

Safety Data Sheet



Reserve Stressgard® Turf Fungicide

Version 1 / AUS
102000031645

Revision Date: 31.05.2021
Print Date: 31.05.2021

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name Reserve Stressgard® Turf Fungicide
Product code (UVP) 84999792

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

Use Fungicide

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.es.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

Carcinogenicity: Category 2

H351 Suspected of causing cancer.

Acute toxicity: Category 2

H330 Fatal if inhaled.

Specific target organ toxicity - single exposure: Category 3

H335 May cause respiratory irritation.

Eye Damage/Irritation: Category 1

H318 Causes serious eye damage.

Skin sensitisation: Category 1

H317 May cause an allergic skin reaction.

Acute aquatic toxicity: Category 1

H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1

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H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to specific Australian legislation

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Chlorothalonil

Signal word: Danger

Hazard statements

H351 Suspected of causing cancer.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H318 Causes serious eye damage.
H317 May cause an allergic skin reaction.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284 Wear respiratory protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER/doctor/ physician.
P320 Specific treatment is urgent (see supplemental first aid instructions on this label).
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
+ P338
P302 + P352 IF ON SKIN: Wash with plenty of water/ soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No additional hazards known beside those mentioned.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Chlorothalonil 720g/L
Suspension concentrate (=flowable concentrate)(SC)

Chemical name	CAS-No.	Concentration [%]
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Chlorothalonil	1897-45-6	53.73
Ethanediol	107-21-1	3.73
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

Inhalation	Move the victim to fresh air and keep at rest. Call a physician or poison control center immediately.
Skin contact	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. Take off contaminated clothing and shoes immediately. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Keep at rest. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms Allergic reactions, Skin, eye and mucous membrane irritation

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable Water, Foam, Carbon dioxide (CO₂), Dry chemical

5.2 Special hazards arising from the substance or mixture In the event of fire the following may be released:, Hydrogen chloride (HCl)

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire, wear self-contained breathing apparatus.

Further information Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.



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Hazchem Code •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions When dealing with a spillage do not eat, drink or smoke. Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment. Keep unauthorized people away.

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 Dike area to prevent runoff. 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.

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 Avoid contact with skin, eyes and clothing. Avoid formation of aerosol. Use only in area provided with appropriate exhaust ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container and out of the reach of children, preferably in a locked storage area. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Chlorothalonil	1897-45-6	0.2 mg/m ³ (TWA)		OES BCS*
Ethanediol	107-21-1	104 mg/m ³ /40 ppm (STEL)	12 2011	AU NOEL
Ethanediol	107-21-1	52 mg/m ³ /20 ppm (TWA)	12 2011	AU NOEL
Ethanediol	107-21-1	10 mg/m ³ (TWA)	12 2011	AU NOEL
Ethanediol	107-21-1	10 ppm (TWA)		OES BCS*

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(Vapor.)				
Ethanediol	107-21-1	10 mg/m ³ (TWA)		OES BCS*
(Aerosol.)				

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

8.2 Exposure controls

Engineering Controls

Advice on safe handling Avoid contact with skin, eyes and clothing. Avoid formation of aerosol. Use only in area provided with appropriate exhaust ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	suspension
Colour	green
Odour	No data available
Odour Threshold	No data available
pH	6 - 8 6.5 - 9.5
Melting point/range	No data available
Boiling Point	No data available
Flash point	No data available
Flammability	No data available
Auto-ignition temperature	No data available
Thermal decomposition	No data available
Minimum ignition energy	No data available
Self-accelarating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No data available
Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.33 - 1.37 g/cm ³
Water solubility	No data available
Partition coefficient: n-octanol/water	Pow: 2.89



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Partition coefficient: n-octanol/water	Chlorothalonil: log Pow: 2.94 log Pow: -1.36 (23 °C)
Viscosity, dynamic	700 - 1,000 mPa.s
Viscosity, kinematic	No data available
Oxidizing properties	No data available
Explosivity	No data available

SECTION 10. STABILITY AND REACTIVITY

10.2 Chemical stability	Stable under recommended storage conditions.
10.5 Incompatible materials	Strong oxidizing agents
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) > 1,000 mg/kg The value mentioned relates to the active ingredient chlorothalonil. LD50 (Dog) > 5,000 mg/kg The value mentioned relates to the active ingredient chlorothalonil.
Acute inhalation toxicity	LC50 (Rat) > 4.7 mg/l Exposure time: 1 h LC50 (Rat) > 0.1 mg/l LC50 (Rat) 0.092 mg/l (hammer milled unground) Exposure time: 1 h LC50 (Rat) 0.10 mg/l (finely ground, 1.3-4.5 micron) Exposure time: 4 h
Acute dermal toxicity	LD50 (Rabbit) > 10,000 mg/kg The value mentioned relates to the active ingredient chlorothalonil.

Assessment mutagenicity

Chlorothalonil was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

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

Assessment carcinogenicity

Chlorothalonil caused at high dose levels an increased incidence of tumours in the following organ(s): Kidney, forestomach. The tumours seen with Chlorothalonil were caused through a non-genotoxic mechanism, which is not relevant at low doses.



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Ethanediol was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

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

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

Assessment developmental toxicity

Chlorothalonil did not cause developmental toxicity in rats and rabbits.

Ethanediol in animal studies the substance caused malformations when given at high doses.

Assessment STOT Specific target organ toxicity – single exposure

Chlorothalonil: May cause respiratory irritation.

Ethanediol: This information is not available.

Assessment STOT Specific target organ toxicity – repeated exposure

Chlorothalonil did not cause specific target organ toxicity in experimental animal studies.

Ethanediol: May cause damage to organs (Kidney) through prolonged or repeated exposure.

Aspiration hazard

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

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

No further toxicological information is available.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 (Oncorhynchus mykiss (rainbow trout)) 49ug/L

Exposure time: 96 h

The value mentioned relates to the active ingredient chlorothalonil.

LC50 (Lepomis macrochirus (Bluegill sunfish)) 62ug/L

Exposure time: 96 h



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Chronic toxicity to aquatic invertebrates
 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 (Ictalurus punctatus (Channel catfish)) 44ug/L
 Exposure time: 96 h
 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 (Daphnia magna (Water flea)): 70ug/L
 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 The value mentioned relates to the active ingredient chlorothalonil.

Toxicity to other organisms
 LD50 (Anas platyrhynchos (Mallard duck)) > 4,640 mg/kg
 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 (Anas platyrhynchos (Mallard duck)) > 10,000 mg/kg
 Exposure time: 8 d
 The value mentioned relates to the active ingredient chlorothalonil.
 LC50 (Colinus virginianus (Bobwhite quail)) > 10,000 mg/kg
 Exposure time: 8 d
 The value mentioned relates to the active ingredient chlorothalonil.

The value mentioned relates to the active ingredient chlorothalonil.
 Non-hazardous for bees.

12.2 Persistence and degradability

Biodegradability
 Chlorothalonil:
 Not rapidly biodegradable
 Ethanediol:
 rapidly biodegradable

Koc
 Chlorothalonil: Koc: 850

12.3 Bioaccumulative potential

Bioaccumulation
 The value mentioned relates to the active ingredient chlorothalonil.
 low

Bioaccumulation
 Chlorothalonil: Bioconcentration factor (BCF) < 100
 Does not bioaccumulate.
 Ethanediol:
 Does not bioaccumulate., The product itself has not been tested.

12.4 Mobility in soil

Mobility in soil
 Chlorothalonil: Moderately mobile in soils
 Ethanediol: Mobile in soils

12.5 Other adverse effects

Additional ecological information
 No further ecological information is available.

SECTION 13. DISPOSAL CONSIDERATIONS

Triple-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

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not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Do not burn empty containers or product.

SECTION 14. TRANSPORT INFORMATION

ADG

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

AU01: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in;

- a) packagings that do not incorporate a receptacle exceeding 500 kg(L); or
- b) IBCs

IMDG

UN number	3082
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. (CHLOROTHALONIL SOLUTION)

IATA

UN number	3082
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. (CHLOROTHALONIL SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 81269

SUSMP classification (Poison Schedule)



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Schedule 6 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Reserve® and Stressgard® are Registered Trademarks of the Bayer Group.

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)
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

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	working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

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.

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