

# MATERIAL SAFETY DATA SHEET



Date of Issue: May 14<sup>th</sup>, 2009

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product name** Balance<sup>®</sup> 750 WG Herbicide  
**Other names** None  
**Product codes and pack sizes** 4209949 (1.5 kg)  
**Chemical group** Isoxazole  
**Recommended use** Herbicide for agricultural use  
**Formulation** Water dispersible granule (WG)  
**Supplier** Bayer CropScience Pty Ltd ABN 87 000 226 022  
**Address** 391 - 393 Tooronga Road, East Hawthorn  
Victoria 3123, Australia  
**Telephone** (03) 9248 6888  
**Facsimile** (03) 9248 6800  
**Website** [www.bayercropscience.com.au](http://www.bayercropscience.com.au)  
**Contact** Development Manager (03) 9248 6888  
**Emergency Telephone Number** 1800 033 111 – Orica SH&E Shared Services

## 2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**  
**HAZARDOUS SUBSTANCE (see Risk phrase below) – DANGEROUS GOOD**  
**Very toxic to aquatic organisms**

**Hazard classification** Hazardous (National Occupational Health and Safety Commission - NOHSC)  
**Risk phrases** R63 – Possible risk of harm to the unborn child.  
**Safety phrases** See Sections 4, 5, 6, 7, 8, 10, 12, 13  
**ADG classification** See Section 14.  
**SUSDP classification (Poison schedule)** 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/kg)
Isoxaflutole	[141112-29-0]	750
Kaolin	[1332-58-7]	≈ 70
Silica, quartz (in kaolin)	[14808-60-7]	(< 7 – in kaolin)
Other ingredients, including dispersing and wetting agents	(non hazardous)	≈ 180

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## 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 Material Safety Data Sheet to the doctor.**

<b>Inhalation</b>	If inhaled remove to fresh air and keep at rest. Obtain medical advice if at all worried. If not breathing give artificial respiration and get medical attention as soon as possible.
<b>Skin contact</b>	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
<b>Eye contact</b>	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
<b>Ingestion</b>	Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice as above.
<b>First Aid Facilities</b>	Ensure washing facilities are available, including an eyewash station.
<b>Medical attention</b>	<i>Local contamination:</i> Treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid Measures. <i>Systemic poisoning:</i> There is no specific antidote. Treat symptoms.

## 5. FIRE FIGHTING MEASURES

<b>Extinguishing media</b>	Water spray, carbon dioxide, dry chemical, foam
<b>Hazards from combustion products</b>	In a fire, oxides of carbon, nitrogen and sulphur, and hydrofluoric acid, may be formed.
<b>Precautions for fire fighters</b>	Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later. Contamination of water bodies should be avoided.
<b>Hazchem code</b>	See Section 14.

## 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Avoid breathing dust. Eliminate all sources of ignition. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Contain spillage. Avoid creating dust by damping down. Prevent spilled material from entering drains or watercourses. Vacuum, shovel or sweep up, and transfer into plastic drums. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc. is unavoidable, warn the local water authority.

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## 7. HANDLING AND STORAGE

<b>Handling</b>	Will irritate the eyes and skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow length PVC gloves and face shield or goggles. When using the prepared spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat and elbow length PVC gloves. Wash hands after use. After each day's use wash gloves, face shield or goggles and contaminated clothing.
<b>Storage</b>	Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight.
<b>Flammability</b>	Dust from this product may form explosive mixtures with air.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure standards</b>	The National Occupational Health and Safety Commission (NOHSC) exposure standards are:  TWA for kaolin is 10 mg/m <sup>3</sup> . STEL for silica, quartz (respirable dust) is 0.1 mg/m <sup>3</sup> .  <i>Exposure standard – Time Weighted Average (TWA)</i> means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.  <i>Exposure standard – Short Term Exposure limit (STEL)</i> means 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.
<b>Biological limit values</b>	None allocated
<b>Engineering controls</b>	Control process conditions to avoid contact. Use in a well-ventilated area only. Use local exhaust ventilation to keep exposure levels below the exposure limits above.
<b>Personal Protective Equipment</b>	Eyes: Face shield or goggles Clothing: Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat Gloves: Elbow-length PVC gloves Respiratory: If airborne concentrations are likely to exceed the exposure standards above or if exposed to dust, an AS/NZS 1715/1716 approved respirator should be worn.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Deep beige granules
<b>Odour:</b>	None
<b>pH:</b>	4.0 to 6.0 (1 % suspension in water)
<b>Vapour pressure:</b>	1.0 x 10 <sup>-3</sup> mPa at 25° C (isoxaflutole)
<b>Vapour density:</b>	Not available
<b>Boiling point:</b>	Not applicable

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## 9. PHYSICAL AND CHEMICAL PROPERTIES - continued

Freezing/melting point:	Not available
Solubility:	Disperses in water
Bulk density:	Approximately 555 - 625 kg/m <sup>3</sup>
Flash Point:	Not applicable
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	Not available
Partition coefficient (octanol/water):	<i>Isoxaflutole</i> : Log P <sub>ow</sub> = 2.32 at 20° C

## 9. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Extremes of temperature and direct sunlight. Prevent formation of dust.
Incompatible materials	None
Hazardous decomposition products	In a fire, oxides of carbon, nitrogen and sulphur, and hydrofluoric acid, may be formed.
Hazardous reactions	None

## 11. TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled.
Skin contact	Will irritate the skin.
Eye contact	Will irritate the eyes.
Ingestion	Harmful if swallowed. This product has a low acute oral toxicity.

### ANIMAL TOXICITY DATA – PRODUCT

<u>Acute:</u>	
Oral toxicity	LD <sub>50</sub> rat: > 5000 mg/kg
Dermal toxicity	LD <sub>50</sub> rat: > 2000 mg/kg
Inhalation toxicity	LC <sub>50</sub> rat (4 h): > 5.26 mg/L
Skin irritation	Slightly irritating (rabbit)

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## 11. TOXICOLOGICAL INFORMATION - continued

Eye irritation	Slightly irritating (rabbit)
Sensitisation	Not a dermal sensitiser (guinea pig) - Buehler test

### Chronic:

Isoxaflutole is not mutagenic and not neuro-toxic. In long-term feeding studies in rodents, liver tumours were observed in rats and mice and thyroid tumours in rats. These effects were only observed at the highest dose tested (Maximum Tolerated Dose) which was far higher than any exposure that could be envisaged for humans. Thus, isoxaflutole presents a negligible, if any, increased cancer risk for humans. Isoxaflutole is classified as a Category 3 substance, having concern for humans owing to possible developmental toxic effects, and therefore, R63 – Possible risk of harm to the unborn child is assigned.

This product contains less than 1% crystalline silica, which is a naturally-occurring mineral component of many sands and clays. Excessive long-term exposure to respirable crystalline silica may cause lung damage. Crystalline silica is classified as a carcinogen.

## 12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic organisms, aquatic plants and algae. It has a low toxicity to earthworms and bees. DO NOT contaminate streams, rivers or waterways with Balance or the used containers.

<b>Ecotoxicity</b>	<u>Isoxaflutole:</u>	
	<i>Fish toxicity:</i>	LC <sub>50</sub> (96 h) rainbow trout > 1.7 mg/L
	<i>Daphnia toxicity:</i>	EC <sub>50</sub> (48 h) <i>Daphnia magna</i> > 1.5 mg/L
	<i>Algal toxicity:</i>	EC <sub>50</sub> (72 h) <i>Selenastrum capricornutum</i> 0.016 mg/L
	<i>Aquatic plants:</i>	LC <sub>50</sub> duckweed 0.003 mg/L (14 day)
	<i>Bird toxicity:</i>	LD <sub>50</sub> mallard duck and bobwhite quail > 2150 mg/kg

### Balance 750 WG:

<i>Fish toxicity:</i>	LC <sub>50</sub> (96 h) rainbow trout > 65 mg/L
<i>Daphnia toxicity:</i>	EC <sub>50</sub> (48 h) <i>Daphnia magna</i> > 5 mg/L
<i>Algal toxicity:</i>	IC <sub>50</sub> (72 h) algae 10.5 mg/L

<b>Environmental fate, persistence and degradability, mobility</b>	In laboratory soil studies degradation of isoxaflutole proceeded via hydrolysis and microbial degradation, with final mineralisation to CO <sub>2</sub> . Isoxaflutole and its major metabolites are potentially mobile in soil under simulated high rainfall; however field studies indicate that residues remain in the surface horizons; after 4 months, virtually no residues remain in the soil.
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## 13. DISPOSAL CONSIDERATIONS

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. Unwanted product should be disposed of by a reputable waste disposal contractor.

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## 14. TRANSPORT INFORMATION

This product is not classified as a Dangerous Good under the Australian Code for the Transport of Dangerous Goods by Road and Rail in packages of 3 m<sup>3</sup> volume or less. In packages greater than 3 m<sup>3</sup> volume it is a Dangerous Good, Class 4.2, SELF-HEATING SOLID, ORGANIC, N.O.S (contains isoxaflutole), UN 3088, PG III, Hazchem code 1Y, EPG Guide 23 - Dangerous Goods - Initial Emergency Response Guide.

<b>UN number</b>	UN 3077
<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (isoxaflutole mixture)
<b>Class and Subsidiary Risk</b>	Class 9
<b>Packing Group</b>	Packing Group III
<b>Hazchem code</b>	2Z
<b>Note for Road and Rail Transport</b>	According to AU01, Environmentally Hazardous Substances in packagings, IBCs or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code

## 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act, 1994

Australian Pesticides and Veterinary Medicines Authority approval number: 49456

See also Section 2.

## 16. OTHER INFORMATION

**Trademark information** Balance<sup>®</sup> is a Registered Trademark of Bayer.

**Preparation information** Replaces December 15, 2005 MSDS.  
Reasons for revision: Product codes, Handling, Bulk density

This MSDS 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 MSDS 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.

END OF MSDS