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

1.1 Product Identifier

Product Name: Niantic
Product Description: A water dispersible granule formulation of mesosulfuron-methyl and iodosulfuron-methyl-sodium for professional use as an agricultural herbicide.

Chemical description of active substance(s): A product comprising of methyl 2-[(4,6-dimethoxypyrimidin-2-ylcarbamoyl)sulfamoyl]-a-(methanesulfonamido)-p-toluate and sodium ([5-iodo-2-(methoxycarbonyl)phenyl]sulfonylecarbamoyl)(4-methoxy-6-methyl-1,3,5-triazin-2-yl)azanide in a ratio of 5:1 respectively.

Chemical Family: Sulfonylurea (mesosulfuron-methyl), Sulfonylurea (iodosulfuron-methyl-sodium)
GCPF code: WG (Water Dispersible Granules)

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

Product Use: Agriculture – 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
Fax: +353 (0) 1 2832026
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 (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Classification</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation</td>
<td>Category 2</td>
<td>H315</td>
</tr>
<tr>
<td>Skin sensitisation</td>
<td>Category 1</td>
<td>H317</td>
</tr>
<tr>
<td>Serious eye damage</td>
<td>Category 1</td>
<td>H318</td>
</tr>
<tr>
<td>Aquatic Chronic</td>
<td>Category 2</td>
<td>H411</td>
</tr>
</tbody>
</table>

2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms:
Signal Word:
Danger

Hazard Statements:
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H411 Toxic to aquatic life with long-lasting effects.

Precautionary Statements:
- P102 Keep out of reach of children.
- P261 Avoid breathing spray.
- P264 Wash hands thoroughly after handling.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305 + P351+ P338+ P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call POISON CENTER/ doctor.
- P308 + P311 If exposed or concerned, please call POISON CENTRE or doctor / physician.
- P332 + P313 If skin irritation or rash occurs: Get medical advice/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.

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).

Spe 3 To protect aquatic organisms respect an unsprayed buffer zone of (5m) to non-agricultural land/surface water bodies.

2.3 Other Hazards
None Known

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>EC No</th>
<th>Classification (Regulation(EC) No 1272/2008)</th>
<th>Concentration (% w/w)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mesosulfuron methyl</td>
<td>208465-21-8</td>
<td>606-653-3</td>
<td>Aqua. Acute 1, H400</td>
<td>2 - 5</td>
</tr>
<tr>
<td>Iodosulfuron-methyl-sodium</td>
<td>144550-36-7</td>
<td>-</td>
<td>Aqua. Acute 1, H400, Aquatic Chronic 1, H410</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>Solvent naphtha, heavy aromatic</td>
<td>64742-94-5</td>
<td>265-198-5</td>
<td>Aspiration hazard, 1, H304, Aquatic Chronic 2, H411</td>
<td>2.5 – 25.0</td>
</tr>
</tbody>
</table>
Fatty alcohol ethoxylate alkyl ether

345642-79-7 or 1492044-51-5

Skin sensitisation, 1, H317
Eye damage, 1, H318
Aquatic chronic, 2, H411

5.0 – 10.0

Naphthalene and alkyl naphthalene sulphonate formaldehyde condensate, sodium salt

68425-94-5

Eye irritation, 2, H319

5.0 – 15.0

Tetrapropylene benzene sulfonate, calcium salt

11117-11-6 (Benzenesulfonic acid, dodecyl-, branched, calcium salts)

234-360-7 (Benzenesulfonic acid, dodecyl-, branched, calcium salts)

1 – 25.0

Section 4. FIRST AID MEASURES

4.1 Description of first aid measures

General information: In the event of any complaints or symptoms, avoid further exposure. Treat symptomatically. If unwell, consult a physician showing the product container, label or this safety data sheet.

Ingestion: DO NOT induce vomiting unless directed to do so by a Poison Control Centre. Never give anything by mouth to an unconscious person. Rinse mouth with plenty of water. Consult a physician or Poison Control Centre immediately.

Skin contact: Remove contaminated clothing immediately. Wash immediately with plenty of soap and water. Consult a physician or Poison Control Centre immediately.

Eye contact: Remove contact lenses if present. Rinse immediately with plenty of water, with the eyelid open for at least 15 minutes. Consult a physician or Poison Control Centre immediately.

4.2 Most important symptoms and effects, both acute and delayed

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

4.3 Indication of any immediate medical attention and special treatment needed

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

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

For large fires: Use alcohol-resistant foam or water spray. Avoid using a solid water stream as it may cause the fire to scatter or spread.

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 (NOx).

5.3 Advice for firefighters

Wear self-contained breathing apparatus with full face shield. Fight fire from a safe distance and a protected location. Do not allow run-off from firefighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

Section 6. ACCIDENTAL RELEASE MEASURES
6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment, see section 8. For safe handling and storage, see section 7.

6.2 Environmental precautions

Prevent further leaking or spillage if safe to do so. Prevent entry into sewers and public waters. In the event of a major spillage, contact an expert immediately. Make provisions to collect extinguishing water after fires. If the product contaminates rivers, lakes or drains, notify the UK Environment Agency (Environment Incident Hotline 0800 80 70 60).

6.3 Methods and materials for containment and cleaning up

Contain spillage. Use non-combustible absorbent material to absorb spillage and place in container for disposal according to local/national legislation.

6.4 Reference to other sections

See Section 7 for information on handling and storage and Section 8 for information on PPE.

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Section 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

No special technical protective measures required. No special handling advice required. Read label before use. DO NOT eat, drink or smoke during use. Avoid contact with skin and eyes. If on skin wash with plenty of water. Take off contaminated clothing and wash it before reuse.

7.2 Conditions for safe storage, including any incompatibilities

No special storage conditions required. Keep containers tightly closed in a cool, dry and well-ventilated area. Keep out of reach of children. Keep separate from food, drink and animal feed.

7.3 Specific end use(s)

Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

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Section 8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure Limit</th>
<th>Value Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fumed silica, amorphous, silicon dioxide</td>
<td>2.4 mg/m³ (Respirable Dust)</td>
<td>TWA value</td>
<td>ELV (IE)</td>
</tr>
<tr>
<td>Kaolin</td>
<td>2 mg/m³</td>
<td>OELV – 8 hrs (TWA)</td>
<td>Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>2 mg/m³</td>
<td>OELV – 15 min (STEL)</td>
<td>Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1</td>
</tr>
<tr>
<td>Polyvinylpyrrolidone</td>
<td>10 mg/m³</td>
<td>TWA value</td>
<td>EH40 (UK)</td>
</tr>
<tr>
<td>Naphthalene and alkyl naphthalene sulphonic acids formaldehyde condensate, sodium salt</td>
<td>4 mg/m³</td>
<td>TWA value</td>
<td>EH40 (UK)</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Respiratory protection: Respiratory protection is not required under anticipated circumstances of exposure. Use self-contained breathing apparatus in case of emergency spills or when exposure levels are unknown.

Skin protection: Wear suitable chemical-resistant coveralls (Category 3, Type 5). In case of high exposure risk consider a higher level of protective suit. Where possible wear two layers of clothing. Decontaminate protective clothing before re-use.
Hand protection: Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness of 0.4 mm). Wash when contaminated and dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently.

Eye protection: Eye protection should be worn and certified to EN 166, Field of Use = 5 or equivalent.

Engineering measures: Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

Hygiene measures: When using, DO NOT eat, drink or smoke. Wash hands and face with soap and water before breaks. Shower at the end of the workday. Decontaminate protective clothing before re-use.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance
Form Granules (water dispersible)
Colour Brown
Odour Aromatic

Chemical properties
pH (at 23 °C) 8.9 – 9.5 at 10%
Density (g/cm³) 0.635-0.745
Solubility in water Dispersible
Autoignition (°C) 264
Oxidising properties Not oxidising
Impact Sensitivity Not impact sensitive
Combustion number CN² short flaring without spreading
Density (g/cm³) 1.057 at 20 °C
Log P octanol/water at 20°C 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
None

Section 10. STABILITY AND REACTIVITY

10.1 Reactivity
Stable under normal conditions.

10.2 Chemical Stability
This mixture is stable at the handling and storage conditions recommended in Section 7.

10.3 Possibility of hazardous reactions
This mixture produces no hazardous reactions when stored at the handling and storage conditions recommended in Section 7.

10.4 Conditions to avoid
Avoid: Heat, direct sunlight.

10.5 Incompatible material
Store in the original container.

10.6 Hazardous decomposition products
No decomposition products expected under normal conditions.
Section 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

LD<sub>50</sub> oral rat: >2000 mg/kg  
LC<sub>50</sub> inhalation rat: > 1.1 mg/L (Exposure time 4h)  
LD<sub>50</sub> dermal rat: > 5000 mg/kg.  
Eye irritation rabbit: Severe irritation  
Skin irritation rabbit: Irritating  
Sensitisation mouse: Non-sensitisation

Mesosulfuron-methyl, Iodosulfuron-methyl-sodium and Mefenpyr-diethyl
Repeatead dose toxicity: Did not cause specific target organ toxicity in experimental animal studies.  
Mutagenicity: Not mutagenic or genotoxic in either in vitro or in vivo tests.  
Carcinogenicity: Not carcinogenic in lifetime feeding studies (rats and mice).  
Reproductive toxicity: Did not cause reproductive toxicity in a two-generation study in rats.

Mesosulfuron-methyl and Iodosulfuron-methyl-sodium
Developmental toxicity: Did not cause developmental toxicity in rats and rabbits.

Mefenpyr-diethyl
Developmental toxicity: Resulted in 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

LC<sub>50</sub> Oncorhynchus mykiss (96 h): 7.5 g/L  
EC<sub>50</sub> Daphnia magna (48 h): 13.1 mg/L  
EC<sub>50</sub> Pseudokirchneriella subcapitata) (72 h): 2.4 mg/L

12.2 Persistence and degradability

Mesosulfuron-methyl
Biodegradability: Not rapidly biodegradable  
Koc: 92

Iodosulfuron-methyl-sodium
Biodegradability: Not rapidly biodegradable  
Koc: 45

Mefenpyr-diethyl
Biodegradability: Not rapidly biodegradable  
Koc: 625

12.3 Bioaccumulative potential

Mesosulfuron-methyl, Iodosulfuron-methyl-sodium and Mefenpyr-diethyl
Bioaccumulation: Does not bioaccumulate

Mefenpyr-diethyl
Bioconcentration factor: 232

12.4 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, iodosulfuron-methyl-sodium and Mefenpyr-diethyl
Substance is not considered to be persistent, bioaccumulative and toxic (PBT). Substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 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 practical, dispose of in compliance with local regulations.

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

Section 14. TRANSPORT INFORMATION


14.1 UN Number
3077

14.2 UN proper shipping name
Environmentally hazardous substance, solid, 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
Marine pollutant, Dangerous to the environment

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 73/78 and the IBC code
No Information available

Section 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture relating to the classification and labelling contained in Section 3.
To avoid risks to man and the environment comply with the instructions for use.

The mixture contains no substances of very high concern (SVHC) published by the European Chemicals Agency (ECHA) under Article 57 of REACH http://echa.europa.eu/uk/candidate-list-table

15.2 Chemical safety assessment

None

Section 16. OTHER INFORMATION

Full list of relevant Hazard 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.
- H312 Harmful in contact with skin.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic organisms.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.

The information presented in this SDS is correct to the best of our knowledge, information and belief at the date of its publication. However, the information given is designed only as a guidance for methods of handling, storage, use, transportation and disposal of the product, and is not considered to be a warranty or quality specification. Life Scientific Limited shall not be held liable for any loss or damage resulting from the handling, storage, use or disposal of the product. The information contained in this SDS relates only to this specific product and may not be valid if this product is used in combination with any other products.

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