measures'

Systemic poisoning: Initial treatment symptomatic and supportive. In the event of a large 'exposure'/amount, (more than one mouthful), being ingested, the following measures should be considered: carry out gastric lavage and charcoal administration with monitoring of cardiac, kidney functions and red blood cells. Also observe ECG, methaemoglobinaemia and serum potassium levels.

Methylene blue/Toluidine blue may be used as an antidote.

Contraindications: alcohol

Recovery is expected to be spontaneous

For further advice on treatment contact The UK National Poisons Control Information Service (NPIS) Centre (Emergency Telephone No.: 0870-600-6266) or The Poisons Information Centre, Beaumont Hospital, Beaumont, Dublin 9, Ireland (Telephone 01-8379964/66).

Material Safety Datasheet

5. Fire-fighting Measures

Suitable extinguishing media: Water spray, carbon dioxide, foam or dry powder.

Extinguishing media which must not be used for safety reasons: None known

Special protective equipment for fire-fighting: Wear self contained breathing apparatus and protective clothing. Do not breathe fumes.

Special exposure hazards: The product itself does not burn. In the event of a fire carbon monoxide, nitrogen oxides and hydrogen fluoride can be released.

Additional information: Keep containers cool by spraying with water. Contain runoff to prevent entry into water or drainage systems. May give off toxic fumes if heated to decomposition

6. Accidental Release Measures

Personal precautionary measures:

Wear the personal protective equipment outlined in section 8 below.

Environmental-protection measures:

Keep the area isolated and do not allow contamination to enter drains or waterways. Spillage or uncontrolled discharges into watercourses must be alerted to the National Rivers Authority. If the product has entered a watercourse or sewer, or grossly contaminated soil or vegetation in a public place, advise police.

Procedures for cleaning/absorption:

Contain/absorb the spillage with a suitable inert absorbent material or sand which should then be transferred to secure containers and sent for disposal.

Further Information:

Check for any local/site procedures in force.

Material Safety Datasheet

7. Handling and Storage

Handling: Use good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work.

Storage: Store in a cool area in the original containers, access should only be for authorised persons. Do not store near food, drink, animal feeding stuffs, pharmaceuticals, cosmetics or fertilisers. Keep out of reach of children. Protect from Frost. Do not store at temperatures above 50⁰C.

8. Exposure Controls/Personal Protection

Occupational exposure limits:

No data is available for the actives.

Engineering measures to reduce exposure:

Ensure adequate ventilation especially in confined areas.

Personal protective equipment:

Respiratory protection: If the ventilation is not adequate wear an approved respirator for pesticides.

Eye protection: Wear safety goggles conforming to BS 2092.

Hand protection: Wear nitrile or PVC gloves.

Skin and body protection: Wear PVC or chemical resistant disposable overalls and PVC boots.

Industrial Hygiene:

Do not breathe spray mist. Immediately change contaminated clothing, dispose of if decontamination is not feasible. Keep the work area clean and wash hands before finishing work. When using do not eat, drink or smoke.

Material Safety Datasheet

9. Physical and Chemical Properties

Appearance:	Liquid
Colour:	White opaque
Odour:	Aromatic
pH:	8.9 @ 25 ^o C (1% suspension in water)
Melting Point/Melting point range:	Not applicable
Boiling Point/Boiling Point range:	Not available
Flash Point:	Not combustible
Flammability	Non flammable
Autoflammability	470 ^o C
Explosive properties: Lower limit Upper limit	Not explosive
Oxidising properties	Not available
Vapour Pressure:	Not available
Relative density:	1.09 g/ml
Solubility Water solubility Fat solubility	Miscible
Partition coefficient n-octanol/water	Not available
Other Data: Freezing temperature	-3 ^o C

10. Stability and Reactivity

Stability:	Stable under normal storage conditions
Conditions to avoid:	Protect from frost. Do not store at temperatures above 50 ^o C.
Materials to avoid:	Strong basic, acidic or oxidising materials.
Hazardous decomposition products:	None known.

Material Safety Datasheet

11. Toxicological Information

No data available for product. The toxicological data refers to a similar formulation.

Acute toxicity:

LD₅₀ (oral, rat): > 2000 mg/kg
LD₅₀ (skin, rat) > 2000 mg/kg

Sensitisation: Does not cause sensitisation on laboratory animals

Further toxicological information:

After inhalation: Low toxicity
After skin contact: Not irritating to rabbit skin.
After eye contact: Not irritating to rabbit eyes.
After swallowing: Low toxicity.
Carcinogenicity: A possible carcinogenic effect at high doses in animal studies on the active substance isoproturon is indicated
Genotoxicity: No data available
Reproductive toxicity: No data available

Material Safety Datasheet

12. Ecological Information

Data is for active ingredients isoproturon and diflufenican.

Mobility: Isoproturon: Fairly mobile in soil
Diflufenican: Fairly mobile in soil

Persistence and Degradability: Isoproturon:
Soil DT50 9 to 17 days (laboratory). Soil DT50 12 to 32 days (field). Water DT50 >200 days (pH 1 to 13 @ 20 deg C. Photolysis DT50 144 to 175 days @290nm. Sediment/water system DT50 35 to 131 days.
Diflufenican:
Soil DT50 15 to 30 weeks. Stable to hydrolysis (25 deg C) at pH5, pH 7 and pH 9. Fairly stable to photolysis.

Bioaccumulative potential: Isoproturon: log Pow = 2.5.
Bioaccumulation factor is 3.6 x trout
Diflufenican: Log P=4.9

Aquatic toxicity: Data for similar formulation
Rainbow trout LC50 (96hr) 74.8 mg/l
Daphnia EC50 (48hr) 378 mg/l
Algae EC50 (72hr) 18µg/l

Data for active ingredients
Isoproturon:
96 hr LC50 trout 37 to 240 mg/l,
Carp 193mg/l,
gruppies 182 mg/l.
48 hr EC 50 daphnia 507 mg/l,
72 hr EC50 algae 0.03 mg/l.
Diflufenican:
96 hr LC 50 rainbow trout 56 -100 mg/l,
Carp 105 mg/l.
48 hour EC50 daphnia >10mg/l ,
96hr EC50 algae > 10mg/l

Other Toxicity: Isoproturon:
LD50 quail 3042 to 3982 mg/Kg.
Low toxicity to bees and worms
Diflufenican:

Material Safety Datasheet

Acute oral LD50 Mallard duck . 2150 mg/Kg
Quail>4000mg/Kg
Low toxicity to bees and worms

13. Disposal Considerations

Waste from residues/unused products:

In accordance with local and national regulations. Do not allow material to contaminate ground water system. Do not contaminate surface water.

Contaminated packaging:

Wash out container thoroughly, empty washings into spray tank and dispose of safely. Do not contaminate ponds, waterways or ditches with chemical or used container. Do not re-use empty containers.

Further information:

Dispose of product concentrate, diluted product and empty containers according to the 'Code of Practice for the Safe Use of Pesticides on Farms and Holdings' available from HMSO. Do not re-use container for any purpose. Contact the Local Council Authority for advice on the disposal of pesticide waste, or ask an approved waste disposal contractor.

Material Safety Datasheet

14. Transport Information

UN proper shipping name: Environmentally hazardous substance, liquid, n.o.s
(contains isoproturon 46.1%)
UN Number 3082

Road/Railway

Proper shipping name: Environmentally hazardous substance, liquid,
n.o.s (contains isoproturon 46.1%)
UN Number 3082
Class: 9
Packaging group: III
Hazard Identification No.: 90

Inland waterways

Proper shipping name: Environmentally hazardous substance, liquid,
n.o.s (contains isoproturon 46.1%)
UN Number 3082
Class: 9
Item: 11
Letter: c
Hazard Identification No.: 90

Sea

Proper shipping name: Environmentally hazardous substance, liquid,
n.o.s (contains isoproturon 46.1%)
UN Number 3082
Class: 9
Packaging group: III
Marine pollutant: P

Air

Proper shipping name: Environmentally hazardous substance, liquid,
n.o.s (contains isoproturon 46.1%)
UN Number 3082
Class: 9
Packaging group: III

Material Safety Datasheet

15. Regulatory Information

Classification in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Hazardous components which must be listed on the label:

Isoproturon
Diflufenican

Symbol(s): **Xn** **Harmful**
 N **Dangerous for the environment**

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

S phrases: S2 Keep out of the reach of children
 S7 Keep container tightly closed
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
 S35 This material and its container must be disposed of in a safe way.
 S36/37 Wear suitable protective clothing and gloves.
 S57 Use appropriate containment to avoid environmental contamination.

Designated name: FERNPATH IPEX (contains isoproturon 500g/l and diflufenican 50g/l)

This product is covered by the Control of Pesticides Regulations, 1986, and is labelled accordingly (MAPP 11391).

Material Safety Datasheet

16. Other Information

Health and Environmental Hazards

Text of R phrases mentioned in Section 2

R phrases:	R22	Harmful if swallowed
	R40	Limited evidence of a carcinogenic effect
	R36/38	Irritating to eyes and skin
	R50/53	Very 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

Recommended Uses: Agricultural Herbicide

Recommended Restrictions: Refer to statutory conditions on approved product label

Further information:

Date of First Issue: 1st October 2002

First Revision Date: 4th November 2003

Disclaimer: The information contained in this MSDS is designed to give general health and safety guidance on the storage and transport of the substance/preparation to which it relates. Requirements arising from a Risk Assessment of the substance/preparation in a particular working environment should take precedence over any of the guidance contained in this MSDS where there is a difference in the information given. The information contained in this MSDS is accurate at the date of publication and will be updated as and when appropriate. Liability will not be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this MSDS.

Compiled in accordance with EC Directive 91/155/EEC and subsequent amendments EC Directives 93/112/EEC and 2001/58/EC.



Material Safety Datasheet