

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

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION

Tradename **DUAL GOLD**
 Design Code **A9396G**
 AGI Code **39823**

COMPANY/UNDERTAKING 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. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

CAS NO.	EC NO.	CHEMICAL NAME	CONCENTRATION (% W/W)	HAZARD SYMBOLS	RISK PHRASES (R)
87392-12-9	–	S-metolachlor	86.5	Xi, N	43, 50/53
78-83-1	201-148-0	1-propanol, 2-methyl-	1–2	Xi	10, 37/38, 41, 67
262464-06-2, 84989-14-0, 90194-26-6	247-557-8	benzenesulfonic acid, dodecyl-, calcium salt	1–5	Xi	38, 41
64742-94-5	265-198-5	solvent naphtha (petroleum), highly arom.	2–12	Xi, N	65, 66, 51/53
99734-09-5, 70559-25-0	–	poly(oxy-1,2-ethanediyl), alpha-[2,4,6-tris(1-phenylethyl)phenyl]-omega-hydroxy-	1–5	–	52/53

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

3. HAZARDS IDENTIFICATION

May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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.

HERBICIDE

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: In the event of fire, wear 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

HANDLING

Advice on safe handling: No special technical protective measures required. No special handling advice 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 feeding stuffs.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

Components	Exposure limit(s)	Value type	Source
S-metolachlor	10 mg/m ³	8 h TWA	SYNGENTA
1-propanol, 2-methyl-	1,600 ppm		NIOSH
	50 ppm		SUVA
	100 ppm	15 min STEL	SUVA
	50 ppm	8 h TWA	ACGIH
	100 ppm	8 h TWA	DFG

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 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 suit.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid
Colour:	Light yellow to dark brown
pH:	4–8 at 1% w/v
Flash point:	>70°C
Density:	1.11 g/cm ³

HERBICIDE

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 Toxicity Rat LD₅₀: Female rat, 2,149 mg/kg; Male rat, 3,397 mg/kg

Acute Dermal Toxicity Rat LD₅₀: Female and male rat >2000 mg/kg

Acute Inhalation Toxicity LC₅₀: Rat, >5.09 mg/l, 4 h

Skin Irritation Rabbit: Not irritant

Eye Irritation Rabbit: Not irritant.

Skin Sensitisation – Buehler Test Guinea Pig: A skin sensitiser in animal tests.

LONG-TERM TOXICITY:

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

12. ECOLOGICAL INFORMATION

ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)

Bioaccumulation: S-metolachlor does not bioaccumulate.

Stability in water: S-metolachlor is not persistent in water.

Stability in soil: S-metolachlor is not persistent in soil.

Mobility: S-metolachlor has medium mobility in soil.

ECOTOXICITY EFFECTS

Toxicity to Fish LC₅₀: *Oncorhynchus mykiss* (rainbow trout), 9.9 mg/l, 96 h

Toxicity to Algae EbC₅₀: *Pseudokirchneriella subcapitata* (green algae), 0.02 mg/l, 72 h

Toxicity to Algae ErC₅₀: *Pseudokirchneriella subcapitata* (green algae), 0.02 mg/l, 72 h

Toxicity to Aquatic Invertebrates EC₅₀: *Daphnia magna* (water flea), 11.2 mg/l, 48 h

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

LAND/ROAD/SEA/AIR (RID/ADR/IMDG/IATA)	Class 9	UN Number 3082	Packaging Group III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (S-METOLACHLOR)		
Marine pollutant:	Yes		

15. REGULATORY INFORMATION

Hazard Symbols/ Classifications	N Xi	DANGEROUS FOR THE ENVIRONMENT IRRITANT
Risk phrases (R)	43 50/53	May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases (S)	2 13 20/21 35 36/37 57	Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Wear suitable clothing and gloves. Use appropriate containment to avoid environmental contamination.
Special label		To avoid risks to man and the environment, comply with the instructions for use.

16. OTHER INFORMATION

Always read the label. Use pesticides safely.

Based upon SDS issue date 04.08.2008, version 1.

Product approval number: MAPP 14649.

Text of R phrases mentioned in Section 2:

R10 Flammable.

R37/38 Irritating to respiratory system and skin.

R38 Irritating to skin.

R41 Risk of serious damage 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.

R51/53 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.

R65 Harmful: may cause lung damage if swallowed.

H E R B I C I D E

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

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.