

REFLECT

Version 7 - This version replaces all previous versions.

Revision Date 23.09.2013

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

1.1 Product identifier

Product name : REFLECT

Design code : A15149W

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

Website : www.syngenta.co.uk

1.4 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

Acute toxicity (Oral)	Category 4	H302
Acute toxicity (Inhalation)	Category 4	H332
Eye irritation	Category 2	H319
Reproductive toxicity	Category 2	H361d
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.

2.2 Label elements

Labelling: Regulation (EC) No. 1272/2008

Hazard pictograms



Signal Word :Warning

Hazard Statements	:H302	Harmful if swallowed.
	:H319	Causes serious eye irritation.
	:H332	Harmful if inhaled
	:H351	Suspected of causing cancer
	:H361d	Suspected of damaging the unborn child.
	:H410	Very toxic to aquatic life with long lasting effects.

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Precautions Statements	:P102	Keep out of reach of children.
	:P201	Obtain special instructions before use.
	:P202	Do not handle until all safety precautions have been read and understood.
	:P261	Avoid breathing fume/ gas/ mist/vapours/spray.
	:P264	Wash hands thoroughly after handling.
	:P270	Do not eat, drink or smoke when using this product.
	:P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
	:P301+P312	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
	:P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	:P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
	:P308/P313	If exposed or concerned: Get medical advice/ attention.
	:P312	Call a POISON CENTER or doctor/ physician if you feel unwell.
	:P330	Rinse mouth.
	:P337+P313	If eye irritation persists get medical advice/attention.
	:P391	Collect spillage.
Supplemental Information	: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.
	:EUH208	Contains isopyrazam: may produce an allergic reaction.
	: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:

- isopyrazam

2.3 Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Registration number	Classification (REGULATION (EC) No 1272/2008)	Concentration
mixture of octanoic acid-decanoic acid- N,N-dimethylamide	14433-76-2 1118-92-9 238-405-1 214-272-5	Skin Irrit.2; H315 Eye Dam.1; H318	40 - 50 % W/W
isopyrazam	881685-58-1	Skin Sens.1B; H317 Repr.2; H361d Aquatic Acute1; H400 Aquatic Chronic1; H410	13.2 % W/W

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calcium dodecylbenzene sulphonate	26264-06-2 247-557-8 284-903-7 290-635-1	Skin Irrit.2; H315 Eye Dam.1; H318	1 - 5 % W/W
poly(oxy-1,2-ethanediyl)-[2,4,6-tris(1-phenylethyl)phenyl]-hydroxy-	99734-09-5 70559-25-0	Aquatic Chronic3; H412	1 - 5 % W/W

Substances for which there are Community workplace exposure limits.

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

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- 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
isoprazam	1 mg/m ³	8 h TWA	SYNGENTA

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.

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	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	: 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	: If eye contact is possible, use tight-fitting chemical safety goggles.
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	: Mobile, clear
Colour	: Light brown to dark brown
Odour	: characteristic
Odour Threshold	: No data available
pH	: 3 - 7 at 1 % w/v (20 - 25 °C) (as an emulsion)
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: 91 °C at 100.2 Pensky-Martens c.c.
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	: 0.954 g/cm ³ at 20 – 25 °C
Solubility in other solvents	: No data available
Partition Coefficient	: No data available
n-octanol/water	
Autoignition temperature	: 225 °C
Thermal decomposition	: No data available
Viscosity, dynamic	: 11.4 mP.a.s at 20 °C 5.6 mP.a.s at 40 °C
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not oxidising

9.2 Other information

Surface tension	: 31.1 mN/m at 20 °C
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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 vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	: LD50 female rat, 1,750 mg/kg The toxicological data has been taken from products of similar composition.
Acute inhalational toxicity	: LC50 male and female rat, > 2.71 - < 5 mg/l, 4 h The toxicological data has been taken from products of similar composition.
Acute dermal toxicity	: LD50 male and female rat, > 5,000 mg/kg The toxicological data has been taken from products of similar composition.
Skin corrosion/irritation	: rabbit: Moderately irritating The toxicological data has been taken from products of similar composition.
Serious eye damage/eye irritation	: rabbit: irritating The toxicological data has been taken from products of similar composition.
Respiratory or skin sensitisation	: Buehler Test guinea pig: Not a skin sensitizer in animal tests. The toxicological data has been taken from products of similar composition.
Germ cell mutagenicity	: isopyrazam Did not show mutagenic effects in animal experiments.
Carcinogenicity	: isopyrazam Did not show carcinogenic effects in animal experiments.
Teratogenicity	: isopyrazam Did not show teratogenic effects in animal experiments.
Reproductive toxicity	: isopyrazam Animal testing did not show any effects on fertility. Evidence of developmental toxicity at high doses (reduction in eye size).

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish	: LC50 <i>Oncorhynchus mykiss</i> (rainbow trout), 0.32 mg/l, 48 h Based on test results obtained with similar product.
Toxicity to aquatic invertebrates	: EC50 <i>Daphnia magna</i> (water flea), 0.35 mg/l, 48 h Based on test results obtained with similar product.
Toxicity to aquatic plants	: EbC50 <i>Pseudokirchneriella subcapitata</i> (green algae), 12 mg/ml, 96 h ErC50 <i>Pseudokirchneriella subcapitata</i> (green algae), 33 mg/l, 96 h. Based on test results obtained with similar product.

12.1 Persistence and degradability

Biodegradability	Isopyrazam	Not readily biodegradable.
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Stability in water	Isopyrazam	Degradation half-life: 21d. Not persistent in water.
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Stability in soil

Isoprazam

Degradation half-life: 70d. Not persistent in soil.

12.2 Bioaccumulative potential

isoprazam

Does not bioaccumulate.

12.3 Mobility in soil

isoprazam

Low to slight mobility in soil.

12.4 Results of PBT and vPvB assessment

isoprazam

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).

12.5 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. (ISOPRAZAM)
14.3	Transport hazard class(es)	:	9
14.4	Packing Group	:	III
Labels		:	9
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. (ISOPRAZAM)
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 3082
14.2	UN proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOPRAZAM)
14.3	Transport hazard class(es)	:	9

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14.4	Packing Group	:	III
	Labels	:	9
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

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

GHS-Labeling

Hazard pictograms



Signal Word

:Warning

Hazard Statements

:H302
:H319
:H332
:H351
:H361d
:H410

Harmful if swallowed.
Causes serious eye irritation.
Harmful if inhaled
Suspected of causing cancer
Suspected of damaging the unborn child.
Very toxic to aquatic life with long lasting effects.

Precautions Statements

:P102
:P201
:P202
:P261
:P264
:P270
:P280
:P301+P312
:P304+P340
:P305+P351+P338
:P308/P313
:P312
:P330
:P337+P313
:P391
:P501

Keep out of reach of children.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/ gas/ mist/vapours/spray.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.
If exposed or concerned: Get medical advice/ attention.
Call a POISON CENTER or doctor/ physician if you feel unwell.
Rinse mouth.
If eye irritation persists get medical advice/attention.
Collect spillage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection

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		site except for empty clean containers which can be disposed of as non-hazardous waste.
Supplemental Information	:EUH208	Contains isopyrazam: may produce an allergic reaction.
	: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:

- isopyrazam

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION**Further information**

Approval number, MAPP 17228

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

Based upon SDS release dated 23/09/2013, version 7 with local amendment.

Full text of H-Statements referred to under sections 2 and 3.

H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361d	Suspected of damaging the unborn child.
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 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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