

LUMAX

Version 3

Revision Date 10.03.2005

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

PRODUCT INFORMATION

Product name : LUMAX
Design Code : A12812A
Use : Herbicide
Company : Syngenta Crop Protection AG
 Postfach
 CH-4002 Basel
 Switzerland
Telephone : +41 61 323 11 11
Telefax : +41 61 323 12 12
Emergency telephone number : +44 1484 538444



Harmful



Dangerous for the environment

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrase(s)	Concentration
S-metolachlor	87392-12-9		Xi, N	R43 R50/53	28 % W/W
terbutylazine	5915-41-3	227-637-9	Xn, N	R22 R50/53	17 % W/W
mesotrione	104206-82-8		N	R50/53	3.4 % W/W

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

3. Hazards identification

Harmful if swallowed.

Irritating to eyes.

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 center 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.

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- 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 Center 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.
- 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
alcohol-resistant foam
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.

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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 feed.
- Other data** : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Value type	Source
mesotrione	10 mg/m ³	8 h TWA	SYNGENTA
terbuthylazine	0.8 mg/m ³	8 h TWA	SYNGENTA
S-metolachlor	10 mg/m ³	8 h TWA	SYNGENTA

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 vapors 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

- 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 are not usually required. Select gloves based on the physical job requirements.
- Eye protection** : If eye contact is possible, use tight-fitting chemical safety goggles.
- Skin and body protection** : No special protective equipment required. Select skin and body protection based on the physical job requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Form** : liquid
- Colour** : green grey to greyish green
- Odour** : like acetic acid
- pH** : 2 - 7 at 1 % w/v
- Oxidizing properties** : not oxidizing

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Explosive properties	: Not explosive
Density	: 1.12 g/cm ³ at 20 °C
Water solubility	: Miscible
Viscosity, dynamic	: 181 - 592 mPa.s at 20 °C
	: 154 - 811 mPa.s at 40 °C

10. STABILITY AND REACTIVITY

Hazardous decomposition products	: Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous reactions	: None known. Hazardous polymerization does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity	: LD50 Rat, 2,000 mg/kg
Acute dermal toxicity	: LD50 Rat, > 2,000 mg/kg
Skin irritation	: Rabbit: non irritant assessment according to 93/21/EEC
Eye irritation	: Rabbit: Irritant assessment according to 93/21/EEC
Sensitization	: Guinea Pig not sensitizing assessment according to 96/54/EEC
Long term toxicity	: Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION**ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)**

Bioaccumulation	: Mesotrione has low potential for bioaccumulation Terbuthylazine does not bioaccumulate S-metolachlor does not bioaccumulate
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- Stability in water** : Mesotrione is persistent in water.
Terbuthylazine is not persistent in water
S-metolachlor is not persistent in water
- Stability in soil** : Mesotrione is not persistent in soil
Terbuthylazine is not persistent in soil
S-metolachlor is not persistent in soil
- Mobility** : Mesotrione has medium to high mobility in soil.
Terbuthylazine has medium mobility in soil
S-metolachlor has medium mobility in soil

ECOTOXICITY EFFECTS

- Toxicity to fish** : LC50 *Oncorhynchus mykiss* (Rainbow trout), 5.7 mg/l , 96 h
Static conditions
- Toxicity to aquatic invertebrates** : EC50 *Daphnia magna* (water flea), 61 mg/l , 48 h
Static conditions
- Toxicity to algae** : ERC50 *Selenastrum capricornutum* (green algae), 0.109 mg/l
, 72 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

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Land transport*ADR/ RID:*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(TERBUTHYLAZINE AND S-METOLACHLOR)

Sea transport*IMDG:*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group: III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(TERBUTHYLAZINE AND S-METOLACHLOR)

Marine pollutant : Marine pollutant

Air transport*IATA-DGR*

UN-No: 3082
Class: 9
Danger Label Number : 9
Packaging group: III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(TERBUTHYLAZINE AND S-METOLACHLOR)

15. REGULATORY INFORMATION**Labelling according to EC Directives**

Hazardous components which must be listed on the label:

- terbuthylazine

Symbol(s) : Xn Harmful
N Dangerous for the environment

R-phrase(s) : R22 Harmful if swallowed.
R36 Irritating to eyes.

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	R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	: S 2 S13 S20/21 S35 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. This material and its container must be disposed of in a safe way. Use appropriate container to avoid environmental contamination.
Exceptional labelling of special preparations	: To avoid risks to man and the environment, comply with the instructions for use. Contains s-metolachlor. May produce an allergic reaction.	
Note	: The preparation is classified as dangerous in accordance with Directive 1999/45/EC.	

16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

R22	Harmful if swallowed.
R43	May cause sensitization by skin contact.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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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