

MATERIAL SAFETY DATA SHEET



Date of Issue: September 10, 2007

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name **Sencor® 750 WG Herbicide**

Other names None

Product codes and pack sizes 4953915 (2.5 kg)

Chemical group Triazinone

Recommended use Herbicide for agricultural use

Formulation Water dispersible granule (WG)

Supplier Bayer CropScience Pty Ltd ABN 87 000 226 022

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2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HAZARDOUS SUBSTANCE (see Risk phrase below) – NON DANGEROUS GOOD (road/rail)
Very toxic to aquatic organisms

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)

Risk phrases R20/22 – Harmful if inhaled and if swallowed.
R49 – May cause cancer by inhalation.

Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13

ADG classification Not a "Dangerous good" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. If the product is shipped by sea it is a Marine Pollutant. See Section 14.

SUSDP classification (Poisons Schedule) 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/kg)
Metribuzin	[21087-64-9]	750
Kaolin	[1332-58-7]	≈ 100
Quartz (silica crystalline) – in kaolin	[14808-60-7]	(≈ 4 - in kaolin)
Other ingredients, including surfactant and dispersing agents	(non hazardous)	≈ 150

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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.

Inhalation	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.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical aid if at all worried.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.
Ingestion	Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice as above.
First Aid Facilities	Ensure washing facilities are available, including an eyewash station.
Medical attention	<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> Poisoning is accompanied by breathing difficulties and sedation. There is no specific antidote. Treat symptoms.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, dry chemical
Hazards from combustion products	In a fire, oxides of carbon, nitrogen and sulphur, methyl mercaptan, hydrogen cyanide and amines may be formed.
Precautions for fire fighters	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. Otherwise, spray them to cool. 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.
Hazchem code	Not applicable

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. 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

Handling	Keep out of reach of children. Harmful if inhaled or swallowed. May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust or spray mist. Wash hands after use. Keep product away from heat and sources of ignition.
Storage	Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.
Flammability	Low flammability. However, if a dust forms, dust / air mixtures can be explosive.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	The National Occupational Health and Safety Commission (NOHSC) exposure standard (TWA) for metribuzin is 5 mg/m ³ . The NOHSC exposure standard (TWA) for kaolin is 10 mg/m ³ . The NOHSC exposure standard (TWA) for quartz (crystalline silica) is 0.1 mg/m ³ . <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.	
Biological limit values	Production workers and agricultural workers handling this product regularly should be monitored for the effects of crystalline silica. A baseline level should be established prior to any potential exposure. See Guidelines for Health Surveillance [NOHSC:7039(1995)].	
Engineering controls	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.	
Personal Protective Equipment	Eyes:	Safety goggles if exposure is possible
	Clothing:	Cotton overalls buttoned to the neck and wrist and a washable hat
	Gloves:	Elbow-length PVC gloves
	Respiratory:	If airborne concentrations are likely to exceed the exposure standards above, an AS/NZS 1715/1716 approved respirator should be worn.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off white to light grey granules with a bluish cast
Odour:	Musty
pH:	Not available
Vapour pressure:	0.058 mPa at 20° C (metribuzin)
Vapour density:	Not available
Boiling point:	Not applicable
Freezing/melting point:	Not available
Solubility:	Dispersible in water
Bulk density:	0.53 to 0.59 g/cm ³
Flash Point:	Not applicable
Flammability (explosive) limits:	Not available
Auto-ignition temperature:	Not available
Partition coefficient (octanol/water):	<i>Metribuzin</i> : Log P _{ow} = 1.6 at 20° C and pH 5.6

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Heat. Prevent formation of dust.
Incompatible materials	Avoid strong alkalis, ketones and aldehydes.
Hazardous decomposition products	In a fire, oxides of carbon, nitrogen and sulphur, methyl mercaptan, hydrogen cyanide and amines may be formed.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled.
Skin contact	May irritate the skin.
Eye contact	Will irritate the eyes.
Ingestion	Harmful if swallowed.

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11. TOXICOLOGICAL INFORMATION - continued

ANIMAL TOXICITY DATA – PRODUCT

Acute:

Oral toxicity	LD ₅₀ male rat: 2365 mg/kg LD ₅₀ female rat: 1449 mg/kg
Dermal toxicity	LD ₅₀ rat: > 2000 mg/kg LD ₅₀ rabbit: > 5000 mg/kg
Inhalation toxicity	LC ₅₀ rat: > 4.84 mg/L – 4 hour exposure to dust - highest attainable concentration
Skin irritation	Slightly irritating (rabbit)
Eye irritation	Moderately irritating (rabbit)
Sensitisation	Not a dermal sensitiser (guinea pig)

Chronic:

No evidence of carcinogenic potential was observed in chronic feeding studies with metribuzin in rats and mice. Metribuzin is not genotoxic, teratogenic or a reproductive toxin. Target organs are the thyroid and the liver. 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. It has a low hazard to earthworms and bees. DO NOT contaminate streams, rivers or waterways with Sencor 750 WG or the used containers.

Ecotoxicity

Metribuzin:

Fish toxicity: LC₅₀ (96 h) golden orfe 141.6 mg/L
LC₅₀ (96 h) rainbow trout 74.6 mg/L
Daphnia toxicity: *Daphnia magna* LC₅₀ (48 h) 49.6 mg/L
Algal toxicity: E_rC₅₀ green algae (*Scenedesmus subspicatus*) 0.021 mg/L
Toxicity to bacteria: EC₅₀ activated sludge 761 mg/L
Bird toxicity:
Acute oral LD₅₀ bobwhite quail 164 mg/kg
Acute oral LD₅₀ mallard duck 460 - 680 mg/kg

Environmental fate, persistence and degradability, mobility

Metribuzin is rapidly degraded in soil with microbial breakdown the major mechanism of loss. Losses due to photodecomposition or volatilisation are insignificant. DT₅₀ in soil is approx. 1-2 months. DT₅₀ in pond water is approx 7 days.

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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.

14. TRANSPORT INFORMATION

UN number	Not applicable (road/rail)
Proper shipping name	Not applicable (road/rail)
Class and Subsidiary Risk	Not applicable (road/rail)
Packing Group	Not applicable (road/rail)
EPG	Not applicable (road/rail)
Hazchem code	Not applicable (road/rail)
Marine Pollutant	Yes – If this product is shipped by sea it is a Class 9, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (metribuzin mixture), UN 3077, Packing Group III, Hazchem 2Z Marine Pollutant.

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority approval number: 49382

See also Section 2.

16. OTHER INFORMATION

Trademark information Sencor® is a Registered Trademark of Bayer.

Preparation information Replaces February 20, 2006.
Reasons for revision: Risk phrases, handling, and biological limit values.

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