



Hussar® OD Selective Herbicide

Version 1 / AUS
102000011563

1/11
Revision Date: 05.10.2016
Print Date: 05.10.2016

SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Trade name Hussar® OD Selective Herbicide
Product code (UVP) 06352286

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

Use Herbicide

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.crop.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

Eye irritation: Category 2A
H319 Causes serious eye irritation.

Germ cell mutagenicity: Category 1
H340 May cause genetic defects.

Carcinogenicity: Category 1
H350 May cause cancer.

Aspiration hazard: Category 1
H304 May be fatal if swallowed and enters airways.

Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.

Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Hazard label for supply/use required.

Hazardous components which must be listed on the label:



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Iodosulfuron-methyl-sodium
Mefenpyr-diethyl
Solvent Naphtha (petroleum), light aromatic
Solvent Naphtha (petroleum), heavy aromatic

Signal word: Danger

Hazard statements

H319 Causes serious eye irritation.
H340 May cause genetic defects.
H350 May cause cancer.
H304 May be fatal if swallowed and enters airways.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/ physician.
P331 Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Iodosulfuron-methyl sodium salt/Mefenpyr-diethyl 100:300 g/l
Chemical nature Oil dispersion (OD)

Chemical Name	CAS-No.	Concentration [%]
Iodosulfuron-methyl-sodium	144550-36-7	8.80
Mefenpyr-diethyl	135590-91-9	26.50
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5	>= 25.00 - <= 30.00
Docusate sodium	577-11-7	>= 10.00 - <= 15.00
Solvent Naphtha (petroleum), light aromatic	64742-95-6	>= 5.00 - <= 10.00
Propylene carbonate	108-32-7	<= 0.50
Other ingredients (non-hazardous) to 100%		

SECTION 4. FIRST AID MEASURES



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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

General advice	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
Inhalation	Move the victim to fresh air and keep at rest. Oxygen or artificial respiration if needed. 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. If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth. Risk of product entering the lungs on vomiting after ingestion. To prevent aspiration of swallowed product, lay in stable position on one side.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms	Local: Skin, eye and mucous membrane irritation Systemic: Headache, Dizziness, Drowsiness, Nausea, Confusion, Cough, Rapid respiration, Breathing difficulties, Cyanosis, Fever
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4.3 Indication of any immediate medical attention and special treatment needed

Risks	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
Treatment	Initial treatment: symptomatic. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

SECTION 5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable	High volume water jet



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5.2 Special hazards arising from the substance or mixture	In the event of fire the following may be released:, Carbon monoxide (CO), Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride (HCl), Hydrogen iodide (HI), Cyanides
5.3 Advice for firefighters	
Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information	Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses. Whenever possible, contain fire-fighting water by diking area with sand or earth.
Hazchem Code	•3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions	Avoid contact with spilled product or contaminated surfaces. When dealing with a spillage do not eat, drink or smoke. Remove all sources of ignition. Keep unauthorized people away. Use personal protective equipment.
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6.2 Environmental precautions	Do not allow to get into surface water, drains and ground water. Inform appropriate authorities immediately if contamination occurs.
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6.3 Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.
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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.
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SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	Use only in area provided with appropriate exhaust ventilation.
Hygiene measures	Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt). After each day's use, wash gloves, face shield or goggles and contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers	Keep out of reach of children and animals. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight.
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Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Iodosulfuron-methyl-sodium	144550-36-7	1 mg/m3 (TWA)		OES BCS*
Mefenpyr-diethyl	135590-91-9	10 mg/m3 (TWA)		OES BCS*

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

8.2 Exposure controls

Respiratory protection

Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.
Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Material Nitrile rubber
Rate of permeability > 480 min
Glove thickness > 0.4 mm
Protective index Class 6
Directive Protective gloves complying with EN 374.

Eye protection

Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection

Wear standard coveralls and Category 3 Type 6 suit.
If there is a risk of significant exposure, consider a higher protective type suit.
Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently.
If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

General protective measures

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the above mentioned recommendations would apply.



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Engineering Controls

Advice on safe handling 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	Liquid
Colour	brown
Odour	aromatic
pH	7.0 - 9.0 at 10 % (23 °C) (deionized water)
Flash point	81 °C
Auto-ignition temperature	460 °C at 1,022.2 hPa
Density	ca. 1.13 g/cm ³ at 20 °C
Water solubility	dispersible
Partition coefficient: n-octanol/water	Iodosulfuron-methyl-sodium: log Pow: -0.7 Mefenpyr-diethyl: log Pow: 3.83 at 21 °C
Viscosity, dynamic	540 mPaxs at 20 °C Velocity gradient 20 /s 404 mPaxs at 20 °C Velocity gradient 100 /s 238 mPaxs at 40 °C Velocity gradient 20 /s 138 mPaxs at 40 °C Velocity gradient 100 /s
Viscosity, kinematic	122 mm ² /s at 40 °C
Surface tension	27.6 mN/m at 25 °C Determined in the undiluted form.
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.



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- 10.4 Conditions to avoid** Heat, flames and sparks.
Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** Strong oxidizing agents, Acids, Bases
- 10.6 Hazardous decomposition products** Thermal decomposition can lead to release of:
Hydrogen chloride (HCl)
Hydrogen iodide (HI)
Hydrogen cyanide (hydrocyanic acid)
Carbon oxides
Nitrogen oxides (NOx)
Sulphur oxides

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

- Acute oral toxicity** LD50 (Rat) > 5,000 mg/kg
- Acute inhalation toxicity** LC50 (Rat) > 2.81 mg/l
Exposure time: 4 h
Determined in the form of a respirable fine dust.
The value mentioned relates to the active ingredient iodosulfuron-methyl-sodium.

During intended and foreseen applications, no respirable aerosol is formed.
- Acute dermal toxicity** LD50 (Rat) > 4,000 mg/kg
- Skin irritation** No skin irritation (Rabbit)
- Eye irritation** Irritating to eyes (Rabbit)
- Sensitisation** Non-sensitizing (Guinea pig)
OECD Test Guideline 406, Buehler test

Assessment mutagenicity

Iodosulfuron-methyl-sodium was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Mefenpyr-diethyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Iodosulfuron-methyl-sodium was not carcinogenic in lifetime feeding studies in rats and mice.
Mefenpyr-diethyl was not carcinogenic in lifetime feeding studies in rats and mice.

Assessment toxicity to reproduction

Iodosulfuron-methyl-sodium did not cause reproductive toxicity in a two-generation study in rats.
Mefenpyr-diethyl did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Iodosulfuron-methyl-sodium did not cause developmental toxicity in rats and rabbits.
Mefenpyr-diethyl caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Mefenpyr-diethyl are related to maternal toxicity.

Assessment STOT Specific target organ toxicity – repeated exposure



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Iodosulfuron-methyl-sodium did not cause specific target organ toxicity in experimental animal studies.
Mefenpyr-diethyl did not cause specific target organ toxicity in experimental animal studies.

Aspiration hazard

May be fatal if swallowed and enters airways.

Information on likely routes of exposure

Inhalation of high concentrations of solvent vapors can cause nausea, vomiting, dizziness, drowsiness and incoordination.

May cause skin irritation. Prolonged skin contact may cause skin irritation and/or dermatitis.

Causes eye irritation.

Harmful if swallowed. Small amounts of the solvent in this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury.

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)) 7.75 mg/l Exposure time: 96 h
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 8.3 mg/l Exposure time: 48 h
Toxicity to aquatic plants	EC50 (Raphidocelis subcapitata (freshwater green alga)) 6.71 mg/l Growth rate; Exposure time: 72 h (Lemna gibba (gibbous duckweed)) 8.4 µg/l Growth rate; Exposure time: 7 d
Toxicity to other organisms	LD50 (Colinus virginianus (Bobwhite quail)) > 2,000 mg/kg The value mentioned relates to the active ingredient iodosulfuron-



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methyl-sodium.

12.2 Persistence and degradability

Biodegradability Iodosulfuron-methyl-sodium:
Not rapidly biodegradable
Mefenpyr-diethyl:
Not rapidly biodegradable

Koc Iodosulfuron-methyl-sodium: Koc: 45
Mefenpyr-diethyl: Koc: 625

12.3 Bioaccumulative potential

Bioaccumulation Iodosulfuron-methyl-sodium:
Does not bioaccumulate.
Mefenpyr-diethyl: Bioconcentration factor (BCF) 232
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Iodosulfuron-methyl-sodium: Mobile in soils
Mefenpyr-diethyl: Slightly mobile in soils

12.5 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13. DISPOSAL CONSIDERATIONS

Metal drums and plastic containers:
Triple or preferably pressure 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 not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.
Do not reuse container for any other purpose.

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. (IODOSULFURON-METHYL SODIUM, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.



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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. (IODOSULFURON-METHYL SODIUM, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC 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. (IODOSULFURON-METHYL SODIUM, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION)

SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994
Australian Pesticides and Veterinary Medicines Authority approval number: 61992

SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

SECTION 16. OTHER INFORMATION

Trademark information Hussar® is a Registered Trademark of the Bayer Group.

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.

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



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

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

END OF SDS