

Safety Data Sheet

LEPIDEX - Reg. No: L 7977 (Act No 36 of 1947) N-AR 1690

Date of issue: 04/10/2010
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1) IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER.	
Product name:	LEPIDEX
Other means of identification:	Lufenuron 50 g/L
UN number:	1993
Recommended use:	Insecticide
Restrictions on use:	Agriculture
Distributed by:	MERIDIAN AGRITECH P O BOX 436 MODDERFONTEIN TEL 011 8228509 FAX 0866901386 MOBILE: 0834006056 www.agritech.co.za
Emergency Number:	POISON CENTRE (UNITAS HOSPITAL) 012 664 1100 WESTERN CAPE POISONS TELEPHONE SERVICE 0861 555 777 RAPID SPILL RESPONSE 0800 775 3305 GRIFFON POISON CENTRE: 082 446 8946
Chemical Name:	(RS)-1-[2,5-dichloro-4-(1,1,2,3,3,3-hexafluoropropoxy)phenyl]-3-(2,6difluorobenzoyl)urea
2) Classification of the substance / mixture:	
Classification of the product:	R10 R38 R41 R43 R50/53 R65 R67 S2 S13 S20/21 S26 S35 S36/37/39 S57 S62 Xn Xi N Full text of symbols and R-phrases: see section 15.

Label elements:

Signal word:
Danger

Hazard Statements:

H226
H315
H318
H317
H304
H336
H410

Precautionary statements:

P102
P210
P270
P280
P301+P310
P302+P352
P305+P351+P338
P331
P391
P501

Supplementary 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:

- Lufenuron
- Solvent Naphtha (petroleum), heavy aromatic

Other hazards:

None known

Refer to section 15 for the full text of R, H, P and S phrases.

Health effects: eyes:

May cause mild irritation.

Health effects: skin:

May cause mild irritation.

Health effects: ingestion

May cause irritation and may be harmful.

Health effects: inhalation

Unlikely to cause harmful effects under normal conditions and use.

Health effects: Other

No data available

3) COMPOSITION / INFORMATION ON INGREDIENTS:

Mixture:

Chemical name	% composition	CAS No.	EC No.	Classification according to Regulation EC 1272/2008 (CLP)	Classification according to 67/548/EEC
Lufenuron	5% w/w	103055-07-8	410-690-9	Skin Sens. 1; H317 Aquatic Acute 1: H400 Aquatic Chronic1:H410	N Xi R43 R50/53

Solvent naphtha (petroleum), heavy aromatic	50-80%	64742-94-5	265-198-5	Acute Tox. 4: H332 STOT: SE3: H335 ASP. Tox. 1: H304: STOT SE3: H336 Aquatic chronic 2: H411	N Xn R20 R37 R51/53 R65 R66 R67
Cyclohexanone	20-30%	108-94-1	203-631-1	Flam, Liq.3: H226 Eye Dam.1: H318 Acute Tox.4:H302 Acute Tox.4:H312 Acute Tox.4:H332 Skin Irrit.2: H315	Xn R10 R20/21/22 R38 R41

Full text of R- and S-phrases: see section 15.

4) First Aid Measures:

Eye contact:	Never give anything by mouth to an unconscious person. Do not induce vomiting. For advice, contact the National Poisons Centre. Seek medical assistance immediately.
Skin contact:	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. Do not rub skin. Persons providing first aid must wear gloves to avoid self-contamination. Seek medical assistance if irritation occurs.
Ingestion:	Never give anything by mouth to an unconscious person. Do not induce vomiting. For advice, contact the National Poisons Centre. Seek medical assistance immediately.
Inhalation:	Remove patient to fresh air. Loosen clothing around neck. Lie down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Most important symptoms and effects, acute and delayed:	Aspiration may cause pulmonary oedema and pneumonitis.
Indication of immediate medical attention and special treatment needed: Advice to physician	No specific antidote known .Treat symptomatically. Repeatedly administer medicinal charcoal in a large quantity of water. Do not induce vomiting, contains petroleum distillates and / or aromatic solvents.

5) Fire-Fighting Measures:

Suitable extinguishing media:	Fine water spray, foam, carbon dioxide. Do not use high volume water jet, due to contamination risk.
Unsuitable extinguishing media:	High volume water jet.
Special hazards arising from the substance or mixture:	Combustion products are toxic and/or irritant
Fire-fighting:	Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal. Do not scatter the material. Avoid pollution of waterways. Generating poisonous and corrosive fumes containing: carbon monoxide, nitrogen oxides and hydrochloric acid.
Protective clothing:	Full protective clothing and self-contained breathing apparatus

6) Accidental Release Measures:	
<p>Personal precautions:</p> <p>Environmental precautions:</p> <p>Cleaning procedure:</p> <p>Disposal:</p>	<p>Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.</p> <p>Do not contaminate waterways, drains and groundwater. Heavily contaminated soil layers should be removed and disposed of in an approved way. If contamination of waterways, drains, rivers or lakes is unavoidable, warn the local authorities (Police and Department of Water/Environmental affairs) immediately.</p> <p>Wear protective clothing. Clear area of unprotected personnel. Contain and absorb liquid spills with inert material, remove by scoop or vacuum. Use approved industrial vacuum cleaner for removal and place in waste containers. Wash area with water and detergent and absorb with further inert material. Heavily contaminated soil layers have to be dug out down to clean soil. If spill does enter waterways contact the local authority.</p> <p>Waste Disposal:</p> <p>In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved chemicals waste disposal facility. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility.</p> <p>Container Disposal: Refer to the product label for instructions.</p> <p>Refer to the product label for instructions. Container Refilling and Disposal: If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product. DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Do not transport if this container is damaged or leaking. If containers cannot be recycled, they should be disposed of together with the waste chemical.</p>
7) Handling & Storage:	
<p>Handling:</p> <p>Storage:</p>	<p>Avoid skin and eye contact and inhalation of spray mist. Avoid inhalation of fog and vapours. Keep away from heat and sources of ignition. Take precautionary measures against static discharges (transfer operations: check grounding). May form explosive vapour-air mixtures. APPROVED HANDLER: This product must be under the control of an approved handler when applied in a wide dispersive manner; or used by a commercial contractor. Spills may be slippery and should be cleaned up immediately. TRACKING: Is not required BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants.</p> <p>Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Keep away from children or uninformed persons.</p>
8) Exposure Control / Personal Protection:	

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Component	Exposure limit(s)	Type of exposure limit
Lufenuron	5 mg/m ³	8h TWA
Cyclohexanone	100 mg/m ³ 200 mg/m ³ 80 mg/m ³ 100 mg/m ³ 700 ppm 10 ppm, 41 mg/m ³ (skin) 20 ppm, 82 mg/m ³ (skin) 10 ppm, 40.8 mg/m ³ (skin) 20 ppm, 81.6 mg/m ³	8 h TWA 15 min STEL 8 h TWA 8 h TWA IDLH 8 h TWA 15 min STEL 8 h TWA 15 min STEL
Solvent naphtha (petroleum), heavy aromatic	100 8mg/m ³	8 h TWA

PERSONAL PROTECTIVE EQUIPMENT:

Clothing:

Consult supplier to confirm that the equipment is suitable.

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Respiratory protection: Respirator with filter for organic vapour.
Hygiene measures: Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke. Wash contaminated clothing before re-use.

Gloves:

Employee must wear appropriate chemical-resistant gloves to prevent contact with this substance

Eye protection:

The use of safety goggles with side shields is recommended.

Respiratory protection:

Respirator with filter for organic vapour.
Hygiene measures: Wash hands before breaks and immediately after.

Emergency eye wash:

Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9) Physical & Chemical Properties:

Form:	Liquid
Colour:	Yellow to Brown
Odour:	Mild characteristic odour
Odour threshold:	No data available
pH:	3 - 7 (1 %; in deionised water)
Melting point / Freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point:	49 °C
Evaporation rate:	No data available
Flammability (solid, gas)	No data available
Upper/ lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	0.92 – 0.96 g/L
Solubility(ies)	Emulsifies in water
Partition coefficient: n-octanol/water	No data available

Auto-ignition temperature:	No data available
Viscosity:	No data available
10) Stability & Reactivity:	
Reactivity:	No data available.
Chemical stability:	When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Heating can release vapours which can be ignited. Combustion products are toxic and/or irritant.
Hazardous decomposition product(s):	No data available.
Conditions to avoid:	Protect from light and humidity.
Incompatible materials:	No data available.
11) Toxicological Information:	
<p>Acute:</p> <p>Oral LD50 > 3 000 mg/kg, rat</p> <p>Dermal LD50 > 4 000mg/kg, rabbit</p> <p>Inhalation LC50 (4h): >5.3 mg/L , rat</p> <p>Skin irritation : Irritant, rabbit</p> <p>Eye irritation : Irritant, rabbit</p> <p>Sensitisation : Causes sensitization on laboratory animals, guinea pig.</p> <p>Mutagenicity : Did not show mutagenic effects in animal experiments.</p> <p>Carcinogenicity : Did not show carcinogenic effects in animal experiments.</p> <p>Teratogenicity : Did not show teratogenic effects in animal experiments.</p> <p>Reproductive toxicity: Did not show reproductive toxicity effects in animal experiments.</p> <p>STOT – single exposure: May cause drowsiness or dizziness</p> <p>STOT – repeated exposure: No adverse effect has been observed in chronic toxicity tests.</p>	
12) Ecological Information:	
<p>Information below based on active ingredient:</p> <p>Bees : LD50 (48h) Oral >35 µg/bee; Contact >80 µg/bee.</p> <p>Birds : LD50 Bobwhite quail & Mallard ducklings > 2000 mg/kg. Dietary LC50 (8d) Bobwhite quail & Mallard ducklings >5 000 mg/kg diet.</p> <p>Fish : LC50 (96h) Rainbow trout >70 mg/L, Bluegill sunfish >25 mg/L.</p> <p>Algae : EC₅₀ green algae 10 mg/L.</p> <p>Worms: LC₅₀ (14d) > 1000 mg/kg.</p> <p>Other aquatic species: <i>Daphnia magna</i>, EC50 (48h) > 0.02 mg/L.</p> <p>Persistence: Rapidly degraded in biologically active soils under aerobic conditions. DT50 13-20days.</p> <p>Stability in water: Degradation half-life of 112 days. Not persistent in water.</p> <p>Stability in soil: Degradation half-life of 28 days. Not persistent in soil.</p> <p>Mobility in soil: Immobile in soil</p> <p>Bioaccumulation potential: Bioaccumulates</p> <p>Results of PBT and vPvB assessment:</p> <ul style="list-style-type: none"> • This substance is not considered to be persistent, bioaccumulating nor toxic (PBT) • This substance is not considered to be very persistent nor very bioaccumulating (vPvT) <p>Other adverse effects: None known</p>	

13) Disposal Considerations:

Waste Disposal : : In accordance with local and national regulations. Must be incinerated in a suitable incineration plant holding a permit delivered by the competent authorities. Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved chemicals waste disposal facility.

Container Disposal : Refer to the product label for instructions.

Container Refilling and Disposal:

If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product.

DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.

Do not transport if this container is damaged or leaking.

14) Transportation Information:

UN Number: 1993

Road transport ADR/RID

Class: 3

Packing Group: III

Proper shipping name: FLAMMABLE LIQUID N.O.S.

Additional Information: CYCLOHEXANONE, SOLVENT NAPHTHA, LUFENURON 5%

Marine pollutant:

Environmentally Hazardous

Air transport: ICAO / IATA

Class: 3

Packing Group: III

Proper shipping name: FLAMMABLE LIQUID N.O.S.

Additional Information: CYCLOHEXANONE, SOLVENT NAPHTHA, LUFENURON 5%

Marine pollutant: yes

Environmentally Hazardous

Maritime transport: IMDG

Class: 3

Packing Group: III

Proper shipping name: FLAMMABLE LIQUID N.O.S.

Additional Information: CYCLOHEXANONE, SOLVENT NAPHTHA, LUFENURON 5%

Marine pollutant: yes

Environmentally Hazardous

Special precautions for user: None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: NA

15) Regulatory Information:

Symbols: Xn - Harmful

N - Dangerous for the environment

Xi – Irritant

Risk – Phrase:

R10 - Flammable.

R20 - Harmful by inhalation.

R20/21/22 - Harmful by inhalation in contact with skin and if swallowed

R37 - Irritating to respiratory system.

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.

R65 - Harmful: may cause lung damage if swallowed.

R66 - Repeated exposure may cause skin dryness or cracking.

R67 - Vapours may cause drowsiness and dizziness.

Safety – Phrase:

- S1/2 - Keep locked up and out of reach of children.
S13 - Keep away from food, drink and animal feeding stuffs.
S20/21 - When using, do not eat drink or smoke.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S35 - This material and its container must be disposed of in a safe way.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
S57 - Use appropriate container to avoid environmental contamination.
S62 - If swallowed, do not induce vomiting: seek medical advice immediately

Hazard Statements

- H226 – Flammable liquid and vapour
H302 – Harmful if swallowed
H304 – May be fatal if swallowed and enters airways.
H312 – Harmful in contact with skin.
H315 – Causes skin irritation.
H317 – May cause an allergic skin reaction.
H318 – Causes serious eye damage.
H332 – Harmful if inhaled.
H335 – May cause respiratory irritation.
H336 – May cause drowsiness or 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.

Precautionary statements:

- P102 - Keep out of reach of children.
P210 - Keep away from heat.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves / protective clothing / eye protection / face protection.
P301+P310 - If SWALLOWED: Immediately call a POISON CENTER or doctor / physician.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
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 an approved waste disposal plant.

Supplementary information:

EUH401: To avoid risks to human health and the environment, comply with the instructions for use.

Remarks:

Classified using all GHS hazard classes and categories. Where the GHS contains options, the most conservative option has been used.

Regional or national implementations of GHS may not implement all hazard categories and classes.

Hazardous components which must be listed on the label:

- Lufenuron
- Solvent Naphtha (petroleum), heavy aromatic

A Chemical Safety Assessment is not required for this substance.

16. Other Information

All information and instructions provided in this Safety Data Sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this SDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with this product. If the recipient subsequently produces formulation(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this SDS to their own SDS.

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