

MATERIAL SAFETY DATA SHEET



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STRIKER 500 SC SELECTIVE HERBICIDE BY SANONDA

1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

Product Name: STRIKER 500 SC Selective Herbicide by Sanonda
Product Use: For the control of weeds in asparagus, bananas, cereals, citrus, coffee, commercial and industrial areas, cotton, lucerne, lupins, pawpaws, perennial grass seed crops, pineapples, pulse crops, rights-of-way, sugar cane, vineyards.
Supplier: Sanonda (Australia) Pty Ltd
ACN: 059 813 973
Street Address: Suite 822, St Kilda Rd Towers, No. 1 Queens Rd, Melbourne, VIC 3004
Telephone: 03 9863 8081
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Emergency phone number: 03 9863 8081

2. HAZARD IDENTIFICATION

Statement of Hazardous Nature

This product is classified as: Hazardous according to the criteria of ASCC Australia. Not subject to the ADG Code when transported by Road and Rail (ADG 7, Special Provision U01).

Risk Phrases:

R48/22. Harmful: danger of serious damage to health by prolonged exposure if swallowed.

Safety Phrases:

S20. When using, do not eat or drink.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS No	Concentration , %	TWA(mg/m ³)	STEL(mg/m ³)
Diuron	330-54-1	50	10	Not set
Ethylene glycol	107-21-1	4	60	120
Other non-hazardous ingredients	Secret	Balance	Not set	Not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and

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should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

4. FIRST AID MEASURES

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

Inhalation:

First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact:

No specific health data is available for this product. If any unusual symptoms become evident, or if in doubt, contact a Poisons Information Centre or a doctor.

Eye Contact:

No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

Ingestion:

If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

SYMPTOM

Some of the symptoms of diuron poisoning includes Methemoglobinemia, Eye irritation, Skin irritation, Nose irritation, Throat irritation.

Advice to doctor: No specific antidotes. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Fire and Explosion Hazards:

There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

This product is likely to decompose only after heating to dryness, followed by further strong heating.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media:

Preferred extinguishing media are carbon dioxide, dry chemical, foam, water fog.

Fire Fighting:

When fighting fires involving significant quantities of this product, wear a splash suit complete with self contained breathing apparatus.

Flash point:

Does not burn.

Upper Flammability Limit:

Does not burn.

Lower Flammability Limit:

Does not burn.

Autoignition temperature:

Not applicable - does not burn.

Flammability Class:

Does not burn.

6. ACCIDENTAL RELEASE MEASURES

Accidental release:

In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Suitable materials for protective clothing include rubber, PVC. Stop leak if safe to do so, and contain spill. Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike

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to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Full details regarding disposal of used containers, spillage and unused material may be found on the label. If there is any conflict between this MSDS and the label, instructions on the label prevail. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

7. HANDLING AND STORAGE

Handling:

Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage:

Make sure that containers of this product are kept tightly closed. Keep containers of this product in a well ventilated area. Make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10. Some liquid preparations settle or separate on standing and may require stirring before use.

Check packaging - there may be further storage instructions on the label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment:	AS/NZS 1715
Protective Gloves:	AS 2161,
Occupational Protective Clothing:	AS/NZS 4501 set 2008,
Industrial Eye Protection:	AS1336 and AS/NZS 1337
Occupational Protective Footwear:	AS/NZS2210

	SWA Exposure Limits	TWA (mg/m³)	STEL (mg/m³)
Diuron	10	not set	
Ethylene glycol	60	120	

The ADI for Diuron is set at 0.006mg/kg/day. The corresponding NOEL is set at 0.625mg/kg/day. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Sept 2006.

Ventilation:

No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that dusts are minimised.

Eye Protection:

Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection:

The information at hand indicates that this product is not harmful and that normally no special skin protection is necessary. However, we suggest that you routinely avoid contact with all chemical products and that you wear suitable gloves (preferably elbow-length) when skin contact is likely.

Protective Material Types:

There is no specific recommendation for any particular protective material type.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Description & colour:	Thick white pasty liquid.
Odour:	Mild unspecific odour.
Boiling Point:	Diuron melts at 158°C.
Freezing/Melting Point:	Not applicable.
Volatiles:	Not volatile.
Vapour Pressure:	Negligible at 25°C.
Vapour Density:	1.10-1.13.
Specific Gravity:	No data.
Water Solubility:	Forms suspension in water.
pH:	7.5-8.5 (1% in water)

10. STABILITY AND REACTIVITY

Reactivity:

This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid:

This product should be kept in a cool place, preferably below 30°C. Containers should be kept dry.

Incompatibilities:

Strong oxidising agents.

Fire Decomposition:

Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds, and under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas. Hydrogen chloride gas, other compounds of chlorine. Water. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death. Hydrogen cyanide poisoning signs and symptoms are weakness, dizziness, headache, nausea, vomiting, coma, convulsions, and death. Death results from respiratory arrest.

Polymerisation:

This product will not undergo polymerisation reactions.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (chlorsulfuron)

Oral

Acute oral LD50 for male rats: 3400 mg/kg.

Skin and eye

Acute percutaneous LD50 for rabbits >2000 mg/kg (80%DF). Mild eye irritation (WP formulation); non-irritating and non-sensitising to intact skin (50%aqueous paste).

Inhalation

LC50 (4 h) for rats >5 mg/l air.

EFFECTS OF AUTE EXPOSURE

Inhalation

Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

Skin Contact

Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

Eye Contact

Available data shows that this product is not harmful. However product may be irritating to eyes, but is unlikely to cause anything more than mild transient discomfort.

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Ingestion

Available data shows that this product is harmful, but symptoms are not available. This product is unlikely to cause any irritation problems in the short or long term.

EFFECTS OF CHRONIC EXPOSURE

CHRONIC TOXICITY

Male rats given extremely high doses of diuron over a two-week period showed changes in their spleen and bone marrow. Other chronic effects attributed to moderate to high doses of the pesticide over time included changes in blood chemistry, increased mortality, growth retardation, abnormal blood pigment, and anemia. When fed small amounts of diuron in food for two years, animal species showed no adverse effects.

Reproductive Effects

Daily low doses of diuron fed to female rats through three successive generations (pregnancies) caused no effects except on body weight of offspring which significantly decreased in the second and third litters. The fertility rate remained unaffected.

Teratogenic Effects

Diuron, administered to pregnant rats on days 6 through 15 of gestation, produced no birth defects in the offspring at doses of up to 125 mg/kg. Moderate doses of 250 mg/kg caused wavy ribs, extra ribs and delayed bone formation. There were also weight decreases in offspring at 500 mg/kg. There was no increase in the severity of the rib deformation at this higher dose.

Pregnant mice given very high doses of diuron (nearly 2,000 mg/kg) exhibited reproductive and embryotoxic effects. Developmental effects were found in their offspring.

Mutagenic Effects

The majority of tests have shown that diuron does not produce mutations in animal cells or in bacterial cells. It is likely that, at levels of exposure normally encountered in the environment, diuron would not pose a mutagenic threat to humans.

Carcinogenic Effects

Limited evidence indicates that diuron, at low exposure levels, does not cause cancer in rats. There is no evidence to suggest it causes cancer in humans.

Organ Toxicity

Low doses of diuron over extended periods of time can cause enlargement to the liver and the spleen. The compound does not cause significant irritation to intact skin, and in test animals does not cause skin sensitization.

12. ECOLOGICAL INFORMATION

ECOTOXICITY

This product is biodegradable. It will not accumulate in the soil or water or cause long term problems.

Effects on birds:

Diuron is slightly toxic to birds. In bobwhite quail, the dietary LC50 is 1730 ppm. In Japanese quail and ring-necked pheasant, it is greater than 5000 ppm. The LC50 is approximately 5000 ppm in mallard ducks.

Effects on aquatic organisms:

The LC50 (48 hour) values for Diuron range from 4.3 mg/L to 42 mg/L in fish, and range from 1 mg/L to 2.5 mg/L for aquatic invertebrates. The LC50 (96-hour) is 3.5 mg/L for rainbow trout. Thus, Diuron is moderately toxic to fish and highly toxic to aquatic invertebrates.

Effects on other organisms:

Diuron is non-toxic to bees.

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ENVIRONMENTAL FATE

Breakdown in soil and groundwater:

Diuron is moderately to highly persistent in soils. Residue half-lives are from 1 month to 1 year. Some pineapple fields contained residues 3 years after the last application. Mobility in the soil is related to organic matter and to the type of the residue. The metabolites are less mobile than the parent compound. In California, Diuron has been found in groundwater in the 2 to 3 ppb range. It has also been found in Ontario groundwater where it has been linked with land applications.

Breakdown in water:

Diuron is relatively stable in neutral water. Microbes are the primary agents in the degradation of Diuron in aquatic environments.

Breakdown in vegetation:

Diuron is readily absorbed through the root system of plants and less readily through the leaves and stems.

13. DISPOSAL CONSIDERATIONS

Disposal:

Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area. Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/> where you will find contact details for your area.

14. TRANSPORT INFORMATION

Not subject to the ADG Code when transported by Road and Rail. (ADG 7, Special Provision AU01).

ADG Code:	3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazchem Code:	3Z
Special Provisions:	179, 274, AU01
Limited quantities:	ADG 7 specifies a Limited Quantity value of 5 L for this class of product.
Dangerous Goods Class:	Class 9: Miscellaneous Dangerous Goods.
Packaging Group:	III
Packaging Method:	P001, IBC03, LP01

Class 9 Miscellaneous Dangerous Goods shall not be loaded in the same vehicle or packed in the same freight container with Dangerous Goods of Class 1 (Explosives).

15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are found in the public AICS Database. The following ingredient: Chlorsulfuron, is mentioned in the SUSMP.

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16. OTHER INFORMATION

This MSDS contains only safety-related information. For other data see product literature.

All due care and skill, so far as practicable, has been applied in the preparation and collation of the information in this MSDS. Each user of the Product named in this MSDS should read and consider the information contained in this MSDS in the context of how the Product will be stored, handled, used or applied in the workplace. In all circumstances, it is the responsibility of the user of the Product to ensure that they have sought out the relevant safety data appropriate to their particular situation. Nothing contained in this MSDS shall be construed as a representation or recommendation to the user about the suitability or otherwise of the Product named in this MSDS for the user's particular situation. If the user requires any clarification or further information, the user should contact Sanonda (Australia) Pty Ltd.

CONTACT POINT:

Sanonda (Australia) Pty Ltd
Suite 822, St Kilda Road Towers,
No.1 Queens Road, Melbourne, VIC 3004
Telephone: 03 9863 8081
Facsimile: 03 9863 8083

National Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia)

Please read all labels carefully before using product.