

MATERIAL SAFETY DATA SHEET



Date of Issue: November 26th, 2009

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name **Flint[®] 500 WG Fungicide**
Other names None
Product codes 6314813 (1 kg), 6314821 (5 kg)
Chemical group Strobilurin (oximinoacetate)
Recommended use Fungicide 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
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) – NON DANGEROUS GOOD
May cause sensitisation by skin contact

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases R43 – May cause sensitisation by skin contact.
Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13
ADG classification See Section 14.
SUSDP classification 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/kg)
Trifloxystrobin	[141517-21-7]	500
Dibutylnaphthalene sulfonic acid, sodium salt	[25417-20-3]	50
Silica, amorphous - diatomaceous earth (uncalcined)*	[61790-53-2]	90
Other ingredients	(non hazardous)	360

* contains <1% cristobalite and quartz

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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. If breathing becomes difficult, contact a physician.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical attention if irritation develops and persists.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes. Seek medical attention if irritation develops and persists.
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.
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> There is no specific antidote. Treat symptoms. The application of activated charcoal and sodium sulfate can be considered in significant ingestions.

5. FIRE FIGHTING MEASURES

Extinguishing media	Water spray, foam, dry chemical, carbon dioxide
Hazards from combustion products	In a fire, formation of hydrogen cyanide, hydrogen fluoride, carbon monoxide and nitrogen oxides can be expected.
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. 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 strictly 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. 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. Will irritate the skin. Avoid contact with skin. Do not inhale dust. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.
Storage	Store in the closed, original container in a dry, well-ventilated place as cool as possible out of direct sunlight.
Flammability	Low flammability.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	The occupational exposure limit for trifloxystrobin set by Bayer CropScience is 2.7 mg/m ³ . The National Occupational Health and Safety Commission exposure standard (TWA) for diatomaceous earth (amorphous silica) is 10 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	None allocated
Engineering controls	Avoid creation of dust. Control process conditions to avoid contact. Use in a well-ventilated area only.
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 standard above, an AS/NZS 1715/1716 approved respirator should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown granule
Odour:	Weak characteristic
pH:	8.5 to 10.5 (1% in water)
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point:	Not applicable
Freezing/melting point:	Not available
Solubility:	Disperses in water
Bulk density:	0.597 g/cm ³
Flash Point:	Not applicable
Flammability (explosive) limits:	No data
Auto-ignition temperature:	Not applicable
Partition coefficient (octanol/water):	<i>Trifloxystrobin</i> : Log P _{ow} = 4.5 at 25° C

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10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	None known
Incompatible materials	Avoid extremes of temperature, direct sunlight, strong acids and strong alkalis.
Hazardous decomposition products	In a fire, formation of hydrogen cyanide, hydrogen fluoride, carbon monoxide and nitrogen oxides can be expected.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	Harmful if inhaled.
Skin contact	Will irritate the skin.
Eye contact	May irritate the eyes.
Ingestion	Product toxicity is low, but may be harmful if a large amount is swallowed.

ANIMAL TOXICITY DATA – PRODUCT

Acute:

Oral toxicity	LD ₅₀ rat: > 2000 mg/kg
Dermal toxicity	LD ₅₀ rat: > 2000 mg/kg
Inhalation toxicity	Inhalation toxicity testing was not required by the European Union (EU), as the inhalation hazard of the product is expected to be low.
Skin irritation	Slightly irritating (rabbit)
Irritation of mucous membranes	Slightly irritating (rabbit)
Sensitisation	Non-sensitising in Buehler test (guinea pig) Sensitising in Maximisation test (guinea pig)

Chronic:

Trifloxystrobin has been tested for mutagenicity, neurotoxicity, reproduction, developmental, chronic toxicity and carcinogenicity. No evidence of adverse effects relevant to humans was obtained.
Excessive long-term exposure to respirable silica may cause lung damage.

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12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms in laboratory tests, but rapid dissipation in biotic environments. Low risk to aquatic ecosystems has been demonstrated in outdoor mesocosm tests. It has a low hazard to birds, earthworms and bees. DO NOT contaminate streams, rivers or waterways with Flint 500 WG or the used containers.

Ecotoxicity

Trifloxystrobin:

Fish toxicity: LC₅₀ (96 h) bluegill sunfish (*Lepomis macrochirus*) 0.054 mg/L

LC₅₀ (96 h) rainbow trout 0.015 mg/L

Daphnia toxicity: LC₅₀ (48 h) *Daphnia magna* 0.016 mg/L

Algal toxicity: E_bC₅₀ (72 h) *Scenedesmus subspicatus* 0.0053 mg/L

Bird toxicity: Acute oral LD₅₀ bobwhite quail > 2000 mg/kg

Acute oral LD₅₀ mallard duck > 2250 mg/kg

Bees: LD₅₀ (oral and contact) > 200 µg/bee

Earthworms: LC₅₀ (14 d) >1000 mg/kg

Flint 500 WG:

Fish toxicity: LC₅₀ (96 h) rainbow trout 0.036 mg/L

Daphnia toxicity: EC₅₀ (48 h) *Daphnia magna* 0.01 mg/L

Algal toxicity: EC₅₀ (72 h) green alga (*Pseudokirchneriella subcapitata*) 0.15 mg/L

Environmental fate, persistence and degradability, mobility

Biological degradability of trifloxystrobin: 0% after 29 days at 20° C, i.e. not readily degradable

Abiotic degradation: half life

t_{1/2}: 3139 days at pH 5 (20° C)

t_{1/2}: 80.1 days at pH 7 (20° C)

t_{1/2}: 1.1 days at pH 9 (20° C)

13. DISPOSAL CONSIDERATIONS

(1 kg bag in box)

Single rinse before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Puncture and bury empty bags 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 bags and product should not be burnt.

(5 kg 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.

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14. TRANSPORT INFORMATION

UN number	UN 3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (contains trifloxystrobin)
Class and Subsidiary Risk	Class 9
Packing Group	Packing Group III
Hazchem code	2Z
Marine Pollutant	Yes
Note for Road and Rail Transport	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: 53871

See also Section 2.

16. OTHER INFORMATION

Trademark information Flint® is a Registered Trademark of Bayer.

Preparation information Replaces August 13th, 2008 edition.
Reasons for revision: Transport information.

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