

Section 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: MILLINER SDS (UK)
Product Code: 054-01
UFI Code: XET7-MJDS-010W-XXAS

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

Product Use: Herbicide

1.3 Details of the supplier of the safety data sheet

Company: Life Scientific Ltd,
Block 4,
Belfield Office Park,
Beech Hill Road,
Dublin 4
Ireland
Telephone: +353 (0) 1 2832024
Email: info@lifescientific.com
Web: www.lifescientific.com

1.4 Emergency contact information

In case of Emergency: Tel. NHS 111

Section 2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) No. 1272/2008

Eye Irritation	Category 2	H319
Aquatic Acute	Category 1	H400
Aquatic Chronic	Category 1	H410

2.2 Label Elements

Labelling according to Regulation (EU) 1272/2008

Hazard Pictograms:



Signal Word:

Warning

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

Hazard Phrases:

H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Phrases:

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P337 + P313 If eye irritation persists: Get medical attention.
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

Other Phrases:

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.
SP 1 Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

2.3 Other Hazards

No additional hazards known beside those mentioned.

Substance does/does not meet the criteria for vPvB according to regulation (EC) No 1907/2006, Annex III.

Mesosulfuron-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).

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).

The mixture does/does not meet the criteria for vPvB (very persistent/very bioaccumulative) or PBT (persistent/bioaccumulative/toxic) according to regulation (EC) No 1907/2006, Annex III.
The 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

3.1 Substances

No substances fulfil the criteria set out in Annex II, Part A of the REACH Regulation (EC) No 1907/2006.

3.2 Mixtures

Chemical Name	CAS No.	EC No.	Classification (Regulation (EC) No 1272/2008)	Concentration (%)
Mesosulfuron-methyl	208465-19-4	-	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	1.0
Iodosulfuron-methyl-sodium	144550-36-7	-	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	0.2
Mefenpyr-diethyl	135590-91-9	-	Aquatic Chronic 2, H411	3.00
Solvent Naphtha (petroleum), heavy aromatic, <1% naphthalene	64742-94-5	265-198-5	Asp. Tox. 1, H304 Aquatic Chronic 2, H411	> 25.00
Solvent Naphtha (petroleum), light aromatic	64742-95-6	265-199-0	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	> 2.00 – < 5.00
Docusate sodium	577-11-7	-	Skin Irrit. 2, H315 Eye Dam. 1, H318	> 5.00 – < 10.00
Alcohols, C11-14-iso-, C13-rich, ethoxylated (6 EO), methylated	1492044-51-5	-	Skin Sens. 1A, H317 Eye Dam. 1, H318 Aquatic Chronic 2, H411	> 10.00 – < 20.00
1,2,4-trimethylbenzene	95-63-6	202-436-9	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315	> 1.00 – < 5.00

			Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335 Aquatic Chronic 2, H411	
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* For the full text of the H and P Statements, 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 information:	Have the product container, label or Safety Data Sheet with you when calling the emergency number, a Poison Control Centre or physician, or going for treatment.
Inhalation:	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Control Centre immediately.
Ingestion:	If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.
Skin contact:	Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	Nausea, Headache, Dizziness.
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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physicians:	There is no specific antidote available. Treat symptomatically.
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Section 5. FIREFIGHTING MEASURES

5.1 Extinguishing media

For small fires:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
For large fires:	Use alcohol-resistant foam or water spray.

5.2 Special hazards arising from the substance or mixture

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health.

5.3 Advice for firefighters

Special protective equipment for fire fighters: In the event of fire, wear self-contained breathing apparatus. Do not allow run-off from firefighting to enter drains or water courses. Cool closed containers exposed to fire with water spray. Do not use a solid water stream as it may scatter and spread fire.

Section 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

6.2 Environmental precautions

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environment Agency (England & Wales), the Scottish Environmental Protection Agency (Scotland), or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters. Keep people and animals away.

6.3 Methods and materials for containment and cleaning up

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, diatomaceous earth).

For large amounts: Dike spillage. Pump off product. Cleaning operations should be carried out only while wearing breathing apparatus. Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labelled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

6.4 Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Avoid contact with skin and eyes. No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

7.2 Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds. Keep away from heat. Protect from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of reach of children.

7.3 Specific end use(s)

Refer to the label.

Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

Component	Exposure Limit	Value Type	Source
Mesosulfuron-methyl, sodium salt	10mg/m ³	TWA	Bayer
Iodosulfuron-methyl-sodium	1 mg/m ³	TWA	Bayer
Mefenpyr-diethyl	10mg/m ³	TWA	Bayer
1,2,4-trimethylbenzene	125 mg/m ³ /25 ppm	TWA	Bayer
Mesosulfuron-methyl	10 mg/m ³	TWA	Bayer
Iodosulfuron-methyl-sodium	1 mg/m ³	TWA	Bayer

8.2 Exposure Controls

When using this product refer to the label for details. In all other cases, use the following Personal Protective Equipment:

Respiratory protection: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

Skin protection:	Wear standard coveralls and Category 3 Type 6 suit.	
Hand protection:	Chemical resistant gloves are not usually required. Select gloves based on the physical job requirements.	
	Material	Nitrile rubber
	Rate of permeability	> 480 min
	Glove thickness	> 4 mm
	Protective index	Class 6
	Directive	Protective gloves complying with EN 374-1/A1.
Eye protection:	If eye contact is a possibility, wear tight-fitting chemical safety goggles conforming to EN 166. Follow any site-specific eye protection policies.	
Engineering measures:	Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapours are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.	
Protective measures:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.	

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form:	Opaque, uniform liquid
Colour:	Brown
Odour:	Faint solvent odour
pH (at 20 °C):	8-10 at 1% aqueous solution
Flash Point:	88°C
Density (at 20 °C):	1.00 g/cm ³
Solubility in water:	Dispersible
Partition coefficient: n-octanol/ water:	Mesosulfuron-methyl: log Pow: -0.48 Iodosulfuron-methyl-sodium: log Pow: -0.7 Mefenpyr-diethyl: log Pow: 3.83 at 21 °C
Auto-ignition temperature:	389°C
Viscosity (dynamic):	41 mPa.s (at 20 °C),
Viscosity (kinematic):	22 mm ² /s (at 40 °C)
Surface tension (at 20 °C):	31 mN/m
Oxidising properties:	Not oxidising
Explosive properties:	Not explosive
Assessment nano particles	This mixture does not contain nanoforms.

9.2 Other Information

None.

9.2.1 Information with regard to physical hazard classes

Explosivity:	Not explosive.
Oxidizing properties:	No oxidizing properties.

9.2.2 Other safety characteristics

Other physico-chemical Properties	No data available
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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

None known.

10.4 Conditions to avoid

Direct sunlight and extreme temperatures.

10.5 Incompatible material

No information available. Store in the original container.

10.6 Hazardous decomposition products

None expected under normal conditions of use.

Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

LD₅₀ oral rat: >= 5000 mg/kg
LD₅₀ dermal rat: > 4000 mg/kg

Eye irritation rabbit: Irritating
Skin irritation rabbit: Slight irritant effect (does not require labelling)
Sensitisation guinea pig: Not a skin sensitiser

Mutagenicity: Mesosulfuron-methyl was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
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

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

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

Results are based on a similar composition.

11.2 Information on other hazards

Endocrine disrupting properties

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

LC₅₀ fish (96 h):

Mesosulfuron-methyl: >100 mg/L

Iodosulfuron-methyl-sodium: >100 mg/L

Mefenpyr-diethyl: 2.4 mg/L

EC₅₀ *Daphnia magna* (48 h):

Mesosulfuron-methyl: >100 mg/L

Iodosulfuron-methyl-sodium: >100 mg/L

Mefenpyr-diethyl: 5.5 mg/L

E_rC₅₀ aquatic plants (96 h):

117 µg/L

12.2 Persistence and degradability

Biodegradability:

Mesosulfuron-methyl: Not rapidly biodegradable

Iodosulfuron-methyl-sodium: Not rapidly biodegradable

Mefenpyr-diethyl: Not rapidly biodegradable

Koc

Mesosulfuron-methyl: Koc: 92

Iodosulfuron-methyl-sodium: Koc: 45

Mefenpyr-diethyl: Koc: 625

Results are based on a similar composition.

12.3 Bioaccumulative potential

Mesosulfuron-methyl:

Does not bioaccumulate

Iodosulfuron-methyl-sodium:

Does not bioaccumulate

Mefenpyr-diethyl:

Bioconcentration factor (BCF) 232; Does not bioaccumulate

Results are based on a similar composition.

12.4 Mobility in soil

Mesosulfuron-methyl: Moderately mobile in soils

Iodosulfuron-methyl-sodium: Mobile in soils

Mefenpyr-diethyl: Slightly mobile in soils

Results are based on a similar composition.

12.5 Results of PBT and vPvB assessment

Mesosulfuron-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).

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).

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

Results are based on a similar composition.

12.6 Endocrine disrupting properties

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.

12.7 Other adverse effects

None.

Section 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal procedures: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers. Follow advice on product label.

Section 14. TRANSPORT INFORMATION

Transport the product in accordance with the provisions of ADR for road, RID for rail, IMDG for the sea, and ICAO / IATA for air transport

14.1 UN Number

3082.

14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (IODOSULFURON-METHYL SODIUM, MESOSULFURONMETHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE)).

14.3 Transport hazard class(es)

9.

14.4 Packing group

III.

14.5 Environmental hazards

Yes.

14.6 Special precautions for user

Refer to sections 6,7 and 8 of this SDS.

14.7 Transport in bulk according to Annex II of Marpol 73/78 and the IBC code

No transport in bulk according to the IBC Code.

Section 15. REGULATORY INFORMATION

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

None.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on this mixture by the supplier.

Section 16. OTHER INFORMATION

Full list of relevant hazard and precautionary statements that were not given in full in sections 2 and 3.

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.
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.

The information presented in this document is accurate to the best of our knowledge at the date of its publication. However, the information given is designed only as a guide for the methods of handling, storage, use, transportation and disposal of the product and is not considered a warranty or quality specification. Life Scientific Limited cannot be held responsible for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this document relates only to this specific product.

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