## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product identifier

| | |
|---|---|
| **Trade name** | HORUS |
| **Product code (UVP)** | 06268129 |
| **UFI** | GSN0-N0T3-R00S-WH30 (for Northern Ireland only) |

### 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 Limited<br>PO Box 1582<br>CB1 0FE Cambridge<br>United Kingdom |
| **Telephone** | +44(0)1223 226500 |
| **FOR NORTHERN IRELAND:** | Bayer CropScience Ltd<br>Bayer Ltd<br>1st Floor, The Grange Offices<br>The Grange, Brewery Road<br>Stillorgan<br>Co. Dublin<br>A94 H2K7<br>Ireland |
| **Telephone** | +353 1 216 3300 |
| **Responsible Department** | Email: gb-bcs-crop-regulatory-affairs@bayer.com |

### 1.4 Emergency telephone no.

| | |
|---|---|
| **Emergency telephone no.** | 0330 678 3382 (24 hr)<br><br>For Medical Professionals:<br>You can also contact the relevant NPIS.<br><br>For Members to the Public:<br>You can contact NHS111 (for GB) or your local GP (for Northern Ireland)<br><br>National Poisons Information Centre UK: 0344 892 0111<br>National Poisons Information Centre Dublin: +353 1 809 2166 |

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended. (CLP Regulation including Northern Ireland)**

Eye irritation: Category 2
H319 Causes serious eye irritation.

Short-term (acute) aquatic hazard: Category 1
H400 Very toxic to aquatic life.

Long-term (chronic) aquatic hazard: Category 1
H410 Very toxic to aquatic life with long lasting effects.

Persistent, mobile and toxic:
EUH450 Can cause long-lasting and diffuse contamination of water resources.

Very persistent and very mobile:
EUH451 Can cause very long-lasting and diffuse contamination of water resources.

**Classification according to UK/GB regulations**

Eye irritation:
H319 Causes serious eye irritation.

Short-term (acute) aquatic hazard:
H400 Very toxic to aquatic life.

Long-term (chronic) aquatic hazard:
H410 Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

**Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended. (CLP Regulation including Northern Ireland)**

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Mesosulfuron-methyl, sodium salt
- Iodosulfuron-methyl-sodium
- Mefenpyr-diethyl

**Signal word**: Danger

**Hazard statements**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| EUH451 | Can cause very long-lasting and diffuse contamination of water resources. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| EUH401 | To avoid risks to human health and the environment, comply with the instructions for use. |
| EUH208 | Contains fatty alcohol ethoxylate alkyl ether. May produce an allergic reaction. |

**Precautionary statements**

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P391 | Collect spillage. |
| P501 | Dispose of contents/container in accordance with local regulation. |

**Labelling according to UK/GB regulations**

Hazard label for supply/use required.

**Hazardous components which must be listed on the label:**

- Mesosulfuron-methyl, sodium salt
- Iodosulfuron-methyl-sodium
- Mefenpyr-diethyl
- Solvent Naphtha (petroleum), heavy aromatic, <1% naphthalene
- Solvent Naphtha (petroleum), light aromatic

**Signal word**: Warning

**Hazard statements**

| | |
|---|---|
| H319 | Causes serious eye irritation. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| EUH066 | Repeated exposure may cause skin dryness or cracking. |
| EUH208 | Contains fatty alcohol ethoxylate alkyl ether. May produce an allergic reaction. |
| EUH401 | To avoid risks to human health and the environment, comply with the instructions for use. |

**Precautionary statements**

| | |
|---|---|
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P391 | Collect spillage. |
| P501 | Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste. |

**2.3 Other hazards**

Product contains substances which are persistent, mobile, and toxic (PMT).
Product contains substances which are very persistent and very mobile (vPvM).

Mesosulfuron-methyl, sodium salt: 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). Iodosulfuron-methyl-sodium: 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). Hydrocarbons, C9, aromatics: 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).

| | |
|---|---|
| Ecological information: | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) |

or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

**Chemical nature**

Oil dispersion (OD)
Mesosulfuron-methyl/Iodosulfuron-methyl-sodium/Mefenpyr-diethyl 10:2:30 g/l

**Hazardous components**

Hazard statements according to Regulation (EC) No. 1272/2008

| Name | CAS-No. / EC-No. / REACH Reg. No. | Classification REGULATION (EC) No 1272/2008 | Conc. [%] |
|---|---|---|---|

Hazard statements according to Regulation (EC) No. 1272/2008

| Name | CAS-No. / EC-No. / REACH Reg. No. | Classification REGULATION (EC) No 1272/2008 | Conc. [%] |
|---|---|---|---|
| Mesosulfuron-methyl, sodium salt | 208465-19-4<br>606-652-8<br>01-2121007338-60-0000 | Eye Irrit. 2, H319<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>PMT EUH450<br>vPvM EUH451 | 1.04 |
| Iodosulfuron-methyl-sodium | 144550-36-7<br>604-422-1 | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>PMT EUH450<br>vPvM EUH451 | 0.20 |
| Mefenpyr-diethyl | 135590-91-9<br>01-2119480146-39-0000 | Aquatic Chronic 2, H411<br>vPvM EUH451 | 3.00 |
| Hydrocarbons, C10-C13, aromatics, <1% naphthalene | 922-153-0<br>01-2119451097-39-xxxx | Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 | >= 25 – < 50 |
| Alcohols, C11-14-iso-, C13-rich, ethoxylated (6 EO), methylated | 1492044-51-5 | Eye Dam. 1, H318<br>Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411 | >= 10 – < 25 |
| Docusate sodium | 577-11-7<br>01-2119491296-29-xxxx | Eye Dam. 1, H318<br>Skin Irrit. 2, H315 | >= 5 – < 10 |
| Hydrocarbons, C9, aromatics | 918-668-5<br>01-2119455851-35-XXXX | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>STOT SE 3, H335<br>STOT SE 3, H336 | >= 1 – < 10 |

| | | | |
|---|---|---|---|
| | | Aquatic Chronic 2, H411 | |
| Mesosulfuron-methyl, sodium salt | 208465-19-4<br>606-652-8<br>01-2121007338-60-0000 | Eye Irrit. 2, H319<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>PMT EUH450<br>vPvM EUH451 | 1.04 |
| Iodosulfuron-methyl-sodium | 144550-36-7<br>604-422-1 | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410<br>PMT EUH450<br>vPvM EUH451 | 0.22 |
| Mefenpyr-diethyl | 135590-91-9<br>01-2119480146-39-0000 | Aquatic Chronic 2, H411<br>vPvM EUH451 | 3.00 |
| Solvent Naphtha (petroleum), heavy aromatic, <1% naphthalene | 64742-94-5<br>01-2119451097-39-XXXX | Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 | > 25.00 |
| Solvent Naphtha (petroleum), light aromatic | 64742-95-6<br>01-2119455851-35-xxxx | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 | > 2.00 – < 5.00 |
| Docusate sodium | 577-11-7<br>01-2119491296-29-xxxx | Eye Dam. 1, H318<br>Skin Irrit. 2, H315 | > 5.00 – < 10.00 |
| Alcohols, C11-14-iso-, C13-rich, ethoxylated (6 EO), methylated | 1492044-51-5 | Eye Dam. 1, H318<br>Skin Sens. 1B, H317<br>Aquatic Chronic 2, H411 | > 10.00 – < 20.00 |
| 1,2,4-trimethylbenzene | 95-63-6 | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>STOT SE 3, H335<br>Aquatic Chronic 2, H411 | > 1.00 – < 5.00 |

**Further information**

| | | |
|---|---|---|
| Mesosulfuron-methyl, sodium salt | 208465-19-4 | M-Factor: 100 (acute), 100 (chronic) |
| Iodosulfuron-methyl-sodium | 144550-36-7 | M-Factor: 1,000 (acute) |
| Mesosulfuron-methyl, sodium salt | 208465-19-4 | M-Factor: 100 (acute), 100 (chronic) |
| Iodosulfuron-methyl-sodium | 144550-36-7 | M-Factor: 1,000 (acute) |

For the full text of the H-Statements mentioned in this Section, see Section 16.

**Particle characteristics**

This substance/ mixture does not contain nanoforms.

## SECTION 4: FIRST AID MEASURES

### 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 to fresh air. Keep patient warm and at rest. 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. Risk of product entering the lungs on vomiting after ingestion. Rinse mouth. Call a physician or poison control center immediately. 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** | Headache, Nausea, Dizziness, Somnolence<br><br>Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.<br><br>Aspiration may cause pulmonary oedema and pneumonitis.<br><br>Inhalation may provoke the following symptoms:<br><br>Cough, Shortness of breath, Cyanosis, Fever<br><br>Symptoms and hazards refer to the solvent. |

### 4.3 Indication of any immediate medical attention and special treatment needed

| | |
|---|---|
| **Risks** | Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard. |
| **Treatment** | Treat symptomatically. 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. |

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

| | |
|---|---|
| **Suitable** | Water spray, Alcohol-resistant foam, Dry powder, Carbon dioxide ($CO_2$) |
| **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:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride (HCl), Hydrogen iodide (HI) |
| **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** | Whenever possible, contain fire-fighting water by diking area with sand or earth. Do not allow run-off from fire fighting to enter drains or water courses. |

## 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. If spillage enters drains leading to sewage works inform local water company immediately. If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060). |

### 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. |
| **Additional advice** | Check also for any local site procedures. |
| **6.4 Reference to other sections** | Information regarding safe handling, see section 7.<br>Information regarding personal protective equipment, see section 8.<br>Information regarding waste disposal, see section 13. |

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

| | |
|---|---|
| **Advice on safe handling** | No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation. |
| **Advice on protection against fire and explosion** | Keep away from heat and sources of ignition. |
| **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). |

**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. Store bulk material and packed materials in a closed warehouse or under cover protected against direct sunlight and frost. Protect from freezing. |
| **Advice on common storage** | Keep away from food, drink and animal feedingstuffs. |
| **Suitable materials** | Coex HDPE/EVOH/HDPE |
| **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 |
|---|---|---|---|---|
| Mesosulfuron-methyl, sodium salt | 208465-19-4 | 10 mg/m3 (TWA) | | OES BCS* |
| Iodosulfuron-methyl-sodium | 144550-36-7 | 1 mg/m3 (TWA) | | OES BCS* |
| Mefenpyr-diethyl | 135590-91-9 | 10 mg/m3 (TWA) | | OES BCS* |
| Mesosulfuron-methyl | 208465-21-8 | 10 mg/m3 (TWA) | | OES BCS* |
| Iodosulfuron-methyl-sodium | 144550-36-7 | 1 mg/m3 (TWA) | | OES BCS* |

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

**8.2 Exposure controls**

**Refer to COSHH assessment (Control of Substances Hazardous to Health (Amendment) Regulations 2004). Engineering controls should be used in preference to personal protective equipment wherever practicable. Refer also to COSHH Essentials.**

**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.<br>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.<br>Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be |

| | |
|---|---|
| removed. | |
| 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.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | |
|---|---|
| **Form** | Liquid |
| **Colour** | beige to pink |
| **Odour** | aromatic |
| **Odour Threshold** | No data available |
| **Melting point/ range** | No data available |
| **Boiling Point** | No data available |
| **Flammability** | No data available |
| **Upper explosion limit** | No data available |
| **Lower explosion limit** | No data available |
| **Flash point** | 93 °C |
| **Auto-ignition temperature** | No data available |
| **Ignition temperature** | 405 °C (1,021 hPa) |
| **Self-accelarating decomposition temperature (SADT)** | No data available |
| **pH** | 7.0 - 8.5 (10 %) (23 °C) (deionized water) |
| **Viscosity, dynamic** | 30 - 150 mPa.s (20 °C)<br>Velocity gradient 20 /s<br>25 - 100 mPa.s (20 °C)<br>Velocity gradient 100 /s |

| | |
|---|---|
| **Viscosity, kinematic** | 78 mm²/s (40 °C) Shear rate of 20/sec |
| | 38 mm²/s (40 °C) Shear rate of 100/sec |
| **Water solubility** | dispersible |
| **Partition coefficient: n-octanol/water** | Mesosulfuron-methyl, sodium salt: log Pow: -0.48 |
| | Iodosulfuron-methyl-sodium: log Pow: -0.7 |
| | Mefenpyr-diethyl: log Pow: 3.83 (21 °C) |
| | Hydrocarbons, C9, aromatics:<br>Not applicable |
| **Surface tension** | 29.9 mN/m (40 °C)<br>Determined in the undiluted form. |
| **Vapour pressure** | No data available |
| **Density** | ca. 1.00 g/cm³ (20 °C) |
| **Relative density** | No data available |
| **Relative vapour density** | No data available |
| **Assessment nano particles** | This substance/ mixture does not contain nanoforms. |
| **Particle size** | No data available |
| **9.2 Other information** | |
| **Explosivity** | Not explosive |
| **Oxidizing properties** | No oxidizing properties |
| **Evaporation rate** | No data available |
| **Other physico-chemical properties** | Further safety related physical-chemical data are not known. |

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| **10.1 Reactivity** | 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 hazard classes as defined in regulation (EC) No 1272/2008

| | |
|---|---|
| **Acute oral toxicity** | LD50 (Rat) >= 5,000 mg/kg |
| **Acute inhalation toxicity** | During intended and foreseen applications, no respirable aerosol is formed. |
| **Acute dermal toxicity** | LD50 (Rat) > 4,000 mg/kg |
| **Skin corrosion/irritation** | Slight irritant effect - does not require labelling. (Rabbit) |
| **Serious eye damage/eye irritation** | Irritating to eyes. (Rabbit) |
| **Respiratory or skin sensitisation** | Skin: Non-sensitizing. (Guinea pig)<br>OECD Test Guideline 406, Buehler test |

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

Mesosulfuron-methyl, sodium salt: Based on available data, the classification criteria are not met.
Iodosulfuron-methyl-sodium: Based on available data, the classification criteria are not met.
Mefenpyr-diethyl: Based on available data, the classification criteria are not met.
Hydrocarbons, C9, aromatics: May cause respiratory irritation., Hydrocarbons, C9, aromatics: May cause drowsiness or dizziness.

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

Mesosulfuron-methyl, sodium salt did not cause specific target organ toxicity in experimental animal studies.
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.
Hydrocarbons, C9, aromatics: Based on available data, the classification criteria are not met.

**Assessment mutagenicity**

Mesosulfuron-methyl, sodium salt was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
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.
Hydrocarbons, C9, aromatics is not considered mutagenic.

**Assessment carcinogenicity**

Mesosulfuron-methyl, sodium salt was not carcinogenic in lifetime feeding studies in rats and mice.
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.
Hydrocarbons, C9, aromatics: Based on available data, the classification criteria are not met.

**Assessment toxicity to reproduction**

Mesosulfuron-methyl, sodium salt did not cause reproductive toxicity in a two-generation study in rats.
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.
Hydrocarbons, C9, aromatics: Based on available data, the classification criteria are not met.

**Assessment developmental toxicity**

Mesosulfuron-methyl, sodium salt did not cause developmental toxicity in rats and rabbits.
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.
Hydrocarbons, C9, aromatics: This information is not available.

**Aspiration hazard**

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

**11.2 Information on other hazards**

**Endocrine disrupting properties**

| | |
|---|---|
| **Assessment** | The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. |

## SECTION 12: ECOLOGICAL INFORMATION

**12.1 Toxicity**

| | |
|---|---|
| **Toxicity to fish** | LC50 (Oncorhynchus mykiss (rainbow trout)) 8.83 mg/l<br>Exposure time: 96 h |
| **Toxicity to aquatic invertebrates** | EC50 (Daphnia magna (Water flea)) 7.6 mg/l<br>Exposure time: 48 h |
| **Toxicity to aquatic plants** | EC50 (Raphidocelis subcapitata (freshwater green alga)) 6.71 mg/l<br>Exposure time: 72 h |
| | EC50 (Lemna gibba (gibbous duckweed)) 88.4 µg/l<br>Exposure time: 7 d |

**12.2 Persistence and degradability**

| | |
|---|---|
| **Biodegradability** | Mesosulfuron-methyl, sodium salt:<br>Not rapidly biodegradable<br>Iodosulfuron-methyl-sodium:<br>Not rapidly biodegradable<br>Mefenpyr-diethyl:<br>Not rapidly biodegradable<br>Hydrocarbons, C9, aromatics:<br>rapidly biodegradable |
| **Koc** | Mesosulfuron-methyl, sodium salt: Koc: 347; log Koc: 2.54 |

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

**12.3 Bioaccumulative potential**

**Bioaccumulation**

Mesosulfuron-methyl, sodium salt:
On the basis of the partition coefficient n-octanol/water (log pOW) no accumulation in organisms is expected.
Iodosulfuron-methyl-sodium:
Does not bioaccumulate.
Mefenpyr-diethyl: Bioconcentration factor (BCF) 232
Does not bioaccumulate.
Hydrocarbons, C9, aromatics:
No data available

**12.4 Mobility in soil**

**Mobility in soil**

Mesosulfuron-methyl, sodium salt: very mobile in soil
Iodosulfuron-methyl-sodium: very mobile in soil
Mefenpyr-diethyl: mobile in soil
Hydrocarbons, C9, aromatics: Slightly mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment**

Mesosulfuron-methyl, sodium salt: 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).
Iodosulfuron-methyl-sodium: 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).
Hydrocarbons, C9, aromatics: 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**

PMT and vPvM assessment:
Product contains substances which are persistent, mobile, and toxic (PMT).
Product contains substances which are very persistent and very mobile (vPvM).

## SECTION 13: DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

**Product**

In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK).

| | |
|---|---|
| **Contaminated packaging** | Small containers (< 10 l or < 10 kg) should be rinsed thoroughly using an integrated pressure rinsing device, or, by manually rinsing three times.<br>Add washings to sprayer at time of filling.<br>Dispose of empty and cleaned packaging safely.<br>Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose.<br>Return large containers to supplier.<br>Follow advice on product label and/or leaflet. |

## SECTION 14: TRANSPORT INFORMATION

**ADR/RID/ADN**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(IODOSULFURON-METHYL SODIUM, MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Environm. Hazardous Mark | YES |
| Hazard no. | 90 |
| Tunnel Code | - |

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

**IMDG**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(IODOSULFURON-METHYL SODIUM, MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Marine pollutant | YES |

**IATA**

| | |
|---|---|
| 14.1 UN number | **3082** |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(IODOSULFURON-METHYL SODIUM, MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION ) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Environm. Hazardous Mark | YES |

**UK 'Carriage' Regulations**

| | |
|---|---|
| 14.1 UN number | **3082** |

| | |
|---|---|
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (IODOSULFURON-METHYL SODIUM, MESOSULFURON-METHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC SOLUTION) |
| 14.3 Transport hazard class(es) | 9 |
| 14.4 Packing group | III |
| 14.5 Environm. Hazardous Mark | YES |
| Emergency action code | 3Z |

**14.6 Special precautions for user**
See sections 6 to 8 of this Safety Data Sheet.

**14.7 Transport in bulk according to IMO instruments**
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**

**UK and Northern Ireland Regulatory References**

This material may be subject to some or all of the following regulations (and any subsequent amendments). Users must ensure that any uses and restrictions as indicated on the label and/or leaflet are followed.

**Transport**

Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No 1348)
Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations 1997 (SI 1997 No 2367)
Air Navigation Dangerous Goods Regulations 2002 (SI 2002 No 2786)

**Supply and Use**

Chemical (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No 716)
Chemical (Hazard Information and Packaging for Supply) (Northern Ireland) Regulations 2009
Control of Substances Hazardous to Health Regulations 2002 (SI 2002 No 2677)
EH40 Occupational Exposure Limits - Table 1 List of approved workplace exposure limits
Control of Pesticide Regulations 1986
Dangerous Substances and Explosive Atmospheres Regulations 2002

**Waste Treatment**

Environmental Protection Act 1990, Part II
Environmental Protection (Duty of Care) Regulations 1991
The Waste Management Licensing Regulations 1994 (as amended)
Hazardous Waste Regulations 2005 (Replacing Special Waste Regulations 1996 as amended)
Landfill Directive
Regulation on Substances That Deplete the Ozone Layer 1994 (EEC/3093/94)
Water Resources Act 1991
Anti-Pollution Works Regulations 1999

**Further information**

WHO-classification: III (Slightly hazardous)

## SECTION 16: OTHER INFORMATION

### Text of the hazard statements mentioned in Section 3

| | |
|---|---|
| EUH450 | Can cause long-lasting and diffuse contamination of water resources. |
| EUH451 | Can cause very long-lasting and diffuse contamination of water resources. |
| H226 | Flammable liquid and vapour. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H335 | May cause respiratory irritation. |
| H336 | May cause drowsiness or dizziness. |
| H400 | Very toxic to aquatic life. |
| H410 | Very toxic to aquatic life with long lasting effects. |
| H411 | Toxic to aquatic life with long lasting effects. |

### 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 |
| EC-No. | European community number |
| ECx | Effective concentration to x % |
| EH40 WEL | Worker Exposure Limit |
| 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 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SI | Statutory Instrument |
| TWA | Time weighted average |
| UN | United Nations |
| WHO | World health organisation |

The above information is intended to give general health and safety guidance on the storage and transport of the product.
It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.
The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.
The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.
No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

**Reason for Revision:** Checked and revised according to Regulation (EU) 2023/707.

The following sections have been revised: Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 8: Exposure Controls / Personal Protection. Section 11: Toxicological Information. Section 12. Ecological information.

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