

## TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE

### PRECAUTIONS:

1. Handle with care and avoid any contact. Poisonous by swallowing or inhalation.
2. **Oberon** may cause sensitization by skin contact.
3. Do not eat, drink or smoke while mixing, applying, handling or before washing hands and face.
4. WEAR PROTECTIVE CLOTHING, i.e. overalls, rubber gloves, and rubber boots and a facemask while mixing, spraying and cleaning up.
5. Do not inhale mist or spray against the wind.
6. Remove protective clothing on completion of spraying, wash thoroughly with soap and water, and wash contaminated clothing daily.
7. Clean applicator after use, dispose of wash water where it will not contaminate crops, grazing, rivers and dams.
8. KEEP OUT OF REACH OF CHILDREN, UNINFORMED PERSONS AND ANIMALS.
9. STORE IN A COOL DRY PLACE, IN THE ORIGINAL CONTAINER AND KEEP UNDER LOCK AND KEY.
10. KEEP APART FROM FOOD AND FOODSTUFFS.
11. TOXIC TO FISH AND WILD LIFE. DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS AND WATERWAYS.
12. SPILLAGE - Use protective clothing when dealing with spillages. Prevent entry into drains, water or soil. Soak up spilled product with absorbent material such as dry soil, sawdust or sand and place into a labelled closable container for safe disposal. Use damp cloth to clean the floor and contaminated parts. Place used cleaning materials into closable container for safe disposal. Bury container in a disposable pit away from water sources or arable land.
13. CONTAINER DISPOSAL - Triple rinse container emptying washings into spray tank and spray onto crop. Perforate and flatten rinsed container to make it unusable and bury it in a disposal pit in a secure location away from water sources or arable land. Do not use empty container for any other purpose.
14. **RE-ENTRY:** Do not enter treated area before spray deposits on leaf surfaces have dried, unless wearing protective clothing.

**SYMPTOMS OF POISONING:** No specific symptoms known.

### FIRST AID:

1. Remove patient from source of poisoning and remove contaminated clothing.
2. If skin is contaminated, wash affected areas of skin thoroughly with soap and water.
3. If eyes are contaminated, flush well with clean water for at least 15 minutes.
4. If swallowed, DO NOT induce vomiting, seek medical advice immediately.
5. Show container with label to attending doctor.

**NOTE TO PHYSICIAN: Treatment:** Treat symptomatically.

If ingested - removal of ingested compound by gastric lavage. No specific antidote is known

**WARRANTY:** Although this remedy has been extensively tested under a large variety of conditions the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, compatibility with other substances not indicated on the label and the occurrence of resistance of the pest to the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.



# o.b.e.r.o.n

Reg. No. 09-D-183-1

CONTENTS: 1L

## CAUTION

### HARMFUL IF SWALLOWED

#### COMPOSITION:

spiromesifen..... 240 g/l  
inert ingredients..... 760 g/l

#### MASS/VOLUME

Chemical Group : ketoenol

**A CONTACT ACARICIDE AND INSECTICIDE FOR THE CONTROL OF MITES AND WHITEFLIES ON ROSES, TOMATOES, POTATOES AND HYPERICUM**



### DIRECTIONS FOR USE: USE ONLY AS DIRECTED

**Oberon** is a foliar contact acaricide and insecticide for the control of Red spider mites and Whiteflies on Roses, Tomatoes, Potatoes and Hypericum. **Oberon** is active against all developmental stages of mites and whiteflies, but the eggs, larvae, nymphs and pupae stages are more susceptible than adults.

**Resistance management guidelines:** **Oberon** may be applied up to 3 times in total per cropping cycle in annual crops. For mite control, a maximum of 2 applications, for whitefly, a maximum of 3 applications. **Oberon** applications should be alternated with registered products of other chemical groups with different mode of action.

**Application:** **Oberon** should be applied as a full cover spray on all foliage parts, ensuring a thorough and even coverage of upper and lower leaf surfaces. Apply a minimum overall spray volume of 1000 l of water/ha

**Crop tolerance:** **Oberon** is well tolerated by crops listed on the label, when used as recommended. **Note:** As the different species and varieties of Roses may differ in their sensitivity to chemical spray, users are advised always to check for crop compatibility by first treating a few plants before large-scale application is undertaken. Applications early in the morning or late in the afternoon when temperatures are lower and the drying time is longer may not show symptoms of selectivity but applications done at higher temperatures and low relative humidity may show symptoms of selectivity.

**Mixing instructions:** Thoroughly shake the container and pour the required quantity of **Oberon** into the spray tank half-filled with water while agitating and then top up with water to the required level. Do not allow the **Oberon** mixture to stand any length of time before using.

CROP	PEST	APPLICATION RATE	APPLICATION RATE
Roses	Red Spider mites	60 ml / 100 l water and apply a minimum of 1000 l/ha	Apply <b>Oberon</b> when presence of mites is first noticed and repeat at 10-day intervals if necessary. <b>Note:</b> 1. Early applications of <b>Oberon</b> will prevent mite population build up. 2. For effective control of high mites infestation, choose product effective on adults followed by <b>Oberon</b> .
Hypericum, Potatoes and Tomatoes	Red Spider mites and Whiteflies	60 ml / 100 l water and apply a minimum of 1000 l/ha or 9 ml/ knapsack of 15 l capacity	Apply <b>Oberon</b> when presence of mites or whitefly is first noticed and repeat at 10-day intervals if necessary.

**Pre-harvest interval (PHI):** Potatoes & Tomatoes: 3 days

**Compatibility:** **Oberon** should not be tank mixed with systemic and translaminar products. Do not mix **Oberon** with EC formulations or adjuvant. Do not apply EC formulations before or soon after **Oberon** application. **Oberon** is most efficacious when used alone at recommended rates and timing.

Packed For: Bayer Zimbabwe (Pvt) Ltd P.O. Box AY 78, Amby, Harare, Zimbabwe.  
Tel. 487211/487245/7 Fax. 487242 Emergency Tel. +27(21) 931-6129  
Manufactured by Bayer CropScience AG.

**Oberon**® is a registered trademark of Bayer CropScience AG, Germany

Batch No.: See on pack

Date of Manufacture: See on pack

Expiry date:



Zim/07/09/Oberon 240 SC/Full label Code: 79661206



CAUTION





**Material Safety Data Sheet**  
**OBERON® 2 SC INSECTICIDE/MITICIDE**

MSDS Number: 102000008393  
 MSDS Version 2.2  
 Revision Date: 06/11/2008

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product Name** OBERON® 2 SC INSECTICIDE/MITICIDE  
**MSDS Number** 102000008393  
**EPA Registration No.** 264-719

Bayer CropScience  
 2 T.W. Alexander Drive  
 Research Triangle PK, NC 27709  
 USA

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)  
 For Product Information call: 1-866-99BAYER (1-866-992-2937)

**SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Spiromesifen	283594-90-1	23.10
Trade Secret Ingredient(s)		10.00

**SECTION 3. HAZARDS IDENTIFICATION**

*NOTE: Please refer to Section 11 for detailed toxicological information.*

<b><u>Emergency Overview</u></b>	Caution! Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes and clothing.
<b>Physical State</b>	viscous liquid suspension
<b>Odor</b>	musty earthy
<b>Appearance</b>	white to light grey
<b>Routes of Exposure</b>	Ingestion, Eye contact, Skin Absorption
<b>Immediate Effects</b>	
<b>Eye</b>	Avoid contact with eyes.
<b>Skin</b>	Harmful if absorbed through skin. Avoid contact with skin and clothing.
<b>Ingestion</b>	Harmful if swallowed. Do not take internally.
<b>Chronic or Delayed Long-Term</b>	This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects.



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**Potential Environmental Effect** Toxic to fish and aquatic invertebrates.

**SECTION 4. FIRST AID MEASURES**

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
<b>Skin</b>	Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.
<b>Inhalation</b>	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
<b>Notes to Physician Treatment</b>	There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

**SECTION 5. FIRE FIGHTING MEASURES**

<b>Flash point</b>	> 93.4 °C / 200.1 °F
<b>Suitable Extinguishing Media</b>	Water spray, Foam, Dry powder, Carbon dioxide (CO2), Sand
<b>Fire Fighting Instructions</b>	Keep out of smoke. Fight fire from upwind position. Cool closed containers/ tanks exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.  Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**



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- Personal Precautions**      Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.
- Methods for Cleaning Up**      Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.
- Additional Advice**              Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

**SECTION 7. HANDLING AND STORAGE**

- Handling Procedures**              Handle and open container in a manner as to prevent spillage. Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
- Storing Procedures**                Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.  
  
Protect from freezing.
- Work/Hygienic Procedures**              Handle in accordance with good industrial hygiene and safety practice. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.  
  
Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.  
  
Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Wash thoroughly and put on clean clothing.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

- General Protection**                Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.  
  
Follow all label instructions. Train employees in safe use of the product.
- Eye/Face Protection**              Safety glasses with side-shields
- Hand Protection**                  Chemical resistant nitrile rubber gloves



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**Body Protection**                      Wear long-sleeved shirt and long pants and shoes plus socks.

**Respiratory Protection**            When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

**Exposure Limits**                      This product contains material which are Trade Secret and may have Occupational Exposure Limits. If more information is required, call the product information number listed in Section 1.

Spiromesifen	283594-90-1	OES BCS*	0.92 mg/m3
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\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	white to light grey
<b>Physical State</b>	viscous liquid suspension
<b>Odor</b>	musty earthy
<b>pH</b>	3.5 - 4.5 (100 %) (undiluted)
<b>Density</b>	1.03 g/cm <sup>3</sup> at 20 °C
<b>Melting / Freezing Point</b>	-18 °C / -0 °F
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>Viscosity</b>	600 - 1,100 mPa.s

**SECTION 10. STABILITY AND REACTIVITY**

<b>Conditions to Avoid</b>	Freezing
<b>Hazardous Decomposition Products</b>	Thermal decomposition Carbon monoxide
<b>Hazardous Reactions</b>	Stable under normal conditions.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Only acute toxicity studies have been performed on the formulated product. The non-acute information



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pertains to the active ingredient, spiromesifen technical.

- Acute Oral Toxicity**           rat: LD50: > 2,000 mg/kg
- Acute Dermal Toxicity**       rat: LD50: > 4,000 mg/kg
- Acute Inhalation Toxicity**   rat: LC50: > 2.8 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.
- rat: LC50: > 11.2 mg/l  
Exposure time: 1 h  
Determined in the form of liquid aerosol.  
Extrapolated from the 4 hr LC50.
- Skin Irritation**                rabbit: No skin irritation.
- Eye Irritation**                rabbit: No eye irritation.
- Sensitization**                 guinea pig: Non-sensitizing.
- Chronic Toxicity**             Spiromesifen caused effects in the liver, uterus, adrenal and/or thyroid (secondary effect) in chronic studies in rats and dogs.

**Assessment Carcinogenicity**

Spiromesifen was not carcinogenic in lifetime feeding studies in rats and mice.

- ACGIH**  
None.
- NTP**  
None.
- IARC**  
None.
- OSHA**  
None.

**Reproductive & Developmental Toxicity**       REPRODUCTION: Spiromesifen was not a primary reproductive toxicant in a two-generation study in rats. Reproductive effects were observed only at doses producing systemic toxicity.

DEVELOPMENTAL TOXICITY: Spiromesifen was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in rats but were considered secondary to maternal toxicity.

**Neurotoxicity**                 Spiromesifen caused transient neurobehavioral effects without correlating neuropathological changes in acute and subchronic neurotoxicity screening studies in rats.

**Mutagenicity**                 Spiromesifen was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.



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**SECTION 12. ECOLOGICAL INFORMATION**

**Environmental Precautions** Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.

**SECTION 13. DISPOSAL CONSIDERATIONS**

**General Disposal Guidance** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Disposal** Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**  
Not regulated for Domestic Surface Transportation

**IMDG CLASSIFICATION:**  
Environmentally Hazardous Substances, Liquid, N.O.S.(Spiromesifen)// 9 // UN3082 //PGIII // Marine Pollutant

**FREIGHT CLASSIFICATION:**  
Insecticide or Fungicides, N.O.I.; other than poison

**SECTION 15. REGULATORY INFORMATION**

**EPA Registration No.** 264-719

**US Federal Regulations**

**TSCA list**

None.

**US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)**

None.

**SARA Title III - Section 302 - Notification and Information**

None.

**SARA Title III - Section 313 - Toxic Chemical Release Reporting**

None.

**US States Regulatory Reporting**



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**CA Prop65**

This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

**US State Right-To-Know Ingredients**

None.

**Canadian Regulations**

**Canadian Domestic Substance List**

None.

**Environmental**

**CERCLA**

None.

**Clean Water Section 307 Priority Pollutants**

None.

**Safe Drinking Water Act Maximum Contaminant Levels**

None.

**SECTION 16. OTHER INFORMATION**

NFPA 704 (National Fire Protection Association):

Health - 1      Flammability - 1      Reactivity - 1      Others - none

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated Section 14: Transport Information.

Revision Date: 06/11/2008

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