Dow AgroSciences

Material Safety Data Sheet

Dow AgroSciences (Australia) Ltd.

Product Name: Stinger™ Herbicide **Issue Date:** 28.10.2013

Dow AgroSciences (Australia) Ltd. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. Product and Company Identification

Product Name
Stinger™ Herbicide

Identified uses
Plant Protection Product

COMPANY IDENTIFICATION
Dow AgroSciences (Australia) Ltd.
A Subsidiary of The Dow Chemical Company
ABN 24 003 771 659
Level 5
20 Rodborough Rd
Frenchs Forest, NSW 2086
Australia

Customer Information Number: 1800-700-096
auscustomerservice@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 61 3 9663 2130
Local Emergency Contact: 1800 033 882
For advice, contact a doctor (at once) or the Australian Poisons Information Centre: 131 126

In case of a transport emergency only dial 000

2. Hazards Identification

HAZARDOUS SUBSTANCES CLASSIFICATION: Not classified as hazardous to health according to the criteria of the National Occupational Health and Safety Commission, Australia

3. Composition Information

Component	Amount	Classification:	CAS #
Aminopyralid Potassium	44.35 %	Not classified.	566191-87-5

metsulfuron-methyl; 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl) benzoate	29.91 %	N: R50, R53	74223-64-6
Kaolin	< 10.0 %	Not classified.	1332-58-7
Sodium carbonate	< 5.0 %	Not classified.	497-19-8
Titanium dioxide	< 1.0 %	Not classified.	13463-67-7

See Section 16 for full text of R-phrases.

4. First Aid Procedures

Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Inhalation: Move person to fresh air; if effects occur, consult a physician.
Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.
Eye Contact: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be immediately available.
Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.
Skin contact may aggravate preexisting dermatitis.

5. Fire Fighting Measures

Suitable extinguishing media

Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers.

Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating.
Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur.

Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. Dust explosion hazard may result from forceful application of fire extinguishing agents. Move container from fire area if this is possible without hazard. Contain fire water run-off if possible.

Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.
Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.

HAZCHEM CODE: 2X

See Section 9 for related Physical Properties

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling, for additional precautionary measures. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.
Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. Handling and Storage

Handling
General Handling: Keep out of reach of children. Good housekeeping and controlling of dusts are necessary for safe handling of product. Do not swallow. Avoid breathing dust or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Use with adequate ventilation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Storage
Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

8. Exposure Controls / Personal Protection

Exposure Limits

Component	List	Type	Value
Sodium carbonate	Dow IHG	TWA	10 mg/m3
Kaolin	ACGIH	TWA Respirable fraction.	2 mg/m3 The value is for particulate matter containing no asbestos and <1% crystalline silica.
	AU OEL	TWA Inspirable dust.	10 mg/m3
Titanium dioxide	ACGIH	TWA	10 mg/m3

AU OEL	TWA Inspirable dust.	10 mg/m3

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Personal Protection

Eye/Face Protection: Use safety glasses (with side shields).
Skin Protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.
Hand protection: Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Polyvinyl chloride ("PVC" or "vinyl"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove is recommended to prevent contact with the solid material. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Respiratory Protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, in dusty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.
Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Other Information

Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:
AS/NZS 1336: Recommended practices for eye protection in the industrial environment.
AS/NZS 1337: Eye protectors for industrial applications.
AS/NZS 1715: Selection, use and maintenance of respiratory protective devices.
AS/NZS 2161: Occupational protective gloves.
AS/NZS 2210: Occupational protective footwear.
AS 2919: Industrial clothing.

9. Physical and Chemical Properties

Appearance	
Physical State	Granules.
Color	Brown
Odor	Mild
Odor Threshold	No test data available
pH	7.34 (@ 1 %) *pH Electrode*
Melting Point	No test data available
Freezing Point	Not applicable
Boiling Point (760 mmHg)	Not applicable.
Flash Point - Closed Cup	Not applicable

Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammable Limits In Air	**Lower**: Not applicable **Upper**: Not applicable
Vapor Pressure	Not applicable
Vapor Density (air = 1)	Not applicable
Specific Gravity (H2O = 1)	No test data available
Solubility in water (by weight)	No test data available
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.
Autoignition Temperature	Not applicable
Decomposition Temperature	No test data available
Bulk Density	520 kg/m3 @ 23.3 °C

10. Stability and Reactivity

Reactivity
No dangerous reaction known under conditions of normal use.
Chemical stability
Thermally stable at recommended temperatures and pressures.

Possibility of hazardous reactions
Polymerization will not occur.
Conditions to Avoid: Product decomposes above melting temperature. Generation of gas during decomposition can cause pressure in closed systems.

Incompatible Materials: None known.
Hazardous decomposition products
Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. Toxicological Information

Acute Toxicity
Ingestion
Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
As product: LD50, rat, female > 5,000 mg/kg
Aspiration hazard
Based on physical properties, not likely to be an aspiration hazard.
Dermal
Prolonged skin contact is unlikely to result in absorption of harmful amounts.
As product: LD50, rat, male and female > 5,000 mg/kg
Inhalation
No adverse effects are anticipated from single exposure to dust. Based on the available data, respiratory irritation was not observed.
As product: LC50, 4 h, Dust, rat, male and female > 5.12 mg/l
No deaths occurred at this concentration.
Eye damage/eye irritation
May cause slight eye irritation. Corneal injury is unlikely.
Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin.
Sensitization

Skin
Did not demonstrate the potential for contact allergy in mice.
Respiratory
No relevant data found.

Repeated Dose Toxicity
For the active ingredient(s): Metsulfuron-methyl. Based on available data, repeated exposures are not anticipated to cause significant adverse effects. For similar active ingredient(s). Aminopyralid. In animals, effects have been reported on the following organs: Gastrointestinal tract. Based on information for component(s): In animals, effects have been reported on the following organs: Kidney. Liver.

Chronic Toxicity and Carcinogenicity
For the active ingredient(s): Did not cause cancer in laboratory animals.

Developmental Toxicity
For the active ingredient(s): Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive Toxicity
For the active ingredient(s): In animal studies, did not interfere with reproduction.

Genetic Toxicology
In vitro genetic toxicity studies were negative.

12. Ecological Information

Toxicity
Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species). Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Fish Acute & Prolonged Toxicity
LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 h: > 120 mg/l
Aquatic Invertebrate Acute Toxicity
EC50, Daphnia magna (Water flea), static test, 48 h, immobilization: > 100 mg/l
Aquatic Plant Toxicity
ErC50, Pseudokirchneriella subcapitata (green algae), static test, Growth rate inhibition, 72 h: 1.49 mg/l
Toxicity to Above Ground Organisms
LC50, Colinus virginianus (Bobwhite quail): > 2,250 mg/kg
oral LD50, Apis mellifera (bees): > 214 micrograms/bee
contact LD50, Apis mellifera (bees): > 200 micrograms/bee

Persistence and Degradability

Data for Component: **Aminopyralid Potassium**
For similar active ingredient(s). Aminopyralid. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.
Data for Component: **metsulfuron-methyl; 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl) benzoate**
No appreciable biodegradation is expected.
Data for Component: **Kaolin**
Biodegradation is not applicable.
Data for Component: **sodium carbonate**
Biodegradation is not applicable.
Data for Component: **Titanium dioxide**
Biodegradation is not applicable.

Bioaccumulative potential

Data for Component: **Aminopyralid Potassium**

Bioaccumulation: For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Data for Component: **metsulfuron-methyl; 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl) benzoate**

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.18

Data for Component: **Kaolin**

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: **sodium carbonate**

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Data for Component: **Titanium dioxide**

Bioaccumulation: Partitioning from water to n-octanol is not applicable.

Mobility in soil

Data for Component: **Aminopyralid Potassium**

Mobility in soil: For similar active ingredient(s)., Aminopyralid., Potential for mobility in soil is very high (Koc between 0 and 50).

Data for Component: **metsulfuron-methyl; 2-(4-methoxy-6-methyl-1,3,5-triazin-2-ylcarbamoylsulfamoyl) benzoate**

Mobility in soil: No data available.

Data for Component: **Kaolin**

Mobility in soil: No relevant data found.

Data for Component: **sodium carbonate**

Mobility in soil: Relevant data not available.

Data for Component: **Titanium dioxide**

Mobility in soil: No data available.

13. Disposal Considerations

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. Transport Information

ADG

Not dangerous goods under the ADG code when being transported in IBCs or other receptacles < 500 L (kg), (Special Provision AU01).

IMDG

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S.
Technical Name: Metsulfuron-methyl
Hazard Class: 9 **ID Number:** UN3077 **Packing Group:** PG III
EMS Number: F-A,S-F
Marine pollutant.: Yes

ICAO/IATA
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S.
Technical Name: Metsulfuron-methyl
ID Number: UN3077 **Packing Group:** PG III
Cargo Packing Instruction: 956
Passenger Packing Instruction: 956
Environmental Hazard: Yes

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. Regulatory Information

APVMA Approval Number: 69370
Poison Schedule: S6

16. Other Information

Risk-phrases in the Composition section

R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Revision

Identification Number: 1027427 / 4069. Version: New
DAS Code: GF-2361
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

N/A	Not available
W/W	Weight/Weight
OEL	Occupational Exposure Limit
STEL	Short Term Exposure Limit
TWA	Time Weighted Average
ACGIH	American Conference of Governmental Industrial Hygienists, Inc.
DOW IHG	Dow Industrial Hygiene Guideline
WEEL	Workplace Environmental Exposure Level
HAZ_DES	Hazard Designation

Dow AgroSciences (Australia) Ltd. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.