SANONDA
(AUSTRALIA) PTY LTD

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SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1. Product identifiers

Product name : PARTI-SAN 600 Herbicide

Active ingredient : Metsulfuron methyl

Product code : 7091

1.2. Other means of identification

IUPAC name:

Paraquat: Methyl 2- { [(4-methoxy-6-methyl-1,3,5-triazin-2-yl)carbamoyl]sulfamoyl}benzoate.

1.3. Recommended use of the chemical and restrictions on use

For the control of gorse, broom, blackberry and other scrub and broadleaf weeds in forest site preparation, waste areas and pasture.

1.4. Details of the supplier of the safety data sheet

Sanonda (Australia) Pty Ltd (ABN 23 059 813 973)

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Victoria 3004 Australia.

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1.4. Emergency telephone number

Emergency number : +61 3 9863 8081

SECTION 2: Hazards identification

Statement of Hazardous Nature

This product is classified as: Not classified as hazardous according to the criteria of SWA.

Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

Note: differing Hazard Criteria of SWA and TGA may result in seeming inconsistencies between SDS and label.

SUSMP Classification: None allocated.

ADG Classification: None allocated. Not a Dangerous Good according to Australian Dangerous Goods (ADG) Code, IATA or IMDG/IMSBC criteria.

UN Number: None allocated

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GHS Signal word: NONE

PREVENTION

P261: Avoid breathing dusts.

P262: Do not get in eyes, on skin, or on clothing.

P281: Use personal protective equipment as required.

RESPONSE

P335: Brush off loose particles from skin.

P362: Take off contaminated clothing and wash before reuse.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P309+P311 If exposed or if you feel unwell: Call a POISON CENTRE or doctor/physician.

P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog. Water fog or fine spray is the preferred medium for large fires.

STORAGE

P410: Protect from sunlight.

P402+P404: Store in a dry place. Store in a closed container.

P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Emergency Overview

Physical Description & colour: Off-white granules

Odour: No odour.

Major Health Hazards: Systemic poisoning by sulfonylurea based compounds is unlikely, unless large quantities have been ingested. No accounts of poisoning by Metsulfuron-methyl are currently available.

No significant risk factors have been found for this product.

SECTION 3: Composition/information on ingredients

Ingredients	CAS No	Concentration, g/L	TWA (mg/m^3)	STEL (mg/m^3)
Metsullfuron methyl	74223-64-6	600	not set	not set
Other non hazardous ingredients	None	to 1 kg	not set	not set

SECTION 4: First aid measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

Inhalation:

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

Skin Contact:

Gently brush away excess particles. Irritation is unlikely. However, if irritation does occur, flush with lukewarm, gently flowing water for 5 minutes or until chemical is removed.

Eye Contact:

Quickly and gently brush particles from eyes. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed, while holding the eyelid(s) open. Obtain medical advice immediately if irritation occurs. Take special care if exposed person is wearing contact lenses.

Ingestion:

If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

SECTION 5: Firefighting measures

Fire and Explosion Hazards:

The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are 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:

Not combustible. Use extinguishing media suited to burning materials. Water fog or fine spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

Fire Fighting:

If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is liquid-tight chemical protective clothing and breathing apparatus.

Flash point:

Combustible solid.

SECTION 6: Accidental release measures

Accidental release:

Minor spills do not normally need any special cleanup measures. 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 no specific manufacturer recommendations. Use impermeable gloves with care. Eye/face protective equipment should comprise, as a minimum, protective glasses and, preferably, goggles. If there is a significant chance that dusts are likely to build up in cleanup area, we recommend that you use a suitable dust mask. Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. Consider vacuuming if appropriate. Recycle

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containers wherever possible after careful cleaning. Refer to product label for specific instructions. 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 SDS 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.

SECTION 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 SDS 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:

This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

SECTION 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**.
The ADI for Metsulfuron methyl is set at 0.01mg/kg/day. The corresponding NOEL is set at 1mg/kg/day. ADI means Acceptable Daily Intake; NOEL means No-observable-effect-level. Data from Australian ADI List, June 2014.
No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation:

This product should only be used where there is ventilation that is adequate to keep exposure below

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the TWA levels. If necessary, use a fan.

Eye Protection:

Eye protection such as protective glasses or goggles is recommended when this product is being used.

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 data that enables us to recommend any type except that it should be impermeable.

Respirator:

If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable dust mask.

SECTION 9: Physical and chemical properties

Physical Description & colour: Off-white granules.

Odour: odourless.

Vapour Pressure: 2.37 kPa at 20°C (water vapour pressure).

Bulk density: 0.5 at 20°C.

Water Solubility: Suspensible in water.

Evaporation Rate: As for water.

pH: 4.5-6.5(1% in water)

SECTION 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:

Protect this product from light. Store in the closed original container in a dry, cool, wellventilated area out of direct sunlight.

Incompatibilities:

Strong oxidising agents.

Fire Decomposition:

Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke.
Water is also formed. May form nitrogen and its compounds, and under some circumstances, oxides of nitrogen.

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Occasionally hydrogen cyanide gas in reducing atmospheres. May form oxides of sulfur (sulfur dioxide is a respiratory hazard) and other sulfur compounds. Most will have a foul odour. May form oxides of phosphorus and other phosphorus compounds. May form hydrogen chloride gas, other compounds of chlorine. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation:

Polymerisation reactions are unlikely; they are not expected to occur.

SECTION 11: Toxicological information

Toxicity data

Acute Toxicity:

Metsulfuron methyl has very low toxicity in mammals. LD_{50} is > 5,000 mg/kg in rats. It has low dermal toxicity in tests with rabbits, with an LD50 > 2,000 mg/kg, and low inhalation toxicity in rats, with a median lethal concentration in air of greater than 5 mg/L air. Moderate but reversible eye irritation has been seen in rabbits, and mild skin irritation has been observed in guinea pigs. No skin sensitization has been observed in guinea pigs.

Chronic Toxicity:

A 2-year feeding study in rats resulted in a No Observable Effects Level (NOEL) of 25.0 mg/kg/day (or 500 ppm in feed), based on decreased body weights seen at 250 mg/kg/day (5,000 ppm) which was the highest dose tested. EPA has based its reference dose (0.25 mg/kg/day) on this study.

Reproductive Effects:

Multigenerational studies in rats did not result in any reproductive effects at the highest doses tested of 250 mg/kg/day.

Teratogenic Effects:

Metsulfuron-methyl did not cause developmental abnormalities to offspring of rats and rabbits fed 1000 mg/kg/day and 700 mg/kg/day respectively during gestation. These doses represent the highest dose tested for each experiment.

Mutagenic Effects:

The weight of evidence presented by a battery of tests to measure mutagenicity and other adverse effects on DNA indicates that Metsulfuron-methyl is neither mutagenic nor genotoxic.

Carcinogenic Effects:

Negative for rats and mice in laboratory tests, but studies may not have been at maximum tolerated dose.

Organ Toxicity:

Metsulfuron-methyl is a moderate eye irritant.

Fate in Humans and Other Animals:

The chemical is broken down quickly and eliminated from the body. In tests with radio labelled Metsulfuron-methyl in rats, the excretion half-lives ranged from 9 to 16 hours and 23 to 29 hours for rats administered low and high doses, respectively. It did not bioaccumulate in fish.

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Classification of Hazardous Ingredients

- Hazardous to the aquatic environment (acute) - category 1
- Hazardous to the aquatic environment (chronic) - category 1

Potential Health Effects

Inhalation:

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

Long Term exposure: Long term inhalation of high amounts of any nuisance dust may overload lung clearance mechanism. No data for health effects associated with long term inhalation.

Skin Contact:

Short term exposure: Available data indicates that this product is not harmful. It should present no hazards in normal use. In addition product is unlikely to cause any discomfort in normal use.

Long Term exposure: No data for health effects associated with long term skin exposure.

Eye Contact:

Short term exposure: This product is believed to be mildly irritating, to eyes, but is unlikely to cause anything more than mild transient discomfort.

Long Term exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short term exposure: Significant oral exposure is considered to be unlikely. However, this product may be irritating to mucous membranes but is unlikely to cause anything more than transient discomfort.

Long Term exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: No significant ingredient is classified as carcinogenic by SWA.

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Metsulfuron-methyl is highly toxic to green algae and aquatic plants, but it is considered as non-toxic to fish, aquatic invertebrates, soil micro- and macroorganisms, birds, mammals and insects.

The measured ecotoxicity of the active ingredient metsulfuron-methyl is:

- Fish — Rainbow trout (Salmo gairdneri).....96-h LC_{50}: > 150 mg/l 21-day NOEC: 68 mg/l
- Invertebrates — Daphnids (Daphnia magna).....48-h LC_{50}: > 150 mg/l 21-day NOEC: 150 mg/l
- Algae — Green algae (Selenastrum capricornutum) ...72-h IC_{50}: 0.045 mg/l
- Aquatic plants — Duckweed (Lemna gibba)..... EC_{50}: 0.36 µg/l

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- Earthworms *Eisinia foetida* ....LC_{50}: > 1000 mg/kg dry soil
- Birds Mallard duck..... LD_{50}: > 2510 mg/kg
- Insects Bees..... LD_{50}, topical: > 25 µg/bee
  LD_{50}, oral: > 44.3 µg/bee

Mobility:

Under normal conditions metsulfuron-methyl is mobile in soil. It has a potential for leaching to groundwater.

Breakdown of Chemical in Soil and Groundwater:

The breakdown of Metsulfuron-methyl in soils is largely dependant on soil temperature, moisture content, and pH. The chemical will degrade faster under acidic conditions, and in soils with higher moisture content and higher temperature. The chemical has a higher mobility potential in alkaline soils than in acidic soils, as it is more soluble under alkaline conditions. Metsulfuron-methyl is stable to photolysis, but will break down in ultraviolet light. Half-life estimates for Metsulfuron-methyl in soil are wide ranging from 14 - 180 days, with an overall average of reported values of 30 days. Reported half-life values (in days) for soil include: clay - 178; sandy loam - 102; clay loam - 70; 14-28; 14-105; silty loam - 120-180.

Breakdown of Chemical in Surface Water:

The dissipation time for Metsulfuron-methyl was investigated in a mixed wood/boreal forest lake. The DT50 or length of time required for half of the material to dissipate in water was >84 days when high concentrations of Metsulfuron-methyl were applied, and 29.1 days at concentrations that might be expected if the chemical is applied for forestry uses. It is stable to hydrolysis at neutral and alkaline pHs, and has a half-life of 3 weeks at pH 5.0, 25°C and >30 days at 15°C.

Breakdown of Chemical in Vegetation:

Metsulfuron-methyl is rapidly taken up by plants at the roots and on foliage. The chemical is translocated throughout the plant, but is not persistent. It is broken down to non-herbicidal products in tolerant plants.

SECTION 13: Disposal considerations

Disposal:

This product may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to separate the contamination in some way. Only if neither of these options is suitable, we suggest that you contact a specialist disposal company to arrange disposal. Disposal by untrained personnel may cause a dangerous incident.

SECTION 14: Transport information

UN Number: This product is not classified as a Dangerous Good by ADG, IATA or IMDG/IMSBC criteria. No special transport conditions are necessary unless required by other regulations.

SECTION 15: REGULATORY INFORMATION

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AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.

SECTION 16. OTHER INFORMATION

Acronyms:

ADG Code

Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)

AICS

Australian Inventory of Chemical Substances

SWA

Safe Work Australia, formerly ASCC and NOHSC

CAS number

Chemical Abstracts Service Registry Number

Hazchem Code

Emergency action code of numbers and letters that provide information to emergency services especially firefighters

IARC

International Agency for Research on Cancer

NOS

Not otherwise specified

NTP

National Toxicology Program (USA)

R-**Phrase**

Risk Phrase

SUSMP

Standard for the Uniform Scheduling of Medicines & Poisons

UN Number

United Nations Number

This SDS 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 SDS. Each user of the Product named in this SDS should read and consider the information contained in this SDS 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 SDS shall be construed as a representation or recommendation to the user about the suitability or otherwise of the Product named in this SDS

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for the user's particular situation. If the user requires any clarification or further information, the user should contact Sanonda (Australia) Pty Ltd.

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

Please read all labels carefully before using product.

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