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

1.1. Product identifier

Trade name: HIATUS®
Product code: FH-045 - Thifensulfuron-methyl 400g/kg + Tribenuron-methyl 150g/kg WG -

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

1.2.1. Relevant identified uses

Main use category: Professional use
Use of the substance/preparation: Agriculture Herbicide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Rotam Europe Ltd
Hamilton House
Mabledon Place
London WC1H 9BB
Tel: +44 020 7953 0447
msds@rotam.com

1.4. Emergency telephone number

<table>
<thead>
<tr>
<th>Country</th>
<th>Organisation/Company</th>
<th>Address</th>
<th>Emergency number</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>NHS Direct (England and Wales)</td>
<td></td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>NHS 24 (Scotland)</td>
<td></td>
<td>111</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aquatic Chronic 1; H410
Aquatic Acute 1 ; H400

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard symbols:

Signal word (CLP): Warning
Hazard statements (CLP): H410 - Very toxic to aquatic life with long lasting effects
Precautionary statements (CLP): P273 - Avoid release to the environment
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.

EUH phrases: EUH208 - Contains tribenuron-methyl. May produce an allergic reaction.
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use

PPP safety precautions: 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)
SPe3 - To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements

2.3. Other hazards

No additional information available
**SECTION 3: Composition/information on ingredients**

### 3.1. Substances

Not applicable

### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thifensulfuron-methyl</td>
<td>(CAS No.) 79277-27-3 (EC index no) 016-098-00-2</td>
<td>40</td>
<td>Aquatic Acute 1, H400&lt;br&gt; Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Tribenuron-methyl</td>
<td>(CAS No.) 101200-48-0 (EC no) 401-190-1 (EC index no) 607-177-00-9</td>
<td>15</td>
<td>Skin Sens. 1, H317&lt;br&gt; Aquatic Acute 1, H400&lt;br&gt; Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Mixture of Alkynaphthalene sulfonate, sodium salt and Sodium dioctyl sulphosuccinate</td>
<td></td>
<td>1 - 5</td>
<td>Skin irrit 2, H315&lt;br&gt; Eye dam. 1, H318</td>
</tr>
<tr>
<td>Mixture of Sulfonated aromatic polymer, sodiumsulphate and Sodium dioctyl sulphonate</td>
<td></td>
<td>1 - 5</td>
<td>Skin irrit 2, H315&lt;br&gt; Eye dam. 1, H318</td>
</tr>
<tr>
<td>Sulfonated aromatic polymer, sodiumsulphate</td>
<td></td>
<td>5 - 15</td>
<td>Skin irrit 2, H315&lt;br&gt; Eye irrit 2, H319</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-phrases: see section 16

### 4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.

First-aid measures after skin contact : Rinse immediately with plenty of water. In case of an skin reaction, consult a physician.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Obtain emergency medical attention.

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

No additional information available

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

### 5.1. Extinguishing media

Suitable extinguishing media : Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2).

Unsuitable extinguishing media : High volume water jet.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Hazardous decomposition products may be released during prolonged heating like smokes, carbon monoxide and dioxide, nitrogen oxides (NOx).

### 5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

**SECTION 6: Accidental release measures**

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

#### 6.1.1. For non-emergency personnel


#### 6.1.2. For emergency responders

Protective equipment : Wear a self-contained breathing apparatus and appropriate personal protective equipment (PPE).

### 6.2. Environmental precautions

Do not allow material to contaminate ground water system. Prevent entry to sewers, drains and public waters. Notify authorities if product enters drains, sewers or public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Sweep or shovel spills into appropriate container for disposal.

Methods for cleaning up : Large spills, scoop solid spill into closing containers. On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

No additional information available
SECTION 7: Handling and storage

7.1. Precautions for safe handling
Hygiene measures: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

Precautions for safe handling: Do not breathe spray, vapours. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Store tightly closed in a dry, cool and well-ventilated place.
Incompatible materials: Oxidants, strong acids and strong bases.
Storage area: Store away from heat.

7.3. Specific end use(s)
Professional use. See the label.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Personal protective equipment: Avoid any unnecessary exposure. Use personal protective equipment that is clean and has been properly maintained. Store personal protective equipment in a clean place, away from the work area. Remove and wash contaminated clothing before re-using.

Hand protection: Wear suitable protective gloves.
Eye protection: Chemical goggles or safety glasses.
Respiratory protection: Ensure that there is adequate ventilation, especially in confined areas.
Other information: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid – water dispersible granule
Appearance: Rod-shaped granules
Colour: Off-white
Odour: Mild characteristic odour
pH at 1%(aqueous dilution, emulsion or dispersion): 5.02 at 25°C (CIPAC MT 75.3)
Relative evaporation rate (butylacetate=1): No data available
Melting point: Measured up to 171°C (active substance: Thifensulfuron-methyl), 137.9°C (active substance: tribenuron-methyl)
Freezing point: No data available
Boiling point: No data available
Self ignition temperature: No self-ignition up to 400°C (EEC A.16)
Decomposition temperature: No data available
Flammability (solid, gas): Not highly flammable (EEC A.10)
Vapour pressure: Not applicable
Relative vapour density at 20 °C: No data available
Tap density: 0.75 g/ml (CIPAC (F) MT 169)
Solubility: No data available
Log Pow: 0.78 at pH = 7 (active substance: tribenuron-methyl)
\[1.65 \text{ at pH } = 7 \text{ (active substance: thifensulfuron-methyl)}\]
Log Kow: Not applicable
Viscosity, kinematic: Not applicable
Viscosity, dynamic: Not applicable
Explosive properties: Not explosive (EEC A.14)
Oxidising properties: Not an oxidiser (EEC A.17)
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
The product is stable at normal handling- and storage conditions.
10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
No additional information available

10.5. Incompatible materials
Strong acids, strong bases and oxidation agents.

10.6. Hazardous decomposition products
No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>HIATUS®</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg, (OECD 423)</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg, (OECD 402)</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>&gt; 3.46 mg/l/4h, (OECD 403)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not irritant to skin (OECD Guideline n°404)
Serious eye damage/irritation: Not irritant to eyes (OECD Guideline n°405)
Respiratory or skin sensitisation: Not skin sensitizing (OECD Guideline n°406)
Repeated dose toxicity: Not classified
Carcinogenicity: Not classified
Mutagenicity: Not classified
Toxicity for reproduction: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>HIATUS®</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fishes 96h</td>
<td>&gt; 100 mg/L, (O. mykiss), (OECD 203)</td>
</tr>
<tr>
<td>EC50 daphnia 48h</td>
<td>31.36 mg/L, (D. magna), (OECD 202)</td>
</tr>
<tr>
<td>EbC50 algae 72h</td>
<td>0.088 mg/L, (P. subcapitata) (OECD 201)</td>
</tr>
<tr>
<td>EC50 aquatic plant 14d</td>
<td>0.00093 mg/L, (L. gibba), (OECD 221)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
Thifensulfuron-methyl is not readily biodegradable.
Tribenuron-methyl is not readily biodegradable.

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Thifensulfuron-methyl</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>1.65 at pH = 7</td>
</tr>
<tr>
<td>Tribenuron-methyl</td>
<td></td>
</tr>
<tr>
<td>Log Pow</td>
<td>0.78 at pH = 7</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

| Thifensulfuron-methyl: KFoc= 9.8 - 74 ml/g |
| Tribenuron-methyl: KFoc= 3 - 86 ml/g |

12.5. Results of PBT and vPvB assessment

Thifensulfuron-methyl and tribenuron-methyl do not fulfill the criteria of PBT substances.

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
No additional information available
SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

| UN-No. (ADR) | : | 3077 |
| UN-No. (IMDG) | : | 3077 |
| UN-No. (IATA) | : | 3077 |
| UN-No. (ADN) | : | 3077 |
| UN-No. (RID) | : | 3077 |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (IMDG) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (IATA) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (ADN) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Proper Shipping Name (RID) | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |

Transport document description

| Transport document description (ADR) | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl/Tribenuron-methyl), 9, III, (E) |
| Transport document description (IMDG) | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl/Tribenuron-methyl), 9, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IATA) | : UN 3077 Environmentally hazardous substance, SOLID, n.o.s. (Thifensulfuron-methyl/Tribenuron-methyl), 9, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (ADN) | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl/Tribenuron-methyl), 9, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (RID) | : UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl/Tribenuron-methyl), 9, III, ENVIRONMENTALLY HAZARDOUS |

14.3. Transport hazard class(es)

ADR

| Transport hazard class(es) (ADR) | : 9 |
| Danger labels (ADR) | : 9 |

IMDG

| Transport hazard class(es) (IMDG) | : 9 |
| Danger labels (IMDG) | : 9 |

IATA

| Transport hazard class(es) (IATA) | : 9 |
| Hazard labels (IATA) | : 9 |

ADN

| Transport hazard class(es) (ADN) | : 9 |
| Danger labels (ADN) | : 9 |

RID

| Transport hazard class(es) (RID) | : 9 |
Danger labels (RID) : 9

14.4. Packing group
Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards
Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
Classification code (ADR) : M7
Special provisions (ADR) : 274, 335, 601, 375
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Special packing provisions (ADR) : PP12, B3
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1, BK1, BK2
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAV, LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V13
Special provisions for carriage - Bulk (ADR) : VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :

Tunnel restriction code (ADR) : E
EAC code : 2Z

- Transport by sea
Special provisions (IMDG) : 274, 335, 966, 967, 969
Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002, LP02
Special packing provisions (IMDG) : PP12
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1, BK1, BK2, BK3
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A
## 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### SECTION 15: Regulatory information

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

**15.1.1. EU-Regulations**  
No REACH Annex XVII restrictions  
Contains no REACH candidate substance

**15.1.2. National regulations**  
No additional information available

#### 15.2. Chemical safety assessment

The mixture is registered as a plant protection product according to Regulation (EC) No.1107 / 2009.

### SECTION 16: Other information

This MSDS supersedes all previous editions.

HIATUS® is a registered trademark of ROTAM.
Data sources:


Full text of H- and EUH-phrases:

<table>
<thead>
<tr>
<th>Aquatic Acute 1</th>
<th>Hazardous to the aquatic environment - Acute Hazard Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Chronic 1</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 1</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitisation Category 1</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H400</td>
<td>Very toxic to aquatic life</td>
</tr>
<tr>
<td>H410</td>
<td>Very toxic to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II)

Disclaimer: The information provided by Rotam Europe Ltd contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.