

# Safety Data Sheet



## Balance® Flow Herbicide

Version 1 / AUS  
102000004081

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Revision Date: 13.08.2017  
Print Date: 13.08.2017

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Balance® Flow Herbicide  
**Product code (UVP)** 06062783

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

**Use** Herbicide  
**Restrictions on use** See product label for restrictions.

#### 1.3 Details of the supplier of the safety data sheet

**Supplier** Bayer Cropscience Pty Ltd  
ABN 87 000 226 022  
Level 1, 8 Redfern Road  
3123 Hawthorn East  
Victoria  
Australia

**Telephone** (03) 9248 6888  
**Telefax** (03) 9248 6800  
**Responsible Department** 1800 804 479 Technical Information Service  
**Website** [www.crop.bayer.com.au](http://www.crop.bayer.com.au)

#### 1.4 Emergency telephone no.

**Emergency telephone no.** 1800 033 111 IXOM Operations Pty Ltd

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification in accordance with Australian GHS Regulation

Reproductive toxicity: Category 2  
H361 Suspected of damaging fertility or the unborn child.

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.

#### 2.2 Label elements

Hazard label for supply/use required.

##### Hazardous components which must be listed on the label:

Isoxaflutole

**Signal word:** Warning

##### Hazard statements

H361 Suspected of damaging fertility or the unborn child.

##### Precautionary statements



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- P202 Do not handle until all safety precautions have been read and understood.  
 P281 Use personal protective equipment as required.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P405 Store locked up.  
 P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No other hazards known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature

Isoxaflutole 486 g/l  
Suspension concentrate (=flowable concentrate)(SC)

Chemical name	CAS-No.	Concentration [%]
Isoxaflutole	141112-29-0	40.50
1,2-Propanediol	57-55-6	>= 5.00 - <= 10.00
Citric acid	77-92-9	< 1.00
2-Ethylhexan-1-ol	104-76-7	<= 1.00
1,2-Benzisothiazol-3(2H)-one	2634-33-5	> 0.005 - < 0.05
Other ingredients (non-hazardous) to 100%		

## SECTION 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Safety Data Sheet to the doctor.**

### 4.1 Description of first aid measures

- General advice** Remove contaminated clothing immediately and dispose of safely.
- Inhalation** Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately. Oxygen or artificial respiration if needed.
- Skin contact** Take off contaminated clothing and shoes immediately. Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
- Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
- Ingestion** Keep patient warm and at rest. Rinse mouth. Do NOT induce vomiting.

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

- Symptoms** To date no symptoms are known.



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

**Treatment** Initial treatment: symptomatic. Carefully monitor the liver functions. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote.

## SECTION 5. FIRE FIGHTING 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 the substance or mixture** Dangerous gases are evolved in the event of a fire.

### 5.3 Advice for firefighters

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

**Further information** Evacuate personnel to safe areas. Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. After fire is extinguished, do not turn on any ignition source until the area is determined to be free from explosion or fire hazard. Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code** •3Z

## 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. Use personal protective equipment.

**6.2 Environmental precautions** Contain contaminated water and fire fighting water. Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and materials 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). Collect and transfer the product into a properly labelled and tightly closed container. Clean floors and contaminated objects with plenty of water.

**Additional advice** Check also for any local site procedures.



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**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** Ensure adequate ventilation.

**Hygiene measures** Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

**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.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Isoxaflutole	141112-29-0	0.6 mg/m3 (TWA)		OES BCS*
1,2-Propanediol (Total vapour and particulates.)	57-55-6	474 mg/m3/150 ppm (TWA)	12 2011	AU NOEL
1,2-Propanediol (Particulate.)	57-55-6	10 mg/m3 (TWA)	12 2011	AU NOEL

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

**8.2 Exposure controls**

**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



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	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.
<b>Eye protection</b>	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).
<b>Skin and body protection</b>	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.
<b>General protective measures</b>	In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.
<b>Engineering Controls</b>	
<b>Advice on safe handling</b>	Ensure adequate ventilation.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

<b>Form</b>	suspension
<b>Colour</b>	light yellow to light brown
<b>Odour</b>	mild
<b>Odour Threshold</b>	No data available
<b>pH</b>	4.7 - 5.8 at 100 % (23 °C)
<b>Flash point</b>	>95.4 °C
<b>Minimum ignition energy</b>	Not applicable
<b>Upper explosion limit</b>	No data available
<b>Lower explosion limit</b>	No data available
<b>Vapour pressure</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Relative vapour density</b>	No data available
<b>Density</b>	ca. 1.20 g/cm <sup>3</sup> at 20 °C
<b>Water solubility</b>	dispersible
<b>Partition coefficient: n-octanol/water</b>	Not applicable
<b>Partition coefficient: n-octanol/water</b>	Isoxaflutole: log Pow: 2.32 at 20 °C
<b>Explosivity</b>	Not applicable

**9.2 Other information** Further safety related physical-chemical data are not known.



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### 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 inhalation toxicity** LC50 (Rat) > 4.39 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
highest concentration tested  
No deaths

**Acute dermal toxicity** LD50 (Rabbit) > 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 mutagenicity

Isoxaflutole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

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

#### Assessment toxicity to reproduction

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

#### Assessment developmental toxicity

Isoxaflutole caused developmental toxicity only at dose levels toxic to the dams. Isoxaflutole caused a delayed ossification of fetuses. The developmental effects seen with Isoxaflutole are related to maternal toxicity.



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### Assessment STOT Specific target organ toxicity – single exposure

Isoxaflutole: Based on available data, the classification criteria are not met.

### Assessment STOT Specific target organ toxicity – repeated exposure

Isoxaflutole caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver, Thyroid. The observed effects do not appear to be relevant for humans.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Information on likely routes of exposure

May be harmful if inhaled.  
May cause skin irritation.  
May cause eye irritation.  
Harmful if swallowed.

### Early onset symptoms related to exposure

Refer to Section 4

### Delayed health effects from exposure

Refer to Section 11

### Exposure levels and health effects

Refer to Section 4

### Interactive effects

Not known

### When specific chemical data is not available

Not applicable

### Mixture of chemicals

Refer to Section 2.1

### Further information

The toxicological data refer to a similar formulation.

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) > 1.7 mg/l  
Exposure time: 96 h  
The value mentioned relates to the active ingredient isoxaflutole.

#### Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) > 1.5 mg/l  
Exposure time: 48 h  
The value mentioned relates to the active ingredient isoxaflutole.

#### Toxicity to aquatic plants

EC50 (Raphidocelis subcapitata (freshwater green alga)) 0.12 mg/l  
Exposure time: 120 h



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The value mentioned relates to the active ingredient isoxaflutole.

EC50 (Lemna gibba (gibbous duckweed)) 0.01439 mg/l

Growth rate; Exposure time: 216 h

The value mentioned relates to the active ingredient isoxaflutole.

NOEC (Lemna gibba (gibbous duckweed)) 0.00056 mg/l

The value mentioned relates to the active ingredient isoxaflutole.

**12.2 Persistence and degradability**

**Biodegradability** Isoxaflutole:  
Not rapidly biodegradable

**Koc** Isoxaflutole: Koc: 112

**12.3 Bioaccumulative potential**

**Bioaccumulation** Isoxaflutole: Bioconcentration factor (BCF) 11  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Isoxaflutole: Moderately mobile in soils

**12.5 Other adverse effects**

**Additional ecological information** No other effects to be mentioned.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Metal drums and plastic containers:

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Do not reuse container for any other purpose.

**SECTION 14. TRANSPORT INFORMATION**

**ADG**

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOXAFLUTOLE SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.

**IMDG**





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UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOXAFLUTOLE SOLUTION)

### IATA

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOXAFLUTOLE SOLUTION )

### SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994  
Australian Pesticides and Veterinary Medicines Authority approval number: 81192

#### SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

### SECTION 16. OTHER INFORMATION

**Trademark information** Balance® is a registered trademark of the Bayer Group.

This SDS 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 should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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.

#### Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)



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CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS