

SAFETY DATA SHEET

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

SOLEIL



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

1.1. Product identifier

SOLEIL
Bromuconazole 167 g/l / Tebuconazole 107 g/l, emulsifiable concentrate
GIFAP Code : EC
EC number: not applicable

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

Fungicide (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)333 333 9962

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)

Danger

Pictogram (s)



Serious eye dam. Cat 1



**Asp. Haz. Cat 1
STOT SE Cat 3
Repro Cat 2**



**Aquatic Acute Cat 1
Aquatic Chronic Cat 1**

Hazard statement(s)

H304: May be fatal if swallowed and enters airways.
H318: Causes serious eye damage
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child
H400: Very toxic to aquatic life
H410: Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Signal word(s)

Danger

Pictogram (s)



Hazard statement(s)

H304: May be fatal if swallowed and enters airways.
H318: Causes serious eye damage
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Precautionary statement(s)

P261: Avoid breathing mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P312: Call a POISON CENTRE/doctor if you feel unwell.
P331: Do NOT induce vomiting.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
P501 (UK/IE): Dispose of contents/container to a licensed hazardous 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 (Commission Regulation (EU) 547/2011):

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

SPe 3: To protect aquatic organisms respect an unsprayed buffer zone of 5 metres (as indicated on the label) to surface water bodies.

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 EU regulations.

Composition/Information on hazardous ingredients

Number	% w/v	CAS number	Chemical name
1	16.7	116255-48-2	Bromuconazole: 1-[(2RS,4RS:2RS,4SR)-4-bromo-2-(2,4-dichlorophenyl) tetrahydrofurfuryl]-1H-1,2,4-triazole
2	10.7	107534-96-3	Tebuconazole: (RS)-1-p-chlorophenyl-4,4-dimethyl-3-(1H-1,2,4-triazol-1-ylmethyl)pentan-3-ol
3	>1	24938-91-8	Tridecyl alcohol ethoxylated
4	>1	100-51-6	Benzyl alcohol
5	>1	70528-83-5	Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts
6	>10	ND	Hydrocarbons, C10, aromatics, <1% naphthalene

Number	EC number	Annex-1 listing	Regl 1272/2008 Pict.	Hazard statements
1	408-060-3	yes	GHS07, GHS08, GHS09	H302, H361D, H400, H410
2	403-640-2	yes	GHS07, GHS08, GHS09	H302, H361D, H411
3	/	/	GHS05, GHS07	H302, H318
4	/	/	GHS07	H302, H319, H332
5	/	/	GHS05, GHS07, GHS09	H312, H315, H318, H411
6	918-811-1	/	GHS07, GHS08, GHS09	H304, H411, H336, EUH066

Other information

SCAE code : SCAE 0108 V2

4. FIRST AID MEASURES

4.1. Description of first aid measures

General

In cases of doubt, seek medical attention.

Inhalation

Move to fresh air. If symptoms persist, seek medical advice.

Skin

Remove contaminated clothing. Wash skin immediately with water. Seek medical advice if irritation develops.

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. DO NOT induce vomiting. Seek medical advice.

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

Causes serious eye damage. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May be fatal if swallowed and enters airways.

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

No specific recommendations.

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5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing media

Dry chemical powder, carbon dioxide, water, foam.

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

May emit toxic and corrosive fumes under fire conditions (carbon monoxide (CO), nitrous gases (NOx), hydrogen bromide (HBr) and hydrogen chloride (HCl))

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 skin and 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 skin and 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 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

Prevent electrostatic discharges. Above the flash point an explosive mixture can be formed in presence of a flame.

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.

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8.2. Exposure controls

Appropriate Engineering controls
Individual protection measures

Provide adequate ventilation.

Respiratory

The usual precautions for handling chemicals should be observed. In case of insufficient ventilation wear suitable respiratory equipment.

Hand

Wear protective nitrile gloves.

Eye

Wear safety goggles or face shield.

Skin and body

Wear suitable protective clothing.

Other information

Laundry clothes before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Name	<i>Bromuconazole 167 g/l / Tebuconazole 107 g/l, emulsifiable concentrate</i>
Appearance	liquid (visual inspection)
Colour	transparent dull yellow (in-house method)
Odour	chemical odour (In-house method)
Odour threshold	not determined
pH value	9.2 (1% suspension in water) at 23°C (CIPAC MT 75.3)
Melting point/freezing point	not determined
Initial boiling point & boiling range	not determined
Flash point	72°C (CIPAC MT 12.2)
Evaporation rate	not applicable
Flammability	not flammable, due to the high flash point
Upper/lower flammability or explosive limits	not determined
Vapour pressure	not determined
Vapour density	not determined
Relative density	1.05 g/ml (at 20°C) (EEC A.3)
Bulk density	not applicable
Solubility in water	dispersible in water (solubility of bromuconazole = isomer cis: 60.9 mg/l isomer trans: 20.8 mg/l at 20°C. (US EPA D 63-8 - EEC A.6 Elution column) solubility of tebuconazole: 36 mg/l at 20°C)
Solubility in other solvents	not applicable
Partition coefficient n-octanol/water	not determined (Bromuconazole: log Pow = 3.24 ; 20°C ; OECD 107; Tebuconazole: log Pow = 3.7 at 20°C)
Autoignition temperature	338°C (EEC A.15)
Decomposition temperature	bromuconazole shows an exothermic decomposition at 194°C (US EPA D 63-5)
Dynamic Viscosity	30.1 mPa.s at 20°C (OECD 114)
Kinematic viscosity	At 20°C = 25.1953 mm ² /s At 40°C = 11.4289 mm ² /s (OECD 114)
Explosive properties	no explosive properties (EEC A.14)
Oxidising properties	no oxidizing properties (Expert statement)
9.2. Other information	
Relative vapour density (air = 1)	not determined
Surface tension	At 25°C = 31.5 mN/m At 40°C = 30.2 mN/m (EEC A.5)

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.

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10.6. Hazardous decomposition products

May emit toxic and corrosive fumes under fire conditions (carbon monoxide (CO), nitrous gases (NO_x), hydrogen bromide (HBr) and hydrogen chloride (HCl)). (See also section 5)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Name	Bromuconazole 167 g/l / Tebuconazole 107 g/l, emulsifiable concentrate
Acute toxicity	
Oral	LD50 rat: > 2005 mg/kg (OECD 401)
Dermal	LD50 rat: > 2005 mg/kg (OECD 402)
Irritation	
Skin	moderately irritating (OECD 404)
Eye	severely irritating (OECD 405)
Sensitization	not sensitizing (Buehler test modified with 9 induction applications) (OECD 406)

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

Name	Active substance <i>Bromuconazole</i>, technical grade
Acute toxicity	
Inhalation	LC50 rat (4 hours): > 5.05 mg/l (nose only) (OECD 403)
Other toxicological information	- Genotoxicity: <i>In vitro</i> tests: all tests negative, except chromosome aberration test weakly positive with metabolic activation (OECD 471, 473, 476, US EPA 40 CFR §798.5550) <i>In vivo</i> : negative (OECD 474, EEC B.18) - Carcinogenicity (rats, mice): no carcinogenic effect (US EPA guideline No. 83-5, 83-2) - Multigeneration reproduction study (rat): negative (OECD 416) - Teratogenicity studies (rat, rabbit): Oral route: negative in rabbits; in rats, some effects observed at maternally toxic levels (EEC B.31, US EPA 83-3) Dermal route: negative in rats (US EPA 83-3)
Name	Active substance, <i>Tebuconazole</i>, technical grade
Acute toxicity	
Inhalation	LC50 rat (4 hours): > 5.1 mg/l (respirable dust)
Other toxicological information	- Genotoxicity: <i>In vitro</i> & <i>In vivo</i> : negative - Carcinogenicity (rats, mice): no carcinogenic effect. - Multigeneration reproduction study (rat): negative. - Teratogenicity studies: teratogenic, possible risk of harm to the unborn child.

Based on the available data, classification criteria are met for the irritation class (eye) and the teratogenic effects.

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

Name	Bromuconazole 167 g/l / Tebuconazole 107 g/l, emulsifiable concentrate
Fish	Acute toxicity, 96h-LC50 (<i>Oncorhynchus mykiss</i>): 10.44 mg/l (OECD 203)
Daphnia	Acute toxicity, 48h-EC50 (<i>Daphnia magna</i>): 21.9 mg/l (OECD 202) Chronic toxicity, 21d-NOEC (<i>Daphnia magna</i>): 1.95 mg/l (OECD 211)
Algae	Acute toxicity, EC50 (<i>Scenedesmus subspicatus</i>): 72h-ECr50: 0.350 mg/l 72h-ECb50: 0.096 mg/l 72h-NOEC = 0.005 mg/l (OECD 201)
Bees	Acute contact toxicity, 48h-LD50 (<i>Apis mellifera</i>): >100 µg/bee (OECD 214) Acute oral toxicity, 48h-LD50 (<i>Apis mellifera</i>): >80 µg/bee (OECD 213)
Earthworms	Acute oral toxicity, 14d-LC50 (<i>Eisenia foetida</i>): >988 mg/kg soil (OECD 207)

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

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Name	Active substance <i>Bromuconazole, technical grade</i>
Sediment dwelling midge	Chronic toxicity, 28d-NOEC (<i>Chironomus riparius</i>): 0.25 mg/l (BBA 1995)
Aquatic plant	Acute toxicity, 14d- (<i>Lemna gibba</i>): EC50 = 0.12 mg/l NOEC = 0.027 mg/l (US EPA FIFRA 122-2 & 123-2)
Birds	Acute toxicity, LD50 (Mallard duck): > 2150 mg/kg bw (US EPA FIFRA 71-1) Acute toxicity, LD50 (Bobwhite quail): >2150 mg/kg bw (US EPA FIFRA 71-1)
Soil micro organisms	No significant impact on carbon mineralization or nitrogen transformation at up to 0.667 mg a.s./kg dry soil (EPPO 1994).

Name	Active substance, <i>Tebuconazole, technical grade</i>:
Sediment dwelling midge	Chronic toxicity, 28d-NOEC (<i>Chironomus riparius</i>): = 1.33 mg/l
Aquatic plant	Acute toxicity, 14d (<i>Lemna gibba</i>): EC50 = 0.144 mg/l NOEC = 0.0623 mg/l
Birds	Acute toxicity, LD50 (Japanese quail): > 2912 mg/kg b.w. Acute toxicity, LD50 (Bobwhite quail): 1988 mg/kg b.w.

12.2. Persistence and degradability

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

Name	Active substance <i>Bromuconazole, technical grade</i>
Degradation Biotic	Not readily biodegradable (OECD 301B - modified Sturm test)
Degradation Abiotic	Hydrolytically stable: (pH 4, 5, 7, 9) (EPA FIFRA § 161-1)
Biological methods for sewage treatment	3h-EC50 activated sludge: > 1000 mg/L (OECD 209)

Name	Active substance, <i>Tebuconazole, technical grade</i>:
Degradation Biotic	Not readily biodegradable
Degradation Abiotic	Hydrolytically stable (pH 4, 7, 9 at 22°C)

12.3. Bioaccumulative potential

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

Name	Active substance <i>Bromuconazole, technical grade</i>
Bioaccumulation	Partition coefficient n-octanol/water log Pow: 3.24 (20°C) (OECD 107) Bio Concentration Factor (BCF), exposure 28 days (Bluegill sunfish): 131 (whole fish) – 227 (viscera); depuration time CT ₅₀ : approx 0.4 day (U.S. E.P.A. FIFRA 165-4).

Name	Active substance, <i>Tebuconazole, technical grade</i>:
Bioaccumulation	Partition coefficient n-octanol/water log Pow = 3.7 at 20°C

12.4. Mobility in soil

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

Name	Active substance <i>Bromuconazole, technical grade</i>
Adsorption	Koc isomer LS850646: 474-1086 mL/g (mean 757 mL/g, 1/n = 0.78-0.85, 4 soils) Koc isomer LS850647: 627-1539 mL/g (mean 987 mL/g, 1/n = 0.76-0.86, 4 soils)
Desorption	Desorption: the sorption process was not entirely reversible. Therefore the substance has a low mobility (US EPA 163.1).

Name	Active substance, <i>Tebuconazole, technical grade</i>:
Kfoc	Kfoc: 128.4 to 1249 mL/g (mean 769 mL/g (1/n = 0.71 – 1.2) Therefore the substance has a low mobility.

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.

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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: Bromuconazole and Tebuconazole)
- 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 and on the properties of the active substances and ingredients.

Changes made to the previous version: Section 1; change to emergency telephone number. Sections 2, 3, 12 were modified to remove any reference to directives 2001/59/EC or 1999/45/EC, add changes due to ATP4 and insert NOECs. [Based on SOLECCLP/EU/310gb from SCAE]

Full text of hazard statement(s) used in this document:

H312: Harmful in contact with skin.
H315: Causes skin irritation
H318: Causes serious eye damage
H304: May be fatal if swallowed and enters airways
H302: Harmful if swallowed
H319: Causes serious eye irritation
H332: Harmful if inhaled
H336: May cause drowsiness or dizziness
EUH066: Repeated exposure may cause skin dryness or cracking
H361d: Suspected of damaging the unborn child.
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

This information only concerns the above mentioned product for the specific use mentioned and is not valid for such product used in combination with any other product. The information is to our best knowledge correct and complete and is given in good faith as of the date indicated. It is the user's responsibility to use this information as appropriate for his own particular use of this product.