

MATERIAL SAFETY DATA SHEET

NAME OF MATERIAL/PREPARATION

LISTOMED

Date of Preparation	11/08/2011
Date of Issue	19/08/2011
MSDS No	FORM_MSDS_R&D_036_00
Renewal Date/No	

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PREPARED BASED ON REGULATION ON PREPARATION AND DISTRIBUTION OF SAFETY DATA SHEETS ABOUT HAZARDOUS MATERIALS AND PREPARATIONS (O.G. issue no 27092 dated 26/12/2008).

1. MATERIAL/PREPARATION AND COMPANY/OWNER IDENTIFICATION:

1.1 Material/Preparation Identification:

Product Name : **LISTOMED**
Product Content : Spirodiclofen 240g/L
Formulation Form : SC (Suspension Concentrate)
Cas No : 148477-71-8
IRAC : 23 tetronic acid

1.2 Usage of the Material/Preparation:

Insecticide

1.3 Company Identification:

Manufacturing and License Holding Company:

Company Name : AGRI SCIENCES TARIM VE ILAC UR. SAN. TIC. LTD. STI.
Address : Bekir Saydam Caddesi Pancar No: 31 Torbali / IZMIR
Telephone : +90 0232 864 13 33
Fax : +90 0232 864 16 79

1.4 Emergency Contact Telephone:

In case of an emergency please call +90 0232 864 13 33.

AGRI SCIENCES TARIM VE ILAC
UR. SAN. TIC. LTD. STI. STAMP

SECIL CANAYAKIN
CHEMIST
Diploma No:11607
Signature

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2. COMPOSITION AND INFORMATION ON INGREDIENTS:

Material	%	CAS No	EINECS/ELINCS	Hazard	R ¹	Classification
Spirodiclofen	240	148477-71-8	-	Xn; Xi, N	R43, R40, R52/53	Xn; R40, R43, N;R52/53
Diethylene glycol	100	111-46-46	203-872-2	Xn	R22	-
Others*	Outside classification due to absence of hazardous material.					

- R explanations are under section 16.

3. HAZARD IDENTIFICATION:



Xn: Harmful (carcinogenic, cat.3)



N: DANGEROUS FOR THE ENVIRONMENT

R40 : Limited evidence for carcinogenic effect

R43 : It may irritate in case of contact with skin.

R52/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

4. FIRST AID MEASURES:

Symptoms of Poisoning: There is no poisoning effect on human.

First Aid Measures and Antidote: In case of swallow, call a doctor, puke the patient or wash the stomach. In case of contact with skin, wash with plenty of water and soap. Take off the contaminated clothes. In case contact with eye, wash with plenty of water and apply an eye doctor. if the patient is conscious, take the patient in lateral position and carry

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5. FIRE FIGHTING MEASURES

Personal Protective Equipment: Do not inhale the fumes occurred during the explosion or fire. If available, use air-independent respiratory mask during the fire.

Dangers: Consider the dangerous fumes such as hydrogen chloride or carbon monoxide occurred during the fire.

Extinguishers: Foam, CO₂, fire extinguishing powder.

Other Details: Take the product away from fire place. Cool the containers with water. If available, use earth or sand after using fire extinguishing water.

6. ACCIDENTAL RELEASE MEASURES:

General Information: Please use the personal protection equipment defined under Section 8.

Personal Precautions: Do not touch spilled product or contaminated surfaces. Do not eat, drink or smoke while handling spilled product.

Clean-up Methods: The poured material is collected with a liquid catcher material (for instance; sucking sand, sawdust, chemical binder). Place the product into tight plastic containers and keep safely until it is disposed. Contaminated materials and surfaces should be cleaned in compliance with environmental regulations.

Additional Precautions: Refer to Section 7 for safe handling instructions. Refer to Section 8 for personal protections equipment. Refer to Section 13 for disposal.

7. HANDLING AND STORAGE

Handling : Please use the personal protection equipment specified under Section 8. Do not eat or drink while using. Prevent the contact with mouth, skin and eyes. Do not inhale. Wash your hands after using. Other security precautions are not required except of stated warnings during using the closed package. Use only in rooms, in which there is a local sucking device.

Storage: Keep in original package in cool, dry and well ventilated places. Keep away from food and animal feed items. Keep away from direct sunlight. Keep against freezing. Keep it in places that children cannot reach. Storage temperature 0-40 °C

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Precautions: Ensure appropriate general or local ventilation to keep the product concentration under allowed limits.

Personal Protection Equipment:

Eye : Use eye protection equipment compliant with EN 166.

Skin : Use protective clothing and appropriate gloves. Use 2 layers of clothing, if possible. Use CE marked Nitrile Rubber (min. 0.40 mm thick). Contaminated gloves should be washed. Any gloves that cannot be cleaned inside and outside should be disposed.

Respiratory : Use respiratory apparatuses compliant with EN 149:2001. Any respiratory protection apparatus should only be used for short term operations, as a part of risk minimization measures, e.g. in case of local ventilation. Comply with operation instructions and warnings of the manufacturer during use of respiratory protection apparatuses.

Hygiene Measures: Do not eat, drink or smoke while handling the product. Wash your hands each time before eating, drinking, smoking or going to the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : Liquid
Color : White-Beige
Odor : Odorless
Density : $1,08 \pm 0,05 \text{ g/cm}^3$ (20⁰C)
pH : 4-8 (solution with water %10)

10. STABILITY AND REACTIVITY

Conditions to be avoided : Extreme degrees and direct sun light

Materials to be avoided : Keep away from strong acids and alkalis.

Dangerous reaction : There is no dangerous reaction in appropriate storage and usage.

Toxic and irritant fumes may occur as a result of fire or thermal degradation. It is resistant in mentioned storage conditions. No dangerous polymerization products.

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11. TOXICOLOGICAL INFORMATION

Spirodiclofen Technical Material:

Acute Oral LD₅₀ female and male rat >2500 mg/kg

Eye and skin Acute percutaneous LD₅₀ female and male rat >2000 mg/kg. It is not irritant to eyes and skin (rabbit)

Inhalation (4hours) rat >5000 mg/m³. NOEL NOAEL (12 months) dog 1.45 mg/kg b.w. ADI/RfD (EC) 0.015 mg/kg b.w. (2007); EPA cRfD 0.0065 mg/kg b.w. (2005)

Other: No teratogen potential (rat and rabbit); 2nd generation rat surveys did not indicate primary reprotoxic potential evidence. No evidence belonging to genotoxic and mutagenic.

12. ECOLOGICAL INFORMATION

Spirodiclofen Technical Material:

Birds Acute Oral LD₅₀ bobwhite quail >2000 mg/kg.

LC₅₀ (5 days) bobwhite quail and mallard ducks >5000 mg/kg.

Fish LC₅₀ (96 hours) rainbow trout >0.035 mg/kg

Daphnia EC₅₀ (48 h) >0.051 mg/l

Algae *Pseudokirchnerella subcpitata* E_bC₅₀ and E_rC₅₀ (96 days) > 0.06 mg/l

Bee LD₅₀ (oral) > 196 µg /bee; (contact) >200 µg /bee

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13. DISPOSAL INFORMATION

Product: Do not dispose it together with household wastes. Waste residue should not be spilled into wastewater canals. Any product wastes should be disposed of in compliance with Hazardous Wastes Control Regulations.

Contaminated Materials : Empty containers should not be used for other products. Completely emptied and rinsed containers should be disposed in compliance with regulations. Non-clearable containers should be disposed of as hazardous materials.

14. TRANSPORTATION INFORMATION

ADR/RID/ADNR
UN-No. : 3082
Hazard Mark : 9
Packing Group : III
Product type : UN 3082 Hazardous for Environment, Liquid, N.O.S. (Includes Spirodiclofen)
IMDG
UN-No. : 3082
Class : 9
Packing Group : III
EMS :
Marine Pollutant : Yes
Product Type : UN 3082 Hazardous for Environment, Liquid, N.O.S. (Includes Spirodiclofen)
IATA
UN-No. : 3082
Class : 9
Packing Group : III
Product Type : UN 3082 Hazardous for Environment, Liquid, N.O.S. (Includes Spirodiclofen)



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15. REGULATORY INFORMATION

This data sheet is prepared based on regulation on preparation and distribution of safety data sheets about hazardous materials and preparations (O.G. issue no 27092 dated 26/12/2008).

Hazard Marks and Symbols:



Xn: Harmful (carcinogenic, cat.3)



N: DANGEROUS FOR THE ENVIRONMENT

Hazardous Materials Listed on the Label

Includes Spirodiclofen

Risk Phrases:

Physicochemical: -

Health :

R40 : Limited evidence for carcinogenic effect

R43 : It may irritate in case of contact with skin.

Environment :

R52/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

S1/2 : Lock it up and keep out of the reach of children.

S13 : Keep away from food, drink and feedstuff.

S24 : Avoid contacting with skin.

S29 : Do not empty into drains

S46 : Call a doctor if swallowed and show the container or label.

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S36/37/39: Wear suitable protective clothing, gloves and eye/face protection
S56: Dispose of this material and its container at hazardous or special waste collection point
S61: Avoid leaving to environment. Apply special user manual/Safety information form.
Important Labeling:
Follow instructions to avoid personal and environmental risks.

16. OTHER INFORMATION

N : Harmful for environment
Xn : Harmful (carcinogenic, cat.3)
Xi : Irritant

All Risk Phrases under Section 2:

R22 : Harmful if swallowed.
R40 : Limited evidence for carcinogenic effect
R43 : It may irritate in case of contact with skin.
R52/53 : Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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This material safety data sheet is provided as a supplement to instructions of manufacturer; however it does not replace instructions of manufacturer. The information provided in this sheet only conforms to the regulatory criteria known at the time of the preparation of Safety Data Sheet. Required data are gathered in accord with "Regulation on Preparation and Distribution of Safety Data Sheets about Hazardous Materials and preparations (O.G. issue no 27092 dated 26/12/2008)". Concerned organizations and persons are invited to comply with the abovementioned regulation.

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