HEADWAY

Version 6 - This version replaces all previous versions.
Revision Date 11.09.2014

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

1.1 Product identifier

Product name : **HEADWAY**

Design code : A14212C

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

Use : Fungicide

1.1 Details of the supplier of the safety data sheet

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

1.3 Telephone : (01223) 883400

Telefax : (01223) 882195

E-mail address : www.syngenta.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

Eye irritation	Category 2	H319
Reproductive toxicity	Sub-category 1B	H360Df
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

N, Dangerous for the environment
T, Toxic
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

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms

Signal Word	:Danger	
Hazard Statements	:H319	Causes serious eye irritation
	:H360Df	May damage the unborn child. Suspected of damaging fertility.
	:H410	Very 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 eye protection/face protection
	: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: TETRAHYDROFURFURYL ALCOHOL

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

Symbol(s)

Toxic Dangerous for the Environment

R-phrase(s)	: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
S-phrase(s)	:S2	Keep out of 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.
Special labelling of certain mixtures	To avoid risks to man and the environment, comply with instructions for use.	
	EUH208	Contains propiconazole. May produce an allergic reaction.

2.1 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC No. Registration number	Classification (67/548/EEC)	Classification (REGULATION (EC) No 1272/2008)	Concentration
TETRAHYDROFURFURYL ALCOHOL	97-99-4 202-625-6	T R61 R62 R36	Repr. 1B: H360Df Eye Irrit.2; H319	60 - 80 % W/W
poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]--hydroxy-	99734-09-5 70559-25-0	R52/53	Aquatic Chronic3; H412	10 - 15 % W/W
propiconazole	60207-90-1 262-104-4	Xn, N R22 R43 R50/53	Acute Tox.4; H302 Skin Sens.1B; H317 Aquatic Acute1; H400 Aquatic Chronic1; H410	9.5 % W/W
azoxystrobin	131860-33-8	T, N R23 R50/53	Acute Tox.3; H331 Aquatic Acute1; H400 Aquatic Chronic1; H410	5.7 % 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.
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

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
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, please refer to the approval conditions laid down on the product label.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
azoxystrobin	2 mg/m3	8 h TWA	SYNGENTA
propiconazole	8 mg/m3	8 h TWA	SYNGENTA

8.2 Exposure controls

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

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 dust is 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 : No personal respiratory protective equipment normally required. A particulate filter respirator may be necessary until effective technical measures are installed.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	:	liquid
Form	:	liquid
Colour	:	Light yellow to brown
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	4-8 at 1% w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	78 ºC at 752 mmHg
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.088 g/cm³
Solubility in other solvents	:	No data available
Partition Coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	265 ºC
Thermal decomposition	:	No data available
Viscosity, dynamic	:	18 mPa.s at 20 ºC
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not oxidising

9.2 Other information

Surface tension	:	38.5 mN/m at 20 °C

SECTION 10. STABILITY AND REACTIVITY

10.1	**Reactivity**	:	See Section 10.3 “Possibility of hazardous reactions”
10.2	**Chemical Stability**	:	The product is stable when used in normal conditions
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 female rat, 2,176 mg/kg
Acute inhalational toxicity	:	LC50 male and female rat, >2.68 mg/l, 4h
Acute dermal toxicity	:	LD50 male and female rat, > 5,050 mg/kg
Skin corrosion/irritation	:	Rabbit: non-irritating
Serious eye damage/eye irritation	:	Rabbit: moderately irritating
Respiratory or skin sensitisation	:	Guinea pig: not a skin sensitiser in animal tests.
Germ cell mutagenicity		
propiconazole	:	Did not show mutagenic effects in animal experiments.
azoxystrobin		Did not show mutagenic effects in animal experiments.
Carcinogenicity		
propiconazole	:	Did not show carcinogenic effects in animal experiments.
azoxystrobin		Did not show carcinogenic effects in animal experiments.
Reproductive toxicity		
Tetrahydrofurfuryl alchol	:	May damage the unborn child. Suspected of damaging fertility.
propiconazole		Did not show reproductive toxicity effects in animal experiments.
azoxystrobin		Did not show reproductive toxicity effects in animal experiments.
STOT – repeated exposure		
propiconazole	:	No adverse effect has been observed in chronic toxicity tests.
azoxystrobin		No adverse effect has been observed in chronic toxicity tests.

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	:	LC50 *Cyprinius carpio* (carp), 10.7 mg/l, 96h Based on test results obtained with similar product.
Toxicity to aquatic invertebrates	:	EC50 *Daphnia magna* (water flea), 2.2 mg/l, 48h Based on test results obtained with similar product.
Toxicity to aquatic plants	:	ErC50 *Pseudokirchneriella subcapitata* (green algae), 8.2 mg/l. 96h EbC50 *Pseudokirchneriella subcapitata* (green algae), 1.6 mg/l. 96h Based on test results obtained with similar product.

12.2 Persistence and degradability

Biodegradability		
propiconazole	:	Not readily biodegradable.
azoxystrobin		Not readily biodegradable.
Stability in water	:	
Propiconazole		Degradation half life: 28 - 64 d. Stable in water
azoxystrobin		Degradation half life: 214 d. Stable in water
Stability in soil	:	
Propiconazole		Degradation half life: 66 - 170 d. Not persistent in soil
azoxystrobin		Degradation half life: 80 d. Not persistent in soil

12.3 Bioaccumulative potential

propiconazole	:	Low to medium mobility in soil.
azoxystrobin		Does not bioaccumulate

12.4 Mobility in soil

propiconazole	:	Low to medium mobility in soil.
azoxystrobin		Low to very high mobility in soil

12.5 Results of PBT and vPvB assessment

propiconazole azoxystrobin	:	These substances are not considered to be persistent, bioaccumulating nor toxic (PBT). These substances are 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 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 AND AZOXYSTROBIN)
14.3	**Transport hazard class(es)**	**:**	9
14.4	**Packing Group**	**;**	III
Labels		**:**	9
14.5	**Environmental hazards** **Tunnel restriction code**	**:**	Environmentally hazardous E

Sea transport (IMDG)

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

Air transport (IATA-DGR)

14.1	**UN Number**	:	UN 3077
14.2	**UN proper shipping name**	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PROPICONAZOLE AND AZOXYSTROBIN)
14.3	**Transport hazard class(es)**	:	9
14.4	**Packing Group**	;	III
Labels		:	9
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

Signal Word	:Danger	
Hazard Statements	:H319	Causes serious eye irritation
	:H360Df	May damage the unborn child. Suspected of damaging fertility.
	:H410	Very 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 eye protection/face protection
	: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: Tetrahydrofurfuryl alcohol

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

SECTION 16. OTHER INFORMATION

Further information
Approval number, MAPP 14396.

Use plant protection products safely. Always read the label and product information before use.

Based upon SDS release dated 11/09/2014, version 6 with local amendment.

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

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
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
H331	Toxic if inhaled
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.
H412	Harmful 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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