SEMPRA®

PCS No. 04207

Suspension Concentrate (SC) containing 500 g/l Diflufenican.

Selective contact and residual herbicide in spring wheat and spring barley, winter wheat and winter barley, durum wheat, rye and triticale for the control of annual dicotyledons and grasses.

FOR USE AS AN AGRICULTURAL HERBICIDE. FOR PROFESSIONAL USE ONLY.

Crop	Max single dose	Max. no. of applications	Max. total dose	Latest time of application
Winter wheat, spring wheat, durum wheat, winter barley, oats, rye & triticale	0.25l/ha	-	0.25l/ha/crop	Before first node detectable (GS 31)
Spring barley	0.125l/ha	-	0.125l/ha/crop	

Authorisation holder and Marketing company:
UPL Europe Ltd
The Centre, Birchwood Park, Warrington, WA3 6YN
Telephone: 01925 819999 Fax: 01925 817425
For 24 hour emergency information contact: CARECHEM24 : +44 (0) 1235 239670

CONTENTS:
1 LITRE

A2.0 SEMPRA IRE 211114 NoA 04207
SEM/IE/1L/F/0715/UPL
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SEMPRA®

SAFETY INFORMATION

WARNING

Very toxic to aquatic life with long lasting effects.
Avoid release to the environment.
Collect spillage.
Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste.

To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

To avoid risks to human health and the environment, comply with the instructions for use.

UN 3082 **PCS No. 04207**

Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).

DIRECTIONS FOR USE

SEMPRA® is a suspension concentrate formulation, which is used as a selective contact and residual herbicide in winter and spring cereals to control annual dicotyledons and grasses. Under favourable growing conditions, the residual activity can last for up to 8 weeks after application. The level of effective residual control may be reduced under dry conditions, when poor coverage of the soil surface is achieved, when the crop is planted in non-wetting sand or where soils have a high content of clay or organic matter.

The product is taken up by the shoots of germinating seeds and seedlings. Susceptible weeds germinate but show immediate chlorosis followed by a mauve-pink discoloration. The chlorosis spreads with the aerial growth and the plants become necrotic and die back.
After application, some transient crop discolouration may occur, which will have no effect on the subsequent growth.

SEMPRA can be used pre-emergence in winter and spring wheat, durum wheat, winter and spring barley, rye and triticale, or post-emergence in spring wheat and spring barley, winter wheat, durum wheat and winter barley.

RESTRICTIONS

Maximum number of applications: one per crop.
Do not apply when heavy rain is expected within 4 hours or on crops suffering from stress, frost, nutrient deficiency, excessively moist or dry conditions, pest or disease attack or pre-emergence applications.
Do not use on other cereals, broadcast or undersown crops or crops to be undersown.
Do not apply to soils with more than 10% organic matter.
Use on Sands (soil texture [85] system) or very stony or gravely soils may result in crop damage.
Do not harrow after application nor roll autumn-treated crops until spring.
Avoid drift onto neighbouring crops.

Weed control

SEMPRA controls the following weeds:

Weed	Susceptibility at 0.2 or 0.25 litre/ha, pre-emergence	Susceptible post-emergence at 0.125 litre/ha, up to true leaf no.	Susceptible post-emergence at 0.25 litre/ha, up to true leaf no.
Black bindweed			1 true leaf
Common chickweed		2 true leaves	4 true leaves
Common field speedwell		2 true leaves	6 true leaves
Corn spurrey	S (0.2 litre/ha)		
Field forget-me-not	S (0.2 litre/ha)		
Field mouse ear	S (0.2 litre/ha)		
Field poppy	S (0.25 litre/ha)		
Henbit dead-nettle	S (0.25 litre/ha)		
Knotgrass			2 true leaves
Nipplewort			1 true leaf
Perennial sowthistle		1 true leaf	1 true leaf
Prickly sowthistle		1 true leaf	1 true leaf
Red dead-nettle	S (0.25 litre/ha)	2 true leaves	6 true leaves
Shepherd's purse		2 true leaves	4 true leaves
Smooth sowthistle		1 true leaf	1 true leaf
Treacle mustard	S (0.25 litre/ha)		
Volunteer oilseed rape	S (0.25 litre/ha)		
Wild pansy			1 true leaf
Wild radish	S (0.25 litre/ha)		

S = Susceptible (> 85 % effect) (at specified dose).

CROP SPECIFIC INFORMATION

SEMPRA can be applied from shortly after sowing until before the 1st node detectable stage (GS31). Seed beds should be fine and firm and should not contain clods greater than fist size. For optimal efficiency, it is advised to apply under moist conditions at or after application and rainfall during the first weeks after application.
On weak plants, a colouring of the first leaf can occur. This will have no impact on yield. Drill crop to normal depth (25 mm) and ensure the seed is well covered.

Dose:
Winter and spring wheat, durum wheat, winter barley, oats, rye and triticale: 0.25 litre/ha.
Spring barley: 0.125 litre/ha

FOLLOWING CROPS

In the event of crop failure, winter wheat may be redrilled immediately after normal cultivation and winter barley may be sown after ploughing. Fields must be ploughed to a depth of 15 cm and 20 weeks must elapse before sowing spring crops of wheat, barley, oilseed rape, peas, field beans, sugar beet, potatoes, carrots, edible brassicas or onions.
After normal harvest autumn cereals can be drilled after ploughing. Thorough mixing of the soil must take place before drilling field beans, leaf brassicae or winter oilseed rape. For sugar beet seed crops and winter onions complete inversion of the furrow slice is essential.
Successive treatments of any products containing diflufenican can lead to soil build-up and inversion ploughing must precede sowing and following non-cereal crop. Even where ploughing occurs some crops e.g. onion, leek, other allium crops and clover may be damaged. As a precaution, users who rent out their land to growers should not use diflufenican containing products in successive years before renting out the land.

RESISTANCE

When herbicides of the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominant. A weed species is considered to be resistant if it survives a correctly timed application at the recommended rate. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from HGCA, CPA, your distributor, crop advisor or manufacturer.

MIXING AND SPRAYING

Apply with a tractor mounted sprayer. Before spraying ensure the sprayer is clean and in good working order. Half fill the sprayer with clean water and begin to agitate. Add the required quantity of SEMPRA® and complete filling. Continue to agitate during spraying.
Apply in 200-300 litres/ha water as a medium spray (BCPC category).
Increase the water volume where weed infestation is heavy or the crop cover is dense. Complete coverage of weeds is essential.
Wash out the sprayer thoroughly after use using a recognised tank cleaner or wetting agent.

CLEANING OF TANK AND EMPTY PACKAGING

After using SEMPRA empty the tank completely and drain the whole system. Thoroughly wash inside the tank with a pressure hose. Quarter fill the tank with clean water and circulate through the pump, line, hoses and nozzles, then drain. Quarter fill the tank again, add a suitable detergent and circulate through the system for at least 15 minutes. Drain, remove filters and nozzles and clean separately. Rinse inside the tank thoroughly using a pressure hose and flush system with clean water.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add the washings to the sprayer tank at the time of filling and dispose of container safely.

FIRST AID INFORMATION

After inhalation: Fresh air, rest. In case of symptoms, contact a doctor and show the label or packaging.

After ingestion: Rinse the mouth and give water to drink. Contact poison information centre to see if drinking a solution of active charcoal in water is recommended.

Eye contact: Rinse with plenty of water for at least 10 minutes. Flush away from the non-contaminated eye. In case of contact lenses: if these can be removed easily, remove lenses first and rinse afterwards. Consult a doctor.

Skin contact: Rinse skin with plenty of water or shower for at least 15 minutes. In the meantime remove contaminated clothes and shoes. Contact a doctor if symptoms appear and show the label or the packaging.

CONDITIONS OF SUPPLY

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during and after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded, and no responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. Our staff or agents cannot vary these conditions whether or not they supervise or assist in the use of such goods. Sempra is a registered trademark of Agrichem B.V. Other brand names used in this guide are trademarks of other manufacturers for which propriety rights may exist.

SAFETY DATA SHEET

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

1.1 Identification of the product
Product code: HC001
Product Description: SEMPRA
Synonyms: Diflufenican 500 SC
Pure substance/preparation: Preparation
1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against
Recommended use: Herbicide
1.3 Details of the Supplier of the Safety Data Sheet
Supplier: UPL Europe Ltd
The Centre
Birchwood Park
Warrington
WA3 6YN
Cheshire, UK
Tel. : +44 (0) 1925 819999
Fax : +44 (0) 1925 856075
E-mail address: info.uk@uniphos.com
1.4 Emergency Telephone Number
Emergency telephone number: (CARECHEM 24): +44 (0) 1235 239670
Ireland: National Poisons Information Centre (IE): +353 1 8379964

2. HAZARDS IDENTIFICATION

2.1 Classification of the mixture
Classification according to EU Directives 67/548/EEC or 1999/45/EC
Symbol(s): N - Dangerous for the environment
R-code(s): R50/53
For the full text of the R phrases mentioned in this Section, see Section 16
Classification according to regulation (EC) No 1272/2008 (CLP)
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 according to EU Directives 67/548/EEC or 1999/45/EC

Symbol(s)
N - Dangerous for the environment
R -phrase(s)
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
S -phrase(s)
S 2 - Keep out of the reach of children
S13 - Keep away from food, drink and animal feedingstuffs
S20/21 - When using, do not eat, drink or smoke
S60 - This material and its container must be disposed of as hazardous waste
S61 - Avoid release to the environment. Refer to special instructions/Safety data sheets
Labelling according Regulation (EC) No 1272/2008 (CLP)

Signal word: WARNING
Hazard statements
H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements - EU (§28, 1272/2008)
P273 - Avoid release to the environment
P391 - Collect spillage
P501 - Dispose of contents/ container in accordance with national regulation
EU Specific Hazard Statements
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use
2.3 Other Hazards
No information available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical name	EC No	CAS-No	Weight %	Classification (Dir.67/548)	EU - GHS Substance Classification	REACH No.
diflufenican (ISO)	-	83164-33-4	40 - 50	R52/53	Aquatic Chronic 3 (H412)	no data available

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

4. FIRST AID MEASURES

4.1 Description of first-aid measures
General advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, consult a specialist.
Skin contact: Wash off immediately with plenty of water. If symptoms persist, call a physician.
Ingestion: Rinse mouth with water. Call a POISON CENTER or doctor/physician if you feel unwell.
Inhalation: Move to fresh air. Call a POISON CENTER or doctor/physician if you feel unwell.
4.2 Most Important Symptoms and Effects, Both Acute and Delayed
No information available.
4.3 Indication of immediate medical attention and special treatment needed
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: Water spray
Foam
Carbon dioxide (CO2)
Dry powder
Unsuitable extinguishing media: No information available.
5.2 Special hazards arising from the substance or mixture
Special Hazard: Burning produces obnoxious and toxic fumes: Carbon oxides, Nitrogen oxides (NOx)
5.3 Advice for Firefighters
Wear self-contained breathing apparatus and protective suit
This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Evacuate personnel to safe areas.
Avoid contact with the skin and the eyes.
Use personal protective equipment.
6.2 Environmental Precautions
Prevent further leakage or spillage if safe to do so.
Do not allow material to contaminate ground water system.
Do not flush into surface water or sanitary sewer system.
6.3 Methods and materials for containment and cleaning up
Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Handling

Provide adequate ventilation.

Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene Measures

Use only outdoors or in a well-ventilated area.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry and cool place.

Store in original packagings.

Keep away from heat and sources of ignition.

7.3 Specific end uses

No information available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Exposure Limits:	Apply technical measures to comply with the occupational exposure limits http://limitvalue.ifa.dguv.de/Webform_gw.aspx
Derived No Effect Level (DNEL):	No information available.
Predicted No Effect Concentration (PNEC):	No information available.

8.2 Exposure Controls

Engineering controls:	Ensure adequate ventilation, especially in confined areas
Personal Protective Equipment	
Eye protection:	Safety glasses with side-shields.
Skin protection:	Long sleeved clothing.
Hand protection:	Protective gloves.
Respiratory protection:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Environmental exposure controls:	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	white
Physical state:	liquid suspension concentrate
Odor:	Mild chemical

Property	Values	Remarks/Method
pH:	7.61	(1% solution)
Melting point/freezing point:	No information available	
Boiling Point/Range:	No information available	
Flash point:	> 76 °C	
Flammability (solid, gas):	No data available	
Surface tension:	41 mN/m	

Property	Values	Remarks/Method
Relative Density:	1203.2 kg/l	
Water solubility:	Miscible with water	
Solubility in Other Solvents:	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature:	No information available	
Decomposition temperature:	No information available	
Viscosity:	123.0 - 173.3 mPa.s	Dynamic viscosity
Oxidizing properties:	Non oxidizing	
Explosive properties:	No	

9.2 Other information

VOC Content:	No information available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible Materials

Acids.

Oxidizing agents.

10.6 Hazardous Decomposition Products

Carbon oxides.

Nitrogen oxides (NOx).

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Acute toxicity

Local effects	
Inhalation:	There is no data available for this product.
Eye contact:	No eye irritation.
Skin contact:	No skin irritation.
Ingestion:	There is no data available for this product.
LD50 Oral:	> 2000 mg/kg
LD50 Dermal:	> 2000 mg/kg
LC50 Inhalation:	> 5.12 mg/l (4-hr)

Chronic toxicity

Skin Corrosion/Irritation:	No information available.
Sensitization:	skin: Did not cause sensitization.
Carcinogenic effects:	No information available.
Mutagenic effects:	No information available.
Reproductive effects:	No information available.
STOT - Single Exposure:	No information available.
STOT - Repeated Exposure:	No information available.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

EC50/72h/algae = 0,0009 mg/L

EC50/48h/daphnia = > 0,4881 mg/L

LC50/fish/96 h = > 0.1065 mg/L

12.2 Persistence and Degradability

No information available.

12.3 Bioaccumulative Potential

No information available.

12.4 Mobility in Soil

No information available.

12.5 Results of PBT and vPvB Assessment

No information available.

12.6 Other Adverse Effects

No information available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Waste from Residues / Unused Products:	Dispose of in accordance with local regulations.
Contaminated packaging:	Empty containers should be taken for local recycling, recovery or waste disposal.
EWC waste disposal No:	020108 - agrochemical waste containing dangerous substances.
Other information:	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.

14. TRANSPORT INFORMATION

ADR/RID

14.1 UN-No:	UN3082
14.2 Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s. (Diflufenican)
14.3 Hazard class:	9
14.4 Packing group:	III
14.5 Environmental Hazard:	Yes
14.6 Special Provisions:	274, 335, 601
Tunnel restriction code:	(E)

IMDG/IMO

14.1 UN-No:	UN3082
14.2 Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s (Diflufenican)
14.3 Hazard class:	9
14.4 Packing group:	III
14.5 Environmental Hazard:	Marine pollutant
14.6 Special Provisions:	274, 335

IATA/ICAO

14.1 UN-No:	UN3082
14.2 Proper shipping name:	Environmentally hazardous substance, liquid, n.o.s (Diflufenican)
14.3 Hazard class:	9
14.4 Packing group:	III
14.5 Environmental Hazard:	Yes
14.6 Special Provisions:	A97, A158

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

- To avoid risks to man and the environment, comply with the instructions for use.

International Inventories

TSCA:	Complies
EINECS/ELINCS:	Complies
DSL/NDSL:	Complies
PICCS:	Complies
ENCS:	Complies
China:	-
AICS:	Complies
KECL:	Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory.

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List.

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances.

PICCS - Philippines Inventory of Chemicals and Chemical Substances.

ENCS - Japan Existing and New Chemical Substances.

IECSC - China Inventory of Existing Chemical Substances.

AICS - Australian Inventory of Chemical Substances.

KECL - Korean Existing and Evaluated Chemical Substances.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out.

16. OTHER INFORMATION

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

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

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

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

Revision date:	19-Jan-2015
Revision note:	-

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information contained is based on our knowledge of the product at the date of publishing.

It applies to the PRODUCT AS SUCH. In case of formulation or mixture, make sure that a new danger will not appear.

Users are advised of possible additional hazards when the product is used in applications for which it was not intended.

This sheet shall only be used and duplicated for prevention and Safety purposes.

For rates and use recommendations, refer to the information displayed on the packaging.

It is the responsability of the handlers of the product to pass on this safety data sheet to any subsequent persons who will come into contact with the product.

SEMPRA®

SAFETY INFORMATION

WARNING

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To protect aquatic organisms respect an unsprayed buffer zone of 5m to surface water bodies.

To avoid risks to human health and the environment, comply with the instructions for use.

UN 3082 **PCS No. 04207**

Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).