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

- 1.1. Product identifier CLAYTON METROPOLIS
- 1.2. Relevant identified uses of the substance or mixture and uses advised. Herbicide
- 1.3. Details of the supplier of the safety data sheet: Marketing Company in UK

Clayton Plant Protection (UK) Ltd., Bracetown Business Park, Clonee, Dublin15. Ireland. Tel: (00 353) 1 8210127 www.claytonpp.com Email: info@claytonpp.com

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.

Eye irritation: Category 2 H319 Causes serious eye irritation.

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

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

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

Mesosulfuron-methyl

Iodosulfuron-methyl-sodium

Mefenpyr-diethyl

Solvent Naphtha (petroleum), heavy aromatic

Solvent Naphtha (petroleum), light aromatic

Pictogram:



Signal Word: Warning

Hazard statements

H319 Causes serious eye irritation.

H410 Very toxic to aquatic life with long lasting effects.

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

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

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.

 $2.3\ Other\ hazards$: No other hazards known.

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. /	Classification	Conc. [%]
	REACH Reg. No	Regulation (EC) No 1272/2008	
Mesosulfuron-methyl	208465-21-8	Aquatic Acute 1, H400 Aquatic	1.04
		Chronic 1, H410	
Iodosulfuron-methylsodium	144550-36-7	Aquatic Acute 1, H400 Aquatic	0.20
		Chronic 1,	
Mefenpyr-diethyl	135590-91-9	Aquatic Chronic 2, H411	3.0
Docusate sodium	577-11-7	Eye Dam. 1, H318	> 1.00 - <
	209-406-4	Skin Irrit. 2, H315	5.00
Solvent Naphtha (petroleum), light	64742-95-6 265-199-0	Flam. Liq. 3, H226 STOT	> 1.00 - <
aromatic		SE 3, H335	10.00
		Asp. Tox. 1, H304	
		Aquatic Chronic 2, H411	



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Fatty alcohol ethoxylate alkyl ether	1492044-51-5	Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 2, H411	> 10.0
Solvent Naphtha (petroleum), heavy	64742-94-5 265-198-5	Asp. Tox. 1, H304	> 25.0
aromatic	01-2119451097-39-xxxx	Aquatic Chronic 2, H411	

Further information

	Mesosulfuron-methyl	208465-21-8	M-Factor: 100 (acute), 100 (chronic)
ĺ	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.

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 centre 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 centre 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

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.

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 (CO2) 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), 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.



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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.

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 feeding stuffs. Suitable materials Coex EVOH (1000L IBC)

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
Iodosulfuron-methyl-sodium	144550-36-7	1 mg/m3 (TWA)		OES BCS*
Mefenpyr-diethyl	135590-91-9	10 mg/m3 (TWA)		OES BCS*
Solvent Naphtha (petroleum), light aromatic	64742-95-6	116 mg/m3/20 ppm (TWA)	2014	EU SCOELS
Solvent Naphtha (petroleum), light aromatic	64742-95-6	290 mg/m3/50 ppm (STEL)	2014	EU SCOELS
Iodosulfuron-methyl-sodium	144550-36-7	1 mg/m3 (TWA)		OES BCS*

^{*}OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

Additional advice - Observe: Exposure Limits In Air, Group 3: 100 mg/m³/ 20 ppm. (aromatic-rich hydrocarbon mixes with > 25% aromatics TRGS 901, No. 72).

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. 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 mmProtective 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



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Form - Liquid	Viscosity, dynamic
Colour beige	30 - 150 mPa×s at 20 °C Velocity gradient 20 /s
Odour aromatic pH 7.0 - 8.5 at 10 % (23 °C)	25 - 100 mPa×s at 20 °C Velocity gradient 100 /s
(deionized water)	Surface tension 29.9 mN/m at 40 °C Determined in the undiluted
Flash point ca.93 °C	form.
Auto-ignition temperature 405 °C at 1,021 hPa	Oxidizing properties No oxidizing properties
Density ca. 1.00 g/cm³ at 20 °C	Explosivity Not explosive
Water solubility 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	

^{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.
- 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

Acute inhalation toxicity During intended and foreseen applications, no respirable aerosol is formed.

Acute dermal toxicity LD50 (Rat) > 4,000 mg/kg

Skin irritation Moderate s kin irritation. (Rabbit)

Eye irritation Irritating to eyes. (Rabbit)

Sensitisation Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

Assessment repeated dose toxicity -

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

Assessment mutagenicity

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

Mesosulfuron-methyl 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.

Assessment toxicity to reproduction

Mesosulfuron-methyl 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.

Assessment developmental toxicity

Mesosulfuron-methyl 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.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 8.83 mg/l Exposure time: 96 h

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) 7.6 mg/l Exposure time: 48 h

Toxicity to aquatic plants EC50 (Raphidocelis subcapitata (freshwater green alga)) 6.71 mg/l Exposure time: 72 h

EC50 (Lemna gibba (gibbous duckweed)) 88.4 μg/l Exposure time: 7 d

12.2 Persistence and degradability

Biodegradability Mesosulfuron-methyl: Not rapidly biodegradable

Iodosulfuron-methyl-sodium: Not rapidly biodegradable

Mefenpyr-diethyl: Not rapidly biodegradable



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Koc Mesosulfuron-methyl: Koc: 92 Iodosulfuron-methyl-sodium: Koc:

Mefenpyr-diethyl: Koc: 625 12.3 Bioaccumulative potential

Bioaccumulation Mesosulfuron-methyl: Does not bioaccumulate.

Iodosulfuron-methyl-sodium: Does not bioaccumulate. Mefenpyr-diethyl:

Bioconcentration factor (BCF) 232 Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Mesosulfuron-methyl: Moderately mobile in soils

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

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).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

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. Add washings to sprayer at time of filling.

Dispose of empty and cleaned packaging safely. Large containers (> 25 l or > 25 kg) should not be rinsed or re-used for any other purpose. Return large containers to supplier. Follow advice on product label and/or leaflet. Waste key for the unused product - 02 01 08* agrochemical waste containing dangerous substances

SECTION 14: TRANSPORT INFORMATION ADR/RID/ADN

- 14.1 UN number 3082
- 14.2 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 Environm. Hazardous Mark YES Hazard no. 90 Tunnel Code E

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.

(IODOSULFURON-METHYL SODIUM, MESOSULFURONMETHYL, 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 3082
- 14.2 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 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, MESOSULFURONMETHYL, SOLVENT NAPHTHA (PETROLEUM) HEAVY AROMATIC MIXTURE)



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- 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 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

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.

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)

15.2 Chemical Safety Assessment: A chemical safety assessment is not required.

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 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. 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. 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 Cooperation 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 information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

