

AMISTAR TOP 325 SC

Version 5

Revision Date 22.10.2009

Print Date 22.10.2009

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

PRODUCT INFORMATION

Product name : AMISTAR TOP 325 SC
Design code : A13703G
Use : Fungicide
Company : Syngenta Crop Protection AG
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 Switzerland
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Harmful

Dangerous for
the environment

2. HAZARDS IDENTIFICATION

May cause an allergic skin reaction.
 Harmful if inhaled.
 Toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	EC-No. (REACH Regis- tration Number)	Symbol(s)	R-phrase(s)	Concentration
azoxystrobin	131860-33-8		T, N	R23 R50/53	18.2 % W/W
difenoconazole	119446-68-3		Xn, N	R22 R50/53	11.4 % W/W
alcohols, C16-18, ethoxylated	68439-49-6		Xn	R22 R41	15 - 25 % W/W

* Substances for which there are Community workplace exposure limits.
 For the full text of the R-phrases mentioned in this Section, see Section 16.

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4. 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.
- Medical advice** : There is no specific antidote available.
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- Suitable 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
- Extinguishing media which shall not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : 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.
- Special protective equipment for fire-fighters** : Wear full protective clothing and self-contained breathing apparatus.
- Further information** : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

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6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.
- Methods for 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).
- Additional advice** : If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE**HANDLING**

- Advice on 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.

STORAGE

- Requirements for storage areas and containers** : 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.
- Other data** : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
azoxystrobin	2 mg/m ³	8 h TWA	SYNGENTA
difenoconazole	8 mg/m ³	8 h TWA	SYNGENTA

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.

PERSONAL PROTECTIVE EQUIPMENT

- 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.

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- 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

9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state** : liquid
Form : liquid
Colour : light yellow to yellow
Odour : weak
pH : 5 - 9 at 1 % w/v
: 7.5 - 8.5 at 100 % w/v (20 °C)
Flash point : > 100 °C at 755 mmHg
Autoignition temperature : 505 °C
Oxidizing properties : not oxidizing
Explosive properties : Not explosive
Density : 1.11 g/cm³ at 20 °C
Miscibility : Miscible
Viscosity, dynamic : 169 - 646 mPa.s at 20 °C
: 98.0 - 472 mPa.s at 40 °C
Surface tension : 27.9 mN/m at 20 °C

10. STABILITY AND REACTIVITY

- Hazardous decomposition products** : Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous reactions : None known.
Hazardous polymerisation does not occur.
Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

- Acute oral toxicity** : LD50 female Rat, > 2,000 mg/kg
GHS-Classification
None
Acute inhalation toxicity : Median lethal concentration male and female Rat, 2.06 - 5.17 mg/l, 4 h
GHS-Classification
Category 4
Acute dermal toxicity : LD50 male and female Rat, > 2,000 mg/kg
GHS-Classification
None

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Skin irritation	:	Rabbit: Slightly irritating GHS-Classification None
Eye irritation	:	Rabbit: Mild eye irritation GHS-Classification None
Sensitisation	:	guinea pig: A skin sensitizer in animal tests. GHS-Classification Category 1
Long term toxicity		
azoxystrobin	:	Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.
difenoconazole	:	Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Stability in water

azoxystrobin	:	Degradation half life: 214 d Azoxystrobin is stable in water.
difenoconazole	:	Degradation half life: 1 d Difenoconazole is not persistent in water

Stability in soil

azoxystrobin	:	Degradation half life : 80 d Azoxystrobin is not persistent in soil.
difenoconazole	:	Degradation half life : 149 - 187 d Difenoconazole is not persistent in soil.

Mobility

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

Bioaccumulation

azoxystrobin	:	Azoxystrobin has medium bioaccumulation potential.
difenoconazole	:	Difenoconazole has high potential to bioaccumulate.

ECOTOXICITY EFFECTS

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 daphnia and other aquatic invertebrates.	:	EC50 Daphnia magna (Water flea), 1.1 mg/l , 48 h
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- Toxicity to algae** : EbC50 Pseudokirchneriella subcapitata (green algae), 0.587 mg/l , 72 h
- : ErC50 Pseudokirchneriella subcapitata (green algae), 3.09 mg/l , 72 h

FURTHER INFORMATION ON ECOLOGY

- Additional ecological information** : GHS-Classification
Category 2

13. DISPOSAL CONSIDERATIONS

- 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.

14. TRANSPORT INFORMATION**Land transport**

- ADR:*
- UN-Number: 3082
Class: 9
Labels: 9
Packaging group: III
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)
Environmentally hazardous: Environmentally hazardous

Sea transport

- IMDG:*
- UN-Number: 3082
Class: 9
Labels: 9
Packaging group: III
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (AZOXYSTROBIN AND DIFENOCONAZOLE)

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Marine pollutant : Marine pollutant

Air transport

IATA-DGR:

UN/ID No.: UN 3082

Class: 9

Labels: 9

Packaging group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(AZOXYSTROBIN AND DIFENOCONAZOLE)

15. REGULATORY INFORMATION

Labelling according to EC Directives

Hazardous components which must be listed on the label:

- azoxystrobin

Symbol(s)	: Xn N	Harmful Dangerous for the environment
R-phrases(s)	: R20 R43 R51/53	Harmful by inhalation. May cause sensitisation by skin contact. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	: S 2 S13 S20/21 S35 S36/37 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. Use appropriate container to avoid environmental contamination.
Note	: The product is classified and labelled in accordance with Directive 1999/45/EC.	
Special labelling of certain mixtures	: To avoid risks to man and the environment, comply with the instructions for use.	

GHS-Labeling

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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Pictogram



Signal word	:	Warning
Hazard statements	:	H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	:	P102 Keep out of reach of children. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/clothing. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. 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

16. OTHER INFORMATION

Further information

Text of R-phrases mentioned in Section 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.

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.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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