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

1.1. Product identifier

Afalon
Pure substance/mixture Mixture

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

Recommended Use Herbicide
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier Address ADAMA Agricultural Solutions UK Ltd
Unit 15, Thatcham Business Village Colthrop Way,
Thatcham Berkshire RG19 4LW, UK: 01635 860555
Fax: 01635 861555

For further information, please contact

Email address ukenquiries@adama.com

1.4. Emergency telephone number

Emergency Telephone National Chemical Emergency Centre (UK):
Tel: 01865 407333 (24 hours)

Section 2: HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Carcinogenicity Category 2 - (H351)
Reproductive Toxicity Category 1B - (H360Df)
Specific target organ toxicity (repeated exposure) Category 2 - (H373)
Acute aquatic toxicity Category 1 - (H400)
Hazardous to the Aquatic Environment - Chronic Hazard Category 1 - (H410)

Classification according to Directive 67/548/EEC or 1999/45/EC
Full text of R-phrases: see section 16
2.2. Label elements

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

Hazard pictograms

Signal word: Danger

Hazard Statements:
- H351 - Suspected of causing cancer
- H360Df - May damage the unborn child. Suspected of damaging fertility
- H373 - May cause damage to organs through prolonged or repeated exposure
- H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements:
- P102 - Keep out of reach of children
- P201 - Obtain special instructions before use
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P501 - Dispose of contents/container to an approved waste disposal plant

EU Specific Hazard Statements:
- EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
- EUH208 - Contains 1,2-Benzisothiazolin-3-one, reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one. May produce an allergic reaction

Additional phrases for PPP:
- SP1 - Do not contaminate water with the product or its container

2.3. Other hazards
No information available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Weight-%</th>
<th>CAS No</th>
<th>EC No</th>
<th>Index No</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
<th>Classification according to 67/548/EEC</th>
<th>M-Factor</th>
<th>REACH Registration Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linuron</td>
<td>35-40</td>
<td>330-55-2</td>
<td>206-356-5</td>
<td>006-021-00-1</td>
<td>Acute Tox. 4 (H302) Repr. 1B (H360Df) Carc. 2 (H351) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Xn; R22-48/22 Repr.Cat.2; R61 Repr.Cat.3; R62 Carc.Cat.3; R40 N; R50-53</td>
<td></td>
<td>M=100 M=10</td>
<td></td>
</tr>
</tbody>
</table>

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

Section 4: FIRST AID MEASURES
4.1. Description of first aid measures

General advice
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). First aider: Pay attention to self-protection!

Inhalation
Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Call a physician.

Skin Contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician if necessary.

Eye contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Ingestion
Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.

Self-protection of the first aider
Use personal protective equipment as required.

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

Symptoms
None known

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

Note to physicians
Treat symptomatically.

Section 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
No information available.

5.2. Special hazards arising from the substance or mixture

No specific hazard known.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus
In the event of fire and/or explosion do not breathe fumes

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

For emergency responders
Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.
6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Other Information
See also section 8,13

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Advice on safe handling
Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.

7.3. Specific end use(s)

Risk Management Methods (RMM)
The information required is contained in this Material Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Derived No Effect Level (DNEL)  No information available
Predicted No Effect Concentration (PNEC)  No information available.

8.2. Exposure controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Personal protective equipment
Eye/face protection
Tight sealing safety goggles.
Body Protection
Gloves made of plastic or rubber, Suitable protective clothing.

General Hygiene Considerations
When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

Environmental exposure controls
Do not allow into any sewer, on the ground or into any body of water. Local authorities should be advised if significant spillages cannot be contained. Prevent product from entering drains.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES
9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>clear brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Urea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>8.9</td>
<td>CIPAC MT 75.3</td>
<td>solution (1 %)</td>
</tr>
<tr>
<td>Melting point/freezing point °C</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling point/boiling range °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point °C</td>
<td>&gt; 79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable for liquids</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure kPa</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density mg/l</td>
<td>1.14 - 1.24</td>
<td>CIPAC MT 3.3.2</td>
<td>20 °C</td>
</tr>
<tr>
<td>Solubility(ies) mg/l</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td></td>
<td></td>
<td>See Section 12 for more information</td>
</tr>
<tr>
<td>(n-octanol/water) Log Pow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature °C</td>
<td>566</td>
<td>EEC A.15</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature °C</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity mm2/s 40 °C</td>
<td>487.4</td>
<td>OECD 114</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not oxidizing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density g/ml</td>
<td>----</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Surface tension mN/m</td>
<td>----</td>
<td></td>
<td>No data available</td>
</tr>
</tbody>
</table>

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

Not available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

No information available

10.6. Hazardous decomposition products

None under normal use conditions.

Section 11: TOXICOLOGY INFORMATION
11.1. Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th></th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50 mg/kg</td>
<td>4480</td>
<td>Rat</td>
<td>OECD 401</td>
<td></td>
</tr>
<tr>
<td>Dermal LD50 mg/kg</td>
<td>&gt; 4000</td>
<td>Rat</td>
<td>OECD 402</td>
<td></td>
</tr>
<tr>
<td>Inhalation LC50 mg/l/4h</td>
<td>&gt; 1.74</td>
<td>Rat</td>
<td>OECD 403</td>
<td></td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Non-irritating to the skin (Rabbit, OECD 404)

Serious eye damage/eye irritation: Not irritating to eyes (Mouse, OECD 429)

Respiratory/skin sensitization: Not a skin sensitizer (Mouse, OECD 429)

Chronic toxicity

Germ cell mutagenicity

Chemical Name: Linuron
Not classified

Carcinogenicity

Chemical Name: Linuron
Suspected of causing cancer

Reproductive toxicity

Chemical Name: Linuron
May damage the unborn child. Suspected of damaging fertility (H360Df, OECD 404)

STOT - single exposure

Chemical Name: Linuron
No data available

STOT - repeated exposure

Chemical Name: Linuron
May cause damage to organs through prolonged or repeated exposure

Aspiration hazard

Chemical Name: Linuron
Not available

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity

<table>
<thead>
<tr>
<th></th>
<th>Values</th>
<th>Species</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish 96-hour LC50 mg/l</td>
<td>15.4</td>
<td>Rainbow trout</td>
<td>OECD 203</td>
<td></td>
</tr>
<tr>
<td>Crustacea 48-hour EC50 mg/l</td>
<td>15</td>
<td>Daphnia magna</td>
<td>OECD 202</td>
<td></td>
</tr>
<tr>
<td>Algae 72-hour EC50 mg/l</td>
<td>0.199</td>
<td>D. Subspicatus</td>
<td>OECD 201</td>
<td></td>
</tr>
<tr>
<td>Other plants EC50 mg/l</td>
<td>0.16</td>
<td>Lemna minor</td>
<td>OECD 221</td>
<td></td>
</tr>
</tbody>
</table>

Terrestrial Toxicity

Birds Oral LD50 mg/kg

Chemical Name: Linuron
314 Bobwhite quail

Bees Oral LD50 μg/bee

Chemical Name: Linuron
> 112
12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Abiotic Degradation</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water DT50 days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linuron</td>
<td>9.9</td>
<td>EPA-FIFRA 162-4</td>
<td></td>
</tr>
</tbody>
</table>

| Soil DT50 days      |        |        |         |
| Chemical Name       |        |        |         |
| Linuron             | 38 - 135 | 15-25 °C |         |

| Biodegradation      |        |        |         |
| Chemical Name       |        |        |         |
| Linuron             | No data available | |

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Partition Coefficient</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n-octanol/water) Log Pow</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linuron</td>
<td>3.0</td>
<td>EPA-FIFRA 63-11</td>
<td>23 °C</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bioconcentration factor (BCF)</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linuron</td>
<td>38</td>
<td>0.95 mg/l</td>
<td></td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Adsorption/Desorption</th>
<th>Values</th>
<th>Method</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linuron</td>
<td>743</td>
<td>OECD 106</td>
<td>Koc</td>
</tr>
</tbody>
</table>

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB

12.6. Other adverse effects

No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

<table>
<thead>
<tr>
<th>Waste from residues/unused products</th>
<th>Disposal should be in accordance with applicable regional, national and local laws and regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging</td>
<td>Improper disposal or reuse of this container may be dangerous and illegal.</td>
</tr>
<tr>
<td>Other Information</td>
<td>Waste codes should be assigned by the user based on the application for which the product was used.</td>
</tr>
</tbody>
</table>

Section 14: TRANSPORTATION INFORMATION

14.1 UN/ID No | 3082
14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Linuron)
14.3 Hazard Class | 9
14.4 Packing Group | III
14.5 Marine pollutant | Yes
14.6 Special precautions for user

RID/ADR
14.1 UN/ID No 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Linuron)
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Environmental hazard Yes
14.6 Special precautions for user

ICAO/IATA
14.1 UN/ID No 3082
14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Linuron)
14.3 Hazard Class 9
14.4 Packing Group III
14.5 Environmental hazard Yes
14.6 Special precautions for user
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

15.2 Chemical safety assessment
A chemical safety assessment according to regulation (EC) No. 1907/2006 is not required. A risk assessment was performed according to directive (EC) No. 91/414 or according to regulation (EC) No. 1107/2009.

Section 16: OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3
R22 - Harmful if swallowed
R40 - Limited evidence of a carcinogenic effect
R61 - May cause harm to the unborn child
R62 - Possible risk of impaired fertility
R48/22 - Harmful: danger of serious damage to health by prolonged exposure if swallowed
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-statements referred to under sections 2 and 3
H302 - Harmful if swallowed
H351 - Suspected of causing cancer if inhaled
H360Df - May damage the unborn child. Suspected of damaging fertility
H373 - May cause damage to organs through prolonged or repeated exposure
H400 - Very toxic to aquatic life
H410 - Very toxic to aquatic life with long lasting effects

Revision Note
*** - Change from previous version.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Disclaimer
The information provided in this Material 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.

End of Safety Data Sheet