MATERIAL SAFETY DATA SHEET

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SANONDA
(AUSTRALIA) PTY LTD

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 Code: 7095
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: 053 813 973
Street Address: Suite 822, St Kilda Rd Towers, No. 1 Queens Rd, Melbourne, VIC 3004
Telephone: 03 98638081
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2. HAZARD IDENTIFICATION

GHS Classification

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS). Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Skin corrosion/irritation	Category 2
Carcinogenicity	Category 2
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category 1

SIGNAL WORD

Warning

Label elements

Exclamation mark

Health hazard

Environment

Hazard statements

H315 - Causes skin irritation
H320 - Causes eye irritation
H351 - Suspected of causing cancer
H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Do not get in eyes, on skin, or on clothing
Wash face, hands and any exposed skin thoroughly after handling
Avoid release to the environment
Use personal protective equipment as required

Precautionary Statements - Response

IF exposed:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water

If skin irritation occurs: Get medical advice/attention

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

In case of fire: Use dry chemical, CO_2, water spray or regular foam to extinguish Absorb spillage to prevent material damage

Precautionary Statements - Storage

Protect from sunlight Store in a dry place.
Store in a closed container
Store in a well-ventilated place.
Keep cool

Precautionary Statements - Disposal

Refer to manufacturer/supplier for information on disposal/recovery/recycling

Other hazards which do not result in classification

Poisons Schedule (SUSMP).

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

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 incudes Methemoglobinemia, Eye irritation, Skin irritation, Nose irritation, Throat irritation.

Advice to doctor:

No specific antidotes. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media: No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical：Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous combustion products：Carbon oxides. Nitrogen oxides.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters： Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Avoid contact with skin and eyes.

Wear protective gloves/protective clothing and eye/face protection.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Keep out of waterways. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment:

Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal. Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up:

Pick up and transfer to properly labelled containers

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling:

Handle in accordance with good industrial hygiene and safety practice.

General hygiene considerations Avoid contact with skin, eyes, and clothing. Take off contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Protect from direct sunlight. This material is a Scheduled Poison and must be stored, maintained and used in accordance with the relevant regulations.

Incompatible materials:

Strong acids. Strong bases. Strong oxidizing agents.

Poisons Schedule (SUSMP) : 6.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

Exposure Limits:

No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Ethylene glycol (vapour): 8hr TWA = 52 mg/m3 (20 ppm), 15 min STEL = 104 mg/m^3 (40 ppm), Sk.

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

`Sk' (skin) Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. The exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

Engineering controls:

Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin and body protection:
Wear suitable protective clothing.
Hand protection:
Wear suitable gloves.
Respiratory protection:
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Environmental exposure controls:
No information available.

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

Toxicity:

Acute toxicity:

Diuron is classified as not harmful to mammals.
The oral LD_{50} in rats is 3400 mg/kg.
The dermal LD_{50} is greater than 2000 mg/kg.
Some signs of central nervous system depression have been noted at high levels of diuron exposure. For humans, the only reported case of acute, oral exposure to the herbicide

produced no significant symptoms or toxicity.

Chronic toxicity:

Male rats given extremely high doses of diuron over a 2-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 anaemia. When fed small amounts of diuron in food for 2 years, animal species showed no adverse effects.

Reproductive effects:

Daily low doses of diuron fed to female rats through three successive generations caused significantly decreased body weight of offspring in the second and third litters. The fertility rate remained unaffected. It is unlikely that diuron will cause reproductive effects in humans at expected levels of exposure.

Teratogenic effects:

Diuron is teratogenic at high doses. Administered to pregnant rats on days 6 through 15 of gestation, it produced no birth defects in the offspring at doses of up to 125 mg/kg/day. However, doses of 250 mg/kg/day caused wavy ribs, extra ribs, and delayed bone formation. There were also weight decreases in offspring at 500 mg/kg/day. There was no increase in the severity of the rib deformation at this higher dose. Pregnant mice given very high doses of diuron (nearly 2000 mg/kg/day) exhibited reproductive and embryotoxic effects. Developmental effects were found in their offspring.

Mutagenic effects:

Diuron does not appear to be mutagenic. The majority of tests have shown that diuron does not produce mutations in animal cells or in bacterial cells.

Carcinogenic effects:

Limited evidence indicates that low level exposures to diuron does not cause cancer.

Organ toxicity:

Low doses of diuron over extended periods of time can cause enlargement to the liver and the spleen.

Fate in humans and animals:

Diuron is excreted in the faeces and urine of test animals. Breakdown of the compound is similar in animals, plants, and soil. Cows fed very low doses of diuron in their diets had small amounts of residues in whole milk. Cattle fed small amounts accumulated low levels of diuron in fat and muscle, liver, and kidney.

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 LC_{50} is 1730 ppm. In Japanese quail and ring-necked pheasant, it is greater than 5000 ppm. The LC_{50} is approximately 5000 ppm in mallard ducks.

Effects on aquatic organisms:

The LC_{50} (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 LC_{50} (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.

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

A**DG Code:** This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

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.

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 98638081 **Facsimile:** 03 98638083
National Poisons Information Centre: Dial 13 11 26 (from anywhere in Australia)
Please read all labels carefully before using product.