



# SAFETY DATA SHEET



## HUSSAR

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**Signal word:** Danger

### Hazard statements

H316 Causes mild skin irritation.  
H318 Causes serious eye damage.  
H410 Very toxic to aquatic life with long lasting effects.  
H421 Very toxic to the soil environment.

### Precautionary statements

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P391 Collect spillage.  
P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No other hazards known.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

#### Chemical nature

Water dispersible granules (WG)  
Iodosulfuron-methyl-sodium/mefenpyr-diethyl 5.0:15.0 % w/w

#### Hazardous components

Name	CAS-No.	Conc. [%]
Iodosulfuron-methyl-sodium	144550-36-7	5,00
Mefenpyr-diethyl	135590-91-9	15,30
Solvent Naphtha (petroleum), heavy aromatic, <1% naphthalene	64742-94-5	> 2,50 – < 25,00
Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt	68425-94-5	> 1,00 – < 20,00
Olefin sulphonate, sodium salt	68439-57-6	> 1,00 – < 5,00
Tetrapropylene benzene sulfonate, calcium salt	11117-11-6	> 1,00 – < 5,00
Silica, amorphe	7631-86-9	> 1,00
Kaolin	1332-58-7	> 1,00

#### Further information

Iodosulfuron-methyl-sodium	144550-36-7	M-Factor: 1.000 (acute)
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### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures

<b>General advice</b>	Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.
<b>Inhalation</b>	Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.
<b>Eye contact</b>	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. Call a physician or poison control center immediately.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately. Risk of product entering the lungs on vomiting after ingestion. Rinse mouth.

#### 4.2 Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	If large amounts are ingested, the following symptoms may occur: Headache, Nausea, Dizziness, Somnolence Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary oedema and pneumonitis. Inhalation may provoke the following symptoms: Cough, Shortness of breath, Cyanosis, Fever Symptoms and hazards refer to the solvent.
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#### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Risks</b>	Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.
<b>Treatment</b>	Treat symptomatically. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. In case of aspiration intubation and bronchial lavage should be considered. Monitor: kidney, liver and pancreas function. There is no specific antidote. Contraindication: derivatives of adrenaline.

Contact the National Poisons and Hazardous Chemicals Information center in Dunedin, PO Box 913, Dunedin. Phone 0800 POISON (0800 764 766).

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### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Unsuitable** High volume water jet

**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen iodide (HI), Carbon monoxide (CO), Sulphur oxides, Nitrogen oxides (NO<sub>x</sub>)

#### 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.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

#### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up** Use mechanical handling equipment. Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

**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.

**Advice on protection against fire and explosion** No special precautions required.

**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).

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### 7.2 Conditions for safe storage, including any incompatibilities

**Requirements for storage areas and containers** Keep containers tightly closed in a dry, cool and well-ventilated place. Store in original container. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from frost.

**Advice on common storage** Keep away from food, drink and animal feedingstuffs.

**Suitable materials** FIBC-PP (Polypropylen; approx.1000 l)

**7.3 Specific end use(s)** Refer to the label and/or leaflet.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Components	CAS-No.	Control parameters	Update	Basis
Mefenpyr-diethyl	135590-91-9	10 mg/m <sup>3</sup> (TWA)		OES BCS*
Solvent Naphtha (petroleum), heavy aromatic, <1% naphthalene	64742-94-5	1.600 mg/m <sup>3</sup> /400 ppm (TWA)	02 2013	NZ OEL
Kaolin (Respirable dust.)	1332-58-7	2 mg/m <sup>3</sup> (TWA)	07 2011	NZ OEL
Kaolin (Inhalable dust.)	1332-58-7	10 mg/m <sup>3</sup> (TWA)	07 2011	NZ OEL

\*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

### 8.2 Exposure controls

#### Personal protective equipment

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

#### Respiratory protection

Respiratory protection is not required under anticipated circumstances of exposure.

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

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	Glove thickness	> 0,4 mm
	Protective index	Class 6
	Directive	Protective gloves complying with EN 374.
<b>Eye protection</b>	Wear goggles (conforming to EN166, Field of Use = 5 or equivalent) and faceshield (conforming to EN166, Field of Use = 3 or equivalent).	
<b>Skin and body protection</b>	Wear standard coveralls and Category 3 Type 5 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.	

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

<b>Form</b>	water-dispersible granules
<b>Colour</b>	light beige to brown
<b>Odour</b>	aromatic
<b>pH</b>	7,5 - 9,0 at 10 % (23 °C) (deionized water)
<b>Flammability (solid, gas)</b>	The product is not highly flammable.
<b>Auto-ignition temperature</b>	378 °C
<b>Bulk density</b>	0,673 - 0,790 g/ml (loose)
<b>Water solubility</b>	dispersible
<b>Partition coefficient: n-octanol/water</b>	Iodosulfuron-methyl: log Pow: 2,57 Mefenpyr-diethyl: log Pow: 3,83 at 21 °C
<b>Surface tension</b>	33 mN/m at 20 °C
<b>Impact sensitivity</b>	Not impact sensitive.
<b>Burning number</b>	CN3 Local combustion without spreading
<b>Oxidizing properties</b>	No oxidizing properties
<b>Explosivity</b>	Not explosive 92/69/EEC, A.14 / OECD 113
<b>Dust content</b>	nearly dust-free
<b>9.2 Other information</b>	Further safety related physical-chemical data are not known.

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### 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.

**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.

**10.5 Incompatible materials** Store only in the original container.

**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute oral toxicity** LD50 (Rat) > 5.000 mg/kg  
Test conducted with a similar formulation.

**Acute inhalation toxicity** Not relevant because of low dust formation.

**Acute dermal toxicity** LD50 (Rat) > 5.000 mg/kg  
Test conducted with a similar formulation.

**Skin irritation** No skin irritation (Rabbit)  
Test conducted with a similar formulation.

**Eye irritation** Severe eye irritation. (Rabbit)  
Test conducted with a similar formulation.

**Sensitisation** Non-sensitizing. (Guinea pig)  
OECD Test Guideline 406, Buehler test  
Test conducted with a similar formulation.

#### Assessment STOT Specific target organ toxicity – single exposure

Iodosulfuron-methyl: Based on available data, the classification criteria are not met.

Mefenpyr-diethyl: Based on available data, the classification criteria are not met.

#### Assessment STOT Specific target organ toxicity – repeated exposure

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

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

#### Assessment mutagenicity

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

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

### Assessment toxicity to reproduction

Iodosulfuron-methyl 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 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.

### Aspiration hazard

Based on available data, the classification criteria are not met.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

<b>Toxicity to fish</b>	LC50 (Oncorhynchus mykiss (rainbow trout)) 11,1 mg/l Exposure time: 96 h Test conducted with a similar formulation.
<b>Toxicity to aquatic invertebrates</b>	EC50 (Daphnia magna (Water flea)) 10,85 mg/l Exposure time: 48 h Test conducted with a similar formulation.
<b>Toxicity to aquatic plants</b>	EC50 (Raphidocelis subcapitata (freshwater green alga)) 0,87 mg/l Exposure time: 72 h Test conducted with a similar formulation.  EC50 (Lemna gibba (gibbous duckweed)) 0,81 µg/l Exposure time: 14 d The value mentioned relates to the active ingredient iodosulfuron-methyl-sodium.

### 12.2 Persistence and degradability

<b>Biodegradability</b>	Iodosulfuron-methyl: Not rapidly biodegradable Mefenpyr-diethyl: Not rapidly biodegradable
<b>Koc</b>	Iodosulfuron-methyl: Koc: 0,8 - 152 Mefenpyr-diethyl: Koc: 625

### 12.3 Bioaccumulative potential

<b>Bioaccumulation</b>	Iodosulfuron-methyl: Does not bioaccumulate. Mefenpyr-diethyl: Bioconcentration factor (BCF) 232 Does not bioaccumulate.
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### 12.4 Mobility in soil

<b>Mobility in soil</b>	Iodosulfuron-methyl: Mobile in soils Mefenpyr-diethyl: Slightly mobile in soils
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### 12.5 Results of PBT and vPvB assessment



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**PBT and vPvB assessment** Iodosulfuron-methyl: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).  
Mefenpyr-diethyl: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

### 12.6 Other adverse effects

**Additional ecological information** No other effects to be mentioned.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

**Product** Dispose of this product only by using according to the label, or at an approved landfill or other approved facility.

**Contaminated packaging** Triple rinse containers. Recycle if possible. If allowed under local authority, burn if circumstances, especially wind direction permit, otherwise crush and bury in an approved local authority facility. Do not use container for any other purpose.

## SECTION 14: TRANSPORT INFORMATION

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

### ADR/RID/ADN

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (IODOSULFURON-METHYL SODIUM/SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES
Hazchem Code	2Z

### IMDG

14.1 UN number	<b>3077</b>
14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (IODOSULFURON-METHYL SODIUM/SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	YES

### IATA

14.1 UN number	<b>3077</b>
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14.2 Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (IODOSULFURON-METHYL SODIUM/SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE )
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

### 14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

## SECTION 15: REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### Further information

HSNO approval-Nr.	HSR000065
HSNO Controls	See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
ACVM Reg.	P7047
ACVM Condition	See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a>

## SECTION 16: OTHER INFORMATION

### 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
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
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

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NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe products in terms of their safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.

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