AMISTAR TOP 325SC (CAM)

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

1.1 Product identifier
Product name: AMISTAR TOP 325SC (CAM)
Design code: A13703G

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 Crop Protection AG
Postfach
CH-4002 Basel
Switzerland
Telephone: +41 61 323 11 11
Telefax: +41 61 323 12 12
E-mail address: sds.ch@syngenta.com

1.4 Emergency telephone number
Emergency telephone number: +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EU) 1272/2008
Skin sensitisation Category 1 H317
Acute toxicity (Inhalation) Category 4 H332
Acute aquatic toxicity Category 1 H400
Chronic aquatic toxicity Category 1 H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Xn, Harmful
N, Dangerous for the environment
R20: Harmful by inhalation.
R43: May cause sensitisation by skin contact.
R51/53: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms

Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
                    H332 Harmful if inhaled.
                    H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : P102 Keep out of reach of children.
                           : P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
                           : P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
                           : P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
                           : P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
                           : P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
                           : P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
                           : P391 Collect spillage.
                           : P501 Dispose of contents/ container to an approved waste disposal plant.

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:
- azoxystrobin

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

Symbol(s)

R-phrase(s) : R20 Harmful by inhalation.
             : R43 May cause sensitisation by skin contact.
             : R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s) :
- S 2: 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 of in a safe way.
- S36/37: Wear suitable protective clothing and gloves.
- S57: Use appropriate container to avoid environmental contamination.

Additional Labelling: To avoid risks to man and the environment, comply with the instructions for use.

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

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>azoxystrobin</td>
<td>131860-33-8</td>
<td>T, N R23 R50/53</td>
<td>Acute Tox.3; H331 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>18.2 % W/W</td>
</tr>
<tr>
<td>difenoconazole</td>
<td>119446-68-3</td>
<td>Xn, N R22 R50/53</td>
<td>Acute Tox.4; H302 Aquatic Acute1; H400 Aquatic Chronic1; H410</td>
<td>11.4 % W/W</td>
</tr>
<tr>
<td>C16-18 alcohols, ethoxylated</td>
<td>68439-49-6</td>
<td>Xn R22 R41</td>
<td>Acute Tox.4; H302 Eye Dam.1; H318</td>
<td>15 - 25 % 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 center 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

Medical advice: There is no specific antidote available. Treat symptomatically.

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
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 firefighters

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).

If the product contaminates rivers and lakes or drains inform respective authorities.

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.

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

7.3 Specific end use(s)

Registered Crop Protection products: For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

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>azoxystrobin</td>
<td>2 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
<tr>
<td>difenoconazole</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 vapors 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 particulate filter 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**: 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. Suitable material: Nitrile rubber.

**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>light yellow to yellow</td>
</tr>
<tr>
<td>Odour</td>
<td>weak</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>no data available</td>
</tr>
<tr>
<td>pH (aqueous suspension)</td>
<td>5 - 9 at 1 % w/v</td>
</tr>
<tr>
<td></td>
<td>7.5 - 8.5 at 100 % w/v (20 °C)</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; 100 °C at 755 mmHg</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>1.11 g/cm³ at 20 °C</td>
</tr>
</tbody>
</table>
Solubility in other solvents: no data available
Partition coefficient: no data available
n-octanol/water: no data available
Auto-ignition temperature: 505 °C
Thermal decomposition: no data available
Viscosity, dynamic: 169 - 646 mPa.s at 20 °C
Viscosity, kinematic: no data available
Explosive properties: Not explosive
Oxidizing properties: not oxidizing

9.2 Other information
Miscibility: Miscible
Surface tension: 27.9 mN/m at 20 °C

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity
No information available.

10.2 Chemical stability
No information available.

10.3 Possibility of hazardous reactions
None known.
Hazardous polymerisation does not occur.

10.4 Conditions to avoid
No information available.

10.5 Incompatible materials
No information available.

10.6 Hazardous decomposition products
Combustion or thermal decomposition will evolve toxic and irritant vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity: LD50 female rat, > 2,000 mg/kg
Acute inhalation toxicity: LC50 male and female rat, 2.06 - < 5.17 mg/l, 4 h
Acute dermal toxicity: LD50 male and female rat, > 2,000 mg/kg
Skin corrosion/irritation: rabbit: Slightly irritating
Serious eye damage/eye irritation: rabbit: Mildly irritating
Respiratory or skin sensitisation: Buehler Test guinea pig: A skin sensitizer in animal tests.

Germ cell mutagenicity:
    - **azoxystrobin**: Did not show mutagenic effects in animal experiments.
    - **difenoconazole**: Did not show mutagenic effects in animal experiments.

Carcinogenicity:
    - **azoxystrobin**: Did not show carcinogenic effects in animal experiments.
    - **difenoconazole**: Did not show carcinogenic effects in animal experiments.

Reproductive toxicity:
    - **azoxystrobin**: Did not show reproductive toxicity effects in animal experiments.
    - **difenoconazole**: Did not show reproductive toxicity effects in animal experiments.

STOT - repeated exposure:
    - **azoxystrobin**: No adverse effect has been observed in chronic toxicity tests.
    - **difenoconazole**: 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), 1.7 mg/l, 96 h
- LC50 *Cyprinus carpio* (Carp), 4.2 mg/l, 96 h

**Toxicity to aquatic invertebrates**
- EC50 *Daphnia magna* (Water flea), 1.1 mg/l, 48 h

**Toxicity to aquatic plants**
- EbC50 *Pseudokirchneriella subcapitata* (green algae), 0.69 mg/l, 96 h
- ErC50 *Pseudokirchneriella subcapitata* (green algae), 3.9 mg/l, 96 h

#### 12.2 Persistence and degradability

**Biodegradability**
- **azoxystrobin**: Not readily biodegradable.
- **difenoconazole**: Degradation half life: 214 d
  - The substance is stable in water.
- **Stability in water**
  - **azoxystrobin**: Degradation half life: 1 d
  - Not persistent in water.
  - **difenoconazole**: Degradation half life: 149 - 187 d
  - Not persistent in soil.

**Stability in soil**
- **azoxystrobin**: Degradation half life: 80 d
  - Not persistent in soil.
- **difenoconazole**: Degradation half life: 149 - 187 d
  - Not persistent in soil.

#### 12.3 Bioaccumulative potential
azoxystrobin : Does not bioaccumulate.
difenoconazole : Difenoconazole has high potential to bioaccumulate.

12.4 Mobility in soil

azoxystrobin : Azoxystrobin has low to very high mobility in soil.
difenoconazole : Low mobility in soil.

12.5 Results of PBT and vPvB assessment

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

12.6 Other adverse effects

Other information : Classification of the product is based on the summation of the concentrations of classified components.

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 to an approved waste handling site for recycling or 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. (AZOXYSTROBIN AND DIFENOCONAZOLE)
- **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. (AZOXYSTROBIN AND DIFENOCONAZOLE)
- **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. (AZOXYSTROBIN AND DIFENOCONAZOLE)
- **14.3 Transport hazard class(es):** 9
- **14.4 Packing group:** III
- **14.5 Environmental hazards:**

**14.6 Special precautions for user**

none

**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

**GHS-Labelling**

- **Hazard pictograms**

<table>
<thead>
<tr>
<th>Pictogram</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Pictogram 1" /></td>
<td>Warning</td>
</tr>
<tr>
<td><img src="image2.png" alt="Pictogram 2" /></td>
<td>Environmentally hazardous</td>
</tr>
</tbody>
</table>

**Signal word** : Warning
Hazard statements:
- H303 May be harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
- P102 Keep out of reach of children.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P280 Wear protective gloves/ protective clothing.
- P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P391 Collect spillage.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Remarks:
- Classified using all GHS hazard classes and categories.
- Where the GHS contains options, the most conservative option has been chosen.
- Regional or national implementations of GHS may not implement all hazard classes and categories.

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

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

SECTION 16. OTHER INFORMATION

Further information
Full text of R-phrases referred to under sections 2 and 3:
- R22 Harmful if swallowed.
- R23 Toxic by inhalation.
- R41 Risk of serious damage to eyes.
- 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.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- H410 Very 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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