

Safety Data Sheet

Revision date: 13th February 2009

1st version

Headway

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND COMPANY OR UNDERTAKING

Tradename Headway
 Design Code A14212C
 AGI Code 35324

Company Identification

Company Syngenta Crop Protection UK Ltd
 CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
 Phone (01223) 883400
 Fax (01223) 882195
 Website www.syngenta-crop.co.uk
 Emergency Phone **+44 (0) 1484 538444 (24h)**

2. HAZARDS IDENTIFICATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrase(s)	Concentration
azoxystrobin	131860-33-8	-	T, N	R23 R50/53	5.7% w/w
propiconazole	60207-90-1	262-104-4	Xn, N	R22, R43, R50/53	9.5% w/w
Poly(oxy-1,2-ethanediyl),alpha-[tris(1-phenylethyl)phenyl]-omega-hydroxy	99734-09-5	-	-	R52/53	10-15% w/w
Tetrahydrofurfyl alcohol	97-99-4	202-625-6	Xi	R36	60-80% w/w

For the full text of the R phrases mentioned in this Section, see Section 16.

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 centre or physician, or going for treatment.

Inhalation: Remove 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: Use alcohol-resistant foam or water spray.

Extinguishing media which must 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.

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 and collect spillage 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

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.

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 feeding stuffs.

Other data: Physically and chemically stable for at least 2 years when stored in the original unopened sales containers at ambient temperatures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value type	Source
azoxystrobin	2 mg/m ³	8 h TWA	SYNGENTA
propiconazole	10 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 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.

PERSONAL PROTECTIVE EQUIPMENT

When using this product refer to the label for details. In all other cases, use the following 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: No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

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 changed when breakthrough is suspected.

Suitable material: nitrile rubber.

Eye protection: If eye contact is possible, use tight-fitting chemical safety goggles and a face shield.

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

Form:	liquid.
Colour:	light yellow to brown
pH:	4-8 at 1 %w/v
Flash point:	78 °C at 752 mm Hg
Autoignition temperature:	265 °C
Oxidising properties:	not oxidising
Explosive properties:	not explosive
Density:	1.088 g/cm ³

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

Hazardous reactions: None known. Hazardous polymerisation does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral LD50, female rat: 2,176 mg/kg
GHS Classification: Category 5

Acute inhalation LC50, rat: >2.68 mg/l, 4 h
GHS Classification: None

Acute dermal LD50, rat: > 5,050 mg/kg
GHS Classification: None

Skin irritation, rabbit: Non-irritating.
GHS Classification: None

Eye irritation, rabbit: Rabbit Moderately irritating.
GHS Classification: Category 2B

Sensitisation, guinea pig: guinea-pig: Not a skin sensitizer in animal tests.
GHS Classification: None

Long term toxicity

Did not show carcinogenic, tetragenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation: Azoxystrobin has medium bioaccumulation potential. Propiconazole has low to medium potential to bioaccumulate.

Stability in water: Degradation half life: >12 d at 25 °C. Azoxystrobin is stable in water. Propiconazole is stable in water.

Stability in soil: Degradation half life: 59.5 d. Azoxystrobin is not persistent in soil. Propiconazole is not persistent in soil.

Mobility: Azoxystrobin has low to very high mobility in soil. Propiconazole has low to medium mobility in soil.

ECOTOXICITY EFFECTS

Toxicity to fish: LC50 *Cyprinus carpio* (Carp), 10.7 mg/l, 96h.
GHS Classification: Category 3 (based on test results obtained with similar product)

Toxicity to aquatic invertebrates: *Daphnia magna* (Water flea), 2.2mg/l, 48 h,
GHS Classification: Category 3 (based on test results obtained with similar product).

Toxicity to algae: EbC50 *Selenastrum capricornutum* (green algae) 2.6 mg/l, 96 h
ErC50 *Selenastrum capricornutum* (green algae) 9.4 mg/l, 96h
GHS Classification: Category 2
(based on test results obtained with similar product).

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 for local recycling or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Rail / Road / Sea / Air Transport (RID / ADR / IMDG / IATA)	Class	UN Number	Packaging Group
	9	3082	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (PROPIICONAZOLE AND AZOXYSTROBIN)		
Marine pollutant:	Marine pollutant		

15. REGULATORY INFORMATION

Classifications /

Hazard symbols	N	DANGEROUS FOR THE ENVIRONMENT
Risk phrases (R)	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases (S)	2	Keep out of the reach of children.
	13	Keep away from food, drink and animal feeding stuffs.
	20/21	When using, do not eat, drink or smoke.
	35	This material and its container must be disposed of in a safe way.
	36/37	Wear suitable protective clothing and gloves.
	57	Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use. Contains propiconazole. May produce an allergic reaction.

16. OTHER INFORMATION

Always read the label. Use pesticides safely.
Product registration number: MAPP 14396

Based on edition 14/01/2008, version 1.

Text of R phrases mentioned in Section 2:

R22 Harmful if swallowed.

R23 Toxic by inhalation.

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.

R52/53 Harmful 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.
