LUMAX 537.5 SE

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

PRODUCT INFORMATION

Product name : LUMAX 537.5 SE
Design Code : A13789C
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

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Symbol(s)</th>
<th>R-phrase(s)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>mesotrione</td>
<td>104206-82-8</td>
<td>N</td>
<td>R50/53</td>
<td>3.4 % W/W</td>
<td></td>
</tr>
<tr>
<td>S-metolachlor</td>
<td>87392-12-9</td>
<td>Xi, N</td>
<td>R43, R50/53</td>
<td>34.2 % W/W</td>
<td></td>
</tr>
<tr>
<td>terbuthylazine</td>
<td>5915-41-3</td>
<td>Xn, N</td>
<td>R22, R50/53</td>
<td>11.4 % W/W</td>
<td></td>
</tr>
<tr>
<td>poly(oxy-1,2-ethanediyl), alpha-phenyl-omega-hydroxy-, styrenated</td>
<td>99734-09-5</td>
<td>N</td>
<td>R51/53</td>
<td>5 - 10 % WW</td>
<td></td>
</tr>
<tr>
<td>butanedioic acid, sulfo-, 1,4-bis(2-ethylhexyl) ester, sodium salt</td>
<td>577-11-7</td>
<td>Xi</td>
<td>R38, R41</td>
<td>1 - 5 % WW</td>
<td></td>
</tr>
<tr>
<td>1,2-propanediol</td>
<td>57-55-6</td>
<td>200-338-0</td>
<td></td>
<td>1 - 5 % WW</td>
<td></td>
</tr>
</tbody>
</table>

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

Harmful if swallowed. 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. 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.

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-fighting: In the event of fire, wear self-contained breathing apparatus.
fighters

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 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).

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 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.

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 feedingstuffs.

Other data : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>Exposure limit(s)</th>
<th>Value type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-metolachlor</td>
<td>10 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
<tr>
<td>mesotrione</td>
<td>10 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
<tr>
<td>terbuthylazine</td>
<td>0.8 mg/m3</td>
<td>8 h TWA</td>
<td>SYNGENTA</td>
</tr>
<tr>
<td>Propane-1,2-diol</td>
<td>10 mg/m3 150 ppm</td>
<td>Particulates Total (vapour &amp; particulates)</td>
<td>8 h TWA</td>
</tr>
<tr>
<td></td>
<td>470 mg/m3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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: Eye protection is not usually required.

Follow any site specific eye protection policies.

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: light green to green grey

Odour: Faint sweet
**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**: Median lethal dose female Rat, 2,000 mg/kg

The toxicological data has been taken from products of similar composition.

**Acute dermal toxicity**: Median lethal dose male and female Rat, > 5,000 mg/kg

The toxicological data has been taken from products of similar composition.

**Skin irritation**: Rabbit: Practically non-irritating.

The toxicological data has been taken from products of similar composition.

**Eye irritation**: Rabbit: Moderately Irritating

The toxicological data has been taken from products of similar composition.

**Sensitization**: guinea pig: Not a skin sensitizer in animal tests.

The toxicological data has been taken from products of similar composition.

**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
Terbutylazine does not bioaccumulate
S-metolachlor does not bioaccumulate

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

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

Mobility : Mesotrione has medium to high mobility in soil.
Terbutylazine has medium mobility in soil.
S-metolachlor has medium mobility in soil.

ECOTOXICITY EFFECTS

Toxicity to fish : LC50 Oncorhynchus mykiss (rainbow trout), 8.9 mg/l, 96 h
Based on test results obtained with similar product.

Toxicity to aquatic invertebrates : EC50 Daphnia magna (Water flea), 53 mg/l, 48 h
Based on test results obtained with similar product.

Toxicity to algae : EbC50 Selenastrum capricornutum (green algae), 28.5 µg/l, 72 h
Based on test results obtained with similar product.

: ErC50 Selenastrum capricornutum (green algae), 67.5 µg/l, 72 h
Based on test results obtained with similar product.

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 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. (S-METOLACHLOR AND TERBUTHYLAZINE)

**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. (S-METOLACHLOR AND TERBUTHYLAZINE)
- 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. (S-METOLACHLOR AND TERBUTHYLAZINE)

15. REGULATORY INFORMATION

**Labelling according to EC Directives**

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

**R-phrase(s):**
- R22: Harmful if swallowed.
16. OTHER INFORMATION

Further information

Text of R phrases mentioned in Section 2:

R22  Harmful if swallowed.
R38  Irritating to skin.
R41  Risk of serious damage to eyes.
R43  May cause sensitization 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.

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