SAFETY DATA SHEET
According to Regulation (EC) No 1907/2006 (REACH)
and Commission Regulation (EU) No 453/2010
BORNEO

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

BORNEO
Etoxazole, 110 g/l suspension concentrate
GIFAP Code : SC
EC number: not applicable

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

Acaricide (agricultural use)
Not for public use

1.3. Details of the supplier of the safety data sheet

INTERFARM (UK) LIMITED
36 Newgate Street
Doddington
Cambridgeshire PE15 0SR
United Kingdom
Tel.: +44 (0)1354 741414
email: technical@interfarm.co.uk

1.4. Emergency Telephone number 24/24hrs

UK & Ireland; +44 (0)844 560 5135

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classified as hazardous according to regulation (EC) No 1272/2008 (CLP)

Signal word(s) **Warning**

Pictogram (s)

Aquatic Acute Cat 1
Aquatic Chronic Cat 1

Hazard statement(s)

H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

Classified as hazardous according to:

- EU directive 67/548/EEC modified by Directive 2001/59/EC (results of the experimental studies),
- Directives 1999/45/EC, 2001/60/EC, 2006/8/EC (classification based on the concentration of active substance and ingredients),
- Directive 2003/82/EC for pesticides (special risks and safety precautions).

Symbol(s) DANGEROUS FOR THE ENVIRONMENT (N)
R(isk) phrase(s) R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

2.2. Label elements

Signal word(s) **Warning**

Pictogram (s)

Hazard statement(s) H410: Very toxic to aquatic life with long lasting effects

Precautionary statement(s)
P273: Avoid release to the environment
P501 (UK): Dispose of contents/container to a licensed hazardous-waste contractor or collection site except for empty clean containers, which can be disposed of as non-hazardous waste.
P501 (IE): Dispose of contents/container to a licensed waste disposal contractor or collection site except for triple rinsed empty containers, which can be disposed of as non-hazardous waste.
EUH 401: To avoid risks to human health and the environment, comply with the instructions for use.

Special risks and safety precautions (directive 91/414/EEC):
General provisions SP 1: Do not contaminate water with the product or its container (Do not clean application equipment near surface water).
Specific safety precautions none

2.3. Other hazards none known

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. This product is to be considered as a mixture in conformance to EC directives.

Composition/Information on hazardous ingredients

Number	% w/v	CAS number	Chemical name
1	11	153233-91-1	(*RS*)-5-*tert*-butyl-2-[2-(2,6-difluorophenyl)-4,5-dihydro-1,3-oxazol-4-yl] phenetole

Number	EC number	Annex-1 listing	Regl 1272/2008 Pict.	Hazard statements	Symbol 2001/59/EC	R phrase(s)
1	/	yes	GHS09	H400, H410	N	R50/53

Other information SCAE code : PHIL 98/03

4. FIRST AID MEASURES

4.1. Description of first aid measures
General In all cases of doubt, seek medical attention.
Inhalation Move to fresh air. If symptoms persist, seek medical advice.
Skin Remove contaminated clothing. Wash immediately with soap and water.
Eye Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion Rinse mouth. Never induce vomiting in unconscious or confused persons. Seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed
Mildly irritating to eyes.

4.3. Indication of any immediate medical attention and special treatment needed
No specific recommendations.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing media Dry chemical powder, carbon dioxide, sand, water.
Unsuitable extinguishing media none known

5.2. Special hazards arising from the substance or mixture
No hazardous combustion products known.

5.3. Advice for fire-fighters	Wear self contained breathing apparatus. Wear suitable protective clothing and eye/face protection.
Other information	Water used to extinguish a fire should not be allowed to enter the drainage system or watercourses.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment, and emergency procedures

For non-emergency personnel	Avoid contact with eyes. Wear protective gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area.
For emergency responders	Avoid contact with eyes. Wear protective nitrile gloves, safety goggles or face shield, and suitable protective clothing. Remove ignition sources. Evacuate the danger area or consult an expert.
6.2. Environmental precautions	Do not allow escape into sewage system or watercourses. Do not wash residues into drains or other waterways.

6.3. Methods and material for containment and cleaning up

Containment of a spill	Do not allow escape into sewage system or watercourses.
Clean-up procedures	In case of spill (liquid), soak it up immediately with suitable absorbent, such as sawdust or granular absorbent clay. Sweep up and place into sealable containers. Dig up heavily contaminated soil and place into drums. Use a damp cloth to clean floors and other objects, and also place in sealable container. Dispose of all waste and contaminated clothing in the same manner as waste chemicals (i.e. via an authorized disposal facility). Do not wash residues into drains or other waterways.
6.4. Reference to other sections	For personal protection see section 8.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling	The usual precautions for handling chemicals should be observed. For personal protection see section 8.
Fire and explosion prevention	No specific recommendations.

7.2. Conditions for safe storage, including any incompatibilities

Storage requirements	Store in a dry and cool place. Keep container in a well-ventilated place. Keep away from food, drink and animal feedingstuffs. Do not drink, eat and smoke in work areas.
Other information	Do not mix with water (except for the normal preparation).
7.3. Specific end use(s)	See label on the container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters	There is no national exposure limit for this product. No chemical safety report is required for this kind of product.

8.2. Exposure controls

Appropriate engineering controls	Provide adequate ventilation.
Individual protection measures	
Respiratory	The usual precautions for handling chemicals should be observed.
Hand	Wear protective nitrile gloves
Eye	Wear safety goggles or face shield.
Skin and body	Wear suitable protective clothing.
Other information	Launder clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Name ***Etoxazole, 110 g/l suspension concentrate***

9.1. Information on basic physical and chemical properties

Appearance	opaque liquid (visual inspection)
Colour	white (visual inspection)
Odour	faint chemical (Olfactory assessment)
Odour threshold	not determined
pH value	7.7 (1% in water, 24°C) (CIPAC MT 75.2 handbook F)
Melting point/freezing point	-4.3°C (freezing point)
Initial boiling point & boiling range	not determined
Flash point	>70°C (Abel-Pensky)
Evaporation rate	not applicable
Flammability	not flammable
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not determined
Vapour density	not applicable
Relative density	1.03 g/ml (20°C) (CIPAC MT 3.3.2 (density bottle) handbook F)
Bulk density	not applicable
Solubility in water	dispersible in water (solubility of etoxazole = 0.0704 mg/l, 20°C) (EEC A.6 Column elution method)
Solubility in other solvents	not applicable
Partition coefficient n-octanol/water	not applicable (etoxazole: log Pow = 5.5, 20°C)
Autoignition temperature	no self ignition up to 600°C (EEC A.15)
Decomposition temperature	the active substance does not decompose up to 450°C (EEC A16)
Dynamic viscosity	31-452 mPa.s (shear rate 504 to 10.58 s^{-1} ; 20°C) (OECD 114)
Kinematic viscosity	not determined
Explosive properties	not explosive (EEC A.14)
Oxidising properties	not oxidising (EEC A.17)

9.2. Other information

Relative vapour density (air = 1)	not determined
Surface tension	42 mN/m (0.166 ml/l ; 20°C) (EEC A.15)

10. STABILITY AND REACTIVITY

10.1. Reactivity Stable under recommended storage and handling conditions (see also section 7).

10.2. Chemical stability Stable for a minimum of 2 years under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions
None known.

10.4. Conditions to avoid Avoid high temperature, light, humidity.

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products
No hazardous combustion products known in contact with fire (see also section 5).

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

No experimental toxicological data are available on the preparation as such. The following data are applicable to a very close formulation:

Name ***Etoxazole, 110 g/l suspension concentrate*** *(close composition)*

Acute toxicity

Oral	LD50 rat: >5000 mg/kg (EEC B.1)
Dermal	LD50 rat: >2000 mg/kg (EEC B.3)

Inhalation	LC50 rat (4 hours): >1.09 mg/l (maximum feasible concentration ; whole body) (OECD 403)
Irritation	
Skin	not irritating (EEC B.4)
Eye	mildly irritating (EEC B.5)
Sensitization	not sensitizing (Maximisation test) (EEC B.6)

The following data are applicable to ingredient(s) listed below :

Name	***Active substance Etoxazole, technical grade***
Other toxicological information	**-** Genotoxicity: negative (OECD 471/472, 476, 473, UKEMS Test Guideline, 1993, EEC B12) - Carcinogenicity (rats, mice): no carcinogenic effect. (OECD 453, 451) - Multigeneration reproduction study (rat): negative (OECD 416) - Teratogenicity studies: negative (OECD 414)

Based on the available data, no classification criteria are met for any of these hazard classes.

Information on likely routes of exposure

This product is for agricultural use, therefore the most probable routes of exposure are via skin or inhalation.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

No experimental ecotoxicological data are available on the preparation as such. The following data are applicable to a very close formulation:

Name	***Etoxazole, 110 g/l suspension concentrate*** *(close composition)*
Daphnia	Acute toxicity, 48h *(Daphnia magna)*: EC50 = 0.019 mg/l NOEC < 0.002 mg/l (OECD 202)
Bees	Acute contact toxicity, LD50 (*Apis mellifera)* : >100 µg a.s./bee Acute oral toxicity, LD50 (*Apis mellifera)* : >100 µg a.s./bee (EPPO 170)

The following data are applicable to the ingredient(s) listed below:

Name	***Active substance Etoxazole, technical grade***
Fish	Acute toxicity, 96h (*Oncorhynchus mykiss*): LC50 = 2.8 mg/l NOEC = 0.22 mg/l (semi-static test) (OECD 203) Acute toxicity, 96h (*Lepomis macrochirus*) : LC50 = 1.4 mg/l NOEC = 0.73 mg/l (semi-static test) (OECD 203)
Daphnia	Acute toxicity, 48h *(Daphnia magna)* : EC50 = 0.0071 mg/l NOEC = 0.0029 mg/l (OECD 202) Chronic toxicity, 21d-NOEC *(Daphnia magna)* : 0.0002 mg/l (OECD 202)
Sediment dwelling midge	Acute toxicity, 10d-sediment (*Chironomus riparius*) : LC50 > 56 mg/kg sediment NOEC = 25 mg/kg sediment (ASTM Guideline E 1706-95b)
Algae	Acute toxicity, 72h *(Selenastrum capricornutum)* : EC_b50 & EC_r50 >10 mg/l NOEC = 10 mg/l (OECD 201)
Birds	Acute toxicity, LD50 (Mallard duck) : >2000 mg/kg (Draft OECD » FIFRA § 71-1)
Bees	Acute contact toxicity, 48h-LD50 (*Apis mellifera)* : >200 µg/bee (FIFRA §141-1 » EPPO 170) Acute oral toxicity, 4 8h-LD50 (*Apis mellifera)* : >200 µg/bee (FIFRA § 141-1 » EPPO 170)
Earthworms	Acute oral toxicity, 14d-LC50 (*Eisenia foetida*) : >1000 mg/kg soil (OECD 207)
Soil micro organisms	No significant impact on carbon mineralization or nitrogen transformation at up to 0.35 mg a.s./kg dry soil (SETAC - Procedures for assessing the environmental fate and ecotoxicity of pesticides).

12.2. Persistence and degradability
The following data are applicable to ingredient(s) listed below :

Name	***Active substance Etoxazole, technical grade***
Degradation Biotic	Not readily biodegradable (OECD 301D - Closed bottle test)
Degradation Abiotic	Hydrolysis (OECD 111) pH5: DT50 = 9.6 days at 20°C pH7: DT50 = 147 - 161 days at 20°C pH9: DT50 = 165 - 217 days at 20°C

12.3. Bioaccumulative potential
The following data are applicable to ingredient(s) listed below :

Name	***Active substance Etoxazole, technical grade***
Bioaccumulation	Partition coefficient n-octanol/water log Pow : 5.5 (20°C) (EEC A.8) Bio Concentration Factor (BCF), exposure 30 days (*Oncorhynchus mykiss*): 2500 – 3300 (depuration time: CT50 = 3-6 days - whole fish) (OECD 305E)

12.4. Mobility in soil
The following data are applicable to ingredient(s) listed below :

Name	***Active substance Etoxazole, technical grade***
	Adsorption K_{oc} values : 4910 - 11000 ml/g ; Desorption K_{ocdes} values: 11850 to 40750 ml/g Therefore the substance is slightly mobile to immobile (OECD 106).

12.5. Results of PBT and vPvB assessment
not required (no chemical safety report required).

12.6. Other adverse effects no other known adverse effects on the environment.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Substance and/or Mixture	According to local regulations. For further advice contact manufacturer.
Contaminated packaging	According to local regulations.

14. TRANSPORT INFORMATION

Land transport ADR/RID, Sea transport IMO/IMDG, Air transport ICAO-TI/IATA-DGR:

14.1. UN Number 3082

14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains: etoxazole)

14.3. Transport hazard class(es)

Land transport ADR/RID class:	9	label:	9
IMO/IMDG code class:	9		
Air transport ICAO-TI/IATA-DGR class:	9		

14.4. Packing group III

14.5. Environmental hazards Marine pollutant: yes

14.6. Special precautions for user EMS: F-A, S-F
No other special precaution required.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the ICB Code
Not applicable

15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
There is no specific regulation/legislation for this mixture.

15.2. Chemical safety assessment
No chemical safety assessment is required for this mixture.

16. OTHER INFORMATION

Method for evaluating information referred to in Article 9 of Regulation (EC) No 1272/2008 used for the purpose of classification:
Classification based on tests, on close formulation, and the properties of the active substance.

Changes made to the previous version: Sections 2, 3 & 16 were modified to introduce CLP hazard information and to declare hazardous ingredients according to CLP. Sections 11, 12 & 16, were modified to include/justify the CLP classification of the mixture. Other sections were updated to meet the requirements of Regulation 453/2010. [Based on S128311SCphCLP/EU/400gb from SCAE]

Full text of risk phrase(s) used in this document:
R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of hazard statement(s) used in this document:
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.