PLOVER

Version 10 - This version replaces all previous versions.
Revision Date 14.10.2013

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

1.1 Product identifier

Product name : **PLOVER**

Design code : A7402T

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

Telephone : (01223) 883400

Telefax : (01223) 882195

Website : www.syngenta.co.uk

1.4 Emergency telephone number

: (0) 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008

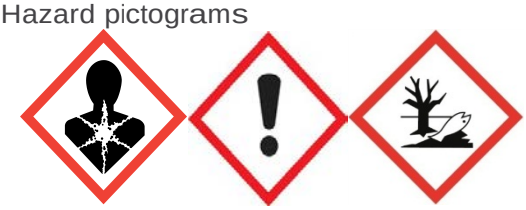
Aspiration hazard	Category 1	H304
Eye irritation	Category 2	H319
Chronic aquatic toxicity	Category 1	H410

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	:Danger	
Hazard Statements	:H304	May be fatal if swallowed and enters airways.
	:H410	Very toxic to aquatic life with long lasting effects.
Precautions Statements	:P102	Keep out of reach of children.
	:P273	Avoid release to the environment.
	:P280	Wear protective gloves/protective clothing/eye protection/face protection.
	:P301/P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
	:P305/P351/P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	:P331	Do NOT induce vomiting.
	: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 for 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:

- solvent naphtha (petroleum), highly arom.

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
solvent naphtha (petroleum), highly arom.	64742-94-5 265-198-5 922-153-0 01-2119451097-39-0002	Asp. Tox.1; H304 Aquatic Chronic 2; H411	60 – 70 % w/w
difenoconazole	119446-68-3	Acute Tox.4; H302 Aquatic Acute1; H400 Aquatic Chronic1; H410	23.2 % w/w
poly(oxy-1,2-ethanediyl), alpha-9-octadecenyl-omega-	9004-98-2	Acute Tox.4; H302 Eye Dam.1; H318	1 – 5 % w/w

hydroxyl-, (Z)-			
Calcium bis (dodecyl benzenesulphonate), branched	70528-83-5 68953-96-8 26264-06-2 11117-11-6 274-654-2 273-234-6 234-360-7	Eye Dam.1; H318 Skin Irrit.2; H315 Aquatic Chronic 2; H411	1 – 5 % w/w
2-methylpropan-1-ol	78-83-1 201-148-0 01-2119484609-23-0012	Flam. Liq.3; H226 STOT SE3; H335 Skin Irrit.2; H315 Eye Dam.1; H318 STOT SE3; H336	1 – 3 % 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 : Aspiration may cause pulmonary oedema and pneumonitis.

4.3 Indication of any immediate medical attention and special treatment needed

Medical advice :There is no specific antidote available. Treat symptomatically. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

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). 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.

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
difenoconazole	8 mg/m³	8 h TWA	SYNGENTA
solvent naphtha (petroleum), highly arom.	15 ppm, 100 mg/m³	8 h TWA	SUPPLIER
2-methylpropan-1-ol	1,600 ppm 50 ppm 100 ppm 50 ppm 100 ppm 50 ppm, 231 mg/m³	 8 h TWA 15 min STEL 8 h TWA 8 h TWA 8 h TWA	NIOSH SUVA SUVA ACGIH DFG UK HSE

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. Personal protective equipment should be certified to appropriate standards.

Respiratory protection : A combination gas, vapour and 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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical State	:	Liquid
Form	:	Liquid
Colour	:	Yellow to brown
Odour	:	aromatic
Odour Threshold	:	No data available
pH	:	5 – 9 at 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	71 °C Seta closed cup
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	:	1.071 g/cm³ at 20 °C
Solubility in other solvents	:	No data available
Partition Coefficient n-octanol/water	:	No data available
Autoignition temperature	:	460 °C
Thermal decomposition	:	No data available
Viscosity, dynamic	:	26.0 mPa.s at 20 °C 10.5 mPa.s at 40 °C
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not oxidising

9.2 Other information

Miscibility	:	Miscible
Surface tension		36.0 mN/m at 25 °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 vapours.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	:	LD50 female rat, 3,129 mg/kg
Acute inhalational toxicity	:	LD50 male and female rat, > 5.17 mg/l, 4 h
Acute dermal toxicity	:	LD50 male and female rat, > 5,000 mg/kg
Skin corrosion/irritation	:	Rabbit: slightly 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	:	
difenoconazole		Did not show mutagenic effects in animal experiments.
2-methylpropan-1-ol		Did not show mutagenic effects in animal experiments.
Carcinogenicity	:	
difenoconazole		Did not show carcinogenic effects in animal experiments.
2-methylpropan-1-ol		Did not show carcinogenic effects in animal experiments.
Reproductive toxicity	:	
difenoconazole		Did not show reproductive toxicity effects in animal experiments.
2-methylpropan-1-ol		Did not show reproductive toxicity effects in animal experiments.
STOT – single exposure		
2-methylpropan-1-ol		May cause drowsiness or dizziness
STOT – repeated exposure	:	
difenoconazole		No adverse effect has been observed in chronic toxicity tests.
2-methylpropan-1-ol		No adverse effect has been observed in chronic toxicity tests.
Aspiration toxicity	:	The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.
Solvent naphtha (petroleum), highly arom.		

SECTION 12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	:	LC50 *Oncorhynchus mykiss* (rainbow trout), 3.7 mg/l, 96 h
Toxicity to aquatic invertebrates	:	EC50 *Daphnia magna* (water flea), 4.3 mg/l, 48 h
Toxicity to aquatic plants	:	EbC50 *Desmodesmus subspicatus* (green algae), 1.7 mg/l, 72 h ErC50 *Desmodesmus subspicatus* (green algae), 4.4 mg/l, 72 h

12.2 Persistence and degradability

Stability in water	:	
difenoconazole		Degradation half life: 1 d. Not persistent in water
Stability in soil	:	
difenoconazole		Degradation half life: 149 – 187 d. Not persistent in soil

12.3 Bioaccumulative potential

difenoconazole	:	High potential for bioaccumulation.

12.4 Mobility in soil

difenoconazole	:	Low mobility in soil.

12.5 Results of PBT and vPvB assessment

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 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. (DIFENOCONAZOLE AND SOLVENT NAPHTHA)
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. (DIFENOCONAZOLE AND SOLVENT NAPHTHA)
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. (DIFENOCONAZOLE AND SOLVENT NAPHTHA)
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	:H304	May be fatal if swallowed and enters airways.
	:H410	Very toxic to aquatic life with long lasting effects.
Precautions Statements	:P102	Keep out of reach of children.
	:P273	Avoid release to the environment.
	:P280	Wear protective gloves/protective clothing/eye protection/face protection.
	:P301/P310	IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
	:P305/P351/P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	:P331	Do NOT induce vomiting.
	: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 for 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:

- solvent naphtha (petroleum), highly arom.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. OTHER INFORMATION

Approval number, MAPP 17288.
Use plant protection products safely. Always read the label and product information before use.

Based upon SDS release dated 14/10/2013, version 10 with local amendment.

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

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness and dizziness
H400	Very toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects
H411 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 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.