SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006

BANNER MAXX
Version 7 - This version replaces all previous versions.
Revision Date 25.11.2013

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

1.1 Product identifier

Product name : BANNER MAXX
Design code : A6780D

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

Use : Fungicide

1.3 Details of the supplier of the safety data sheet

Company : Syngenta UK Limited
CPC4, Capital Park
Fulbourn, Cambridge
CB21 5XE

Telephone : (01223) 883400
Telefax : (01223) 882195
Website : www.greencast.co.uk

1.4 Emergency telephone number

: +44 (0) 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

Skin Sensitisation Sub-category 1B H317
Reproductive toxicity Sub-category 1B H360Df
Chronic aquatic toxicity Category 2 H411

Classification according to EU Directives 67/548/EEC or 1999/45/EC

T, Toxic
N, Dangerous for the environment
R43: May cause sensitisation by skin contact.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R61: May cause harm to the unborn child.
R62: Possible risk of impaired fertility.
### 2.2 Label elements

**Hazard pictograms**

- **Signal Word**: Danger

**Hazard Statements**
- H317: May cause an allergic skin reaction.
- H360Df: May damage the unborn child. Suspected of damaging fertility.
- H411: Toxic to aquatic life with long lasting effects.

**Precautions Statements**
- P102: Keep out of reach of children
- P201: Obtain special instructions before use.
- P280: Wear protective gloves/protective clothing.
- P308/P313: IF exposed or concerned: 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.

**Supplemental Information**
- EUH401: To avoid risks to human health and the environment comply with the instructions for use.

**Hazardous components which must be listed on the label:**
- Propiconazole
- Tetrahydrofurfuryl alcohol

**Labelling:**
- EU Directives 67/548/EEC or 1999/45/EC

**Symbol(s)**

**Toxic**

- R43: May cause sensitisation by skin contact.
- R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R61: May cause harm to the unborn child.
- R62: Possible risk of impaired fertility.

**Dangerous for the environment**

- S2: Keep out of the reach of children
- S13: Keep away from food, drink and animal feedingstuffs
- S20/21: When using do not eat, drink or smoke
- S35: This material and its container must be disposed or in a safe way
- S36/37: Wear suitable protective clothing and gloves.
- S57: Use appropriate containment to avoid environmental contamination

**Special labelling of certain mixtures**

To avoid risks to man and the environment, comply with instructions for use.
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Hazardous components which must be listed on the label:
- Propiconazole
- Tetrahydrofurfuryl alcohol

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No. EC-No. Registration number</th>
<th>Classification (67/548/EEC)</th>
<th>Classification (REGULATION (EC) No 1272/2008)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrofurfuryl alcohol</td>
<td>97-99-4 202-625-6</td>
<td>T R61 R62 R36</td>
<td>Repr. 1B; H360Df Eye Irrit.2; H319</td>
<td>40 - 50 % W/W</td>
</tr>
<tr>
<td>propiconazole</td>
<td>60207-90-1 262-104-4</td>
<td>Xn, N R22 R43 R50/53</td>
<td>Acute Tox.4; H302 Skin Sens.1B; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>14.3 % W/W</td>
</tr>
</tbody>
</table>

Substances for which there are Community workplace exposure limits.
For the full text of the R-phrases mentioned in this Section, see Section 16.
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 : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control centre or physician, or going for treatment.

Inhalation : Move the victim 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.

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.

Ingestion : If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed Symptoms : No information available.

4.3 Indication of any immediate medical attention and special treatment needed
SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Use alcohol-resistant foam or water spray.
Do not use a solid water stream as it may scatter and spread fire.

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 (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for fire-fighters:
Wear full protective clothing and self-contained breathing apparatus. Do not allow run-off from fire fighting 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
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions:
Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections
Refer to protective measures listed in sections 7 and 8.
Refer to disposal considerations listed in section 13.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling
No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities
No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)
Registered Crop Protection products: For proper and safe use of this product,
SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
<th>Type of exposure limit</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>propiconazole</td>
<td>8 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
</tbody>
</table>

The following recommendations for exposure controls/personal protection are intended for the manufacture, formulation and packaging of the product.

8.2 Exposure controls

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.

Respiratory protection: A combination gas, vapor and particulate respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand protection: Suitable material: nitrile rubber. 
Break through time: > 480 min
Glove thickness: 0.5 mm
Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Eye Protection: Eye protection is not usually required. Follow any site specific eye protection policies.

Skin and body protection: Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.) Wear as appropriate: impervious protective suit
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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>liquid</td>
</tr>
<tr>
<td>Form</td>
<td>liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Yellowish to orange</td>
</tr>
<tr>
<td>Odour</td>
<td>Aromatic, like solvent</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>5 - 9 at 1 % w/v</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 105°C at 997 hPa DIN EN 22719</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.09 g/cm³ at 20 ºC</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
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</tr>
<tr>
<td>Partition Coefficient n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>280 ºC</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
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<tr>
<td>Viscosity, dynamic</td>
<td>25.6 mPa.s at 40 ºC</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>59.8 mPa.s at 20 ºC</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not oxidising</td>
</tr>
</tbody>
</table>

9.2 Other information

Surface tension: 37.8 mN/m at 20 ºC
38.3 mN/m at 20 ºC

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: No information available.

10.2 Chemical Stability: No information available.

10.3 Possibility of hazardous reactions: No hazardous reactions by normal handling and storage according to provisions.

10.4 Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials: No substances are known which lead to the formation of hazardous substances or thermal reactions.

10.6 Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.
SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity: LD50 male rat, > 5,050 mg/kg
LD50 female rat, 4,343 mg/kg
The toxicological data has been taken from products of similar composition.

Acute inhalational toxicity: LC50 male and female rat, > 1.08 mg/l, 4 h
The toxicological data has been taken from products of similar composition.

Acute dermal toxicity: LD50 male and female rabbit, > 2,020 mg/kg
The toxicological data has been taken from products of similar composition.

Skin corrosion/irritation: Rabbit: non-irritating.
The toxicological data has been taken from products of similar composition.

Serious eye damage/eye irritation: Rabbit: moderately irritating
The toxicological data has been taken from products of similar composition.

Respiratory or skin sensitisation: Buehler Test guinea pig: A skin sensitizer in animal tests.

Germ cell mutagenicity: propiconazole
Did not show mutagenic effects in animal experiments.

Carcinogenicity: propiconazole
Did not show carcinogenic effects in animal experiments.

Reproductive toxicity: propiconazole tetrahydrofurfuryl alcohol
May damage the unborn child. Suspected of damaging fertility.

STOT – repeated exposure: propiconazole
No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish: LC50 Oncorhynchus mykiss (rainbow trout), 25 mg/l, 96 h
LC50 Lepomis macrochirus (Bluegill sunfish), 36 mg/l, 96 h

Toxicity to aquatic invertebrates: EC50 Daphnia magna Straus, 8.5 mg/l, 48 h

Toxicity to aquatic plants:
EbC50 Pseudokirchneriella subcapitata (green algae), 5.6 mg/l, 96 h
ErC50 Pseudokirchneriella subcapitata (green algae), 44 mg/l, 96 h
NOEC Pseudokirchneriella subcapitata (green algae), 0.46 mg/l, 96 h

12.2 Persistence and degradability

Biodegradability: propiconazole
Not readily biodegradable

Stability in water: Degradation half life: 28 - 64 d
Stable in water

Stability in soil: Degradation half life: 66 - 170 d
Not persistent in soil

12.3 Bioaccumulative potential

propiconazole: Low to medium mobility in soil.

12.4 Mobility in soil

propiconazole: Low to medium mobility in soil.

12.5 Results of PBT and vPvB assessment

propiconazole: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
This substance is not considered to be very persistent nor very bioaccumulating
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(vPvB).

12.6 Other adverse effects
None known.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: 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.

SECTION 14. TRANSPORT INFORMATION

Land transport (ADR/RID)

| 14.1 | UN Number          | UN 3082 |
| 14.2 | UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROPICONAZOLE) |
| 14.3 | Transport hazard class(es) | 9 |
| 14.4 | Packing Group | III |
| 14.5 | Environmental hazards | Environmentally hazardous |

Sea transport (IMDG)

| 14.1 | UN Number          | UN 3082 |
| 14.2 | UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROPICONAZOLE) |
| 14.3 | Transport hazard class(es) | 9 |
| 14.4 | Packing Group | III |
| 14.5 | Environmental hazards | Marine pollutant |

Air transport (IATA-DGR)

| 14.1 | UN Number          | UN 3082 |
| 14.2 | UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROPICONAZOLE) |
| 14.3 | Transport hazard class(es) | 9 |
| 14.4 | Packing Group | III |
| 14.6 | Special precautions for user | none |

14.6 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS-Labelling

<table>
<thead>
<tr>
<th>Hazard pictograms</th>
<th>Signal Word</th>
<th>Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>:Danger</td>
<td>:H317 May cause an allergic skin reaction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>:H360Df May damage the unborn child. Suspected of damaging fertility.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>:H411 Toxic to aquatic life with long lasting effects.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Precautions Statements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>:P102</td>
<td>Keep out of reach of children</td>
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<td>:P201</td>
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<td></td>
</tr>
</tbody>
</table>

| Supplemental Information | EUH401 | To avoid risks to human health and the environment comply with the instructions for use. |

Hazardous components which must be listed on the label:
- Propiconazole

15.2 Chemical Safety Assessment
A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION

Approval number, MAPP 13167.

Use plant protection products safely. Always read the label and product information before use. Based upon SDS release dated 08/09/2014, version 7 with local amendment.

Full text of R-phrases referred to under sections 2 and 3:

- R22 Harmful if swallowed.
- R36 Irritating to eyes.
- R43 May cause sensitisation by skin contact.
- R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R61 May cause harm to the unborn child.
- R62 Possible risk of impaired fertility
Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H360Df May damage the unborn child. Suspected of damaging fertility.
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 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.

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