



**Product Identifier according to Art.18 of Reg. (EC) No 1272/2008 [CLP]: SEQUOIA**

**Toxic to aquatic life with long lasting effects.**

Collect Spillage

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except

for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

Contain 1,2 benzisothiazolin-3-one. May produce an allergic reaction

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

**READ DIRECTIONS FOR USE ON ATTACHED LEAFLET.**

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.



Dow AgroSciences



# Sequoia®

## INSECTICIDE

**MAPP 18677**



A suspension concentrate containing 120 g/litre (2.38% w/w) sulfoxaflor. A selective insecticide (IRAC Group 4C) for use in PROTECTED ORNAMENTAL PLANT PRODUCTION and PROTECTED CROPS of AUBERGINE, COURGETTE, CUCUMBER, GHERKIN, PEPPERS, TOMATO, PUMPKIN, MELON and WATERMELON for the control of aphid and whitefly species.

### IMPORTANT INFORMATION

FOR USE ONLY AS A HORTICULTURAL INSECTICIDE

**Crops/Situations:** Ornamental plant production, flowers and bulbs (protected), protected crops of aubergine (including pepinos), pepper (including chilli pepper), tomatoes, cucumbers, courgettes, gherkins, melons, pumpkin, and watermelon.

**Maximum Individual Dose:** } Full details are

**Maximum Number of Treatments:** } given in the  
} Important

**Latest Time of Application:** } Information area  
} on the attached

**Other Specific Restrictions:** } leaflet

**Read the label before use. Using this product in a manner that is inconsistent with the label may be an offence. Follow the Code of Practice for Using Plant Protection Products.**

**PROTECT FROM FROST**

**0.25 litres e**



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## **SAFETY PRECAUTIONS**

### **Operator protection:**

OPERATORS must wear suitable protective gloves when handling the concentrate or applying by hand-held equipment.

WASH HANDS AND EXPOSED SKIN before meals and after work.

WASH CONCENTRATE from skin or eyes immediately.

### **Environmental protection:**

DO NOT CONTAMINATE WATER with the product or its container.

DO NOT CLEAN application equipment near surface water. Avoid contamination via drains from farmyards and roads.

### **Storage and disposal:**

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

WASH OUT CONTAINER THOROUGHLY, empty washings into the spray tank and dispose of safely.

DO NOT RE-USE CONTAINER for any purpose.

This label is compliant with the CPA Voluntary Initiative Guidance (UK only).

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Registered by:

### **Dow AgroSciences Limited**

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Marketed and distributed by:

### **Fargro Limited**

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Poling, Arundel, West Sussex,

BN18 9PY

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## **DIRECTIONS FOR USE**

IMPORTANT: This information is approved as part of the Product label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

## FOR PERMANENT PROTECTED USES

### IMPORTANT INFORMATION

FOR USE ONLY AS A HORTICULTURAL INSECTICIDE

Crop/Situation	Maximum Individual Dose (mL/ha)	Maximum Number of Treatments	Latest Time of Application
Aubergine (permanent protection with full enclosure), Courgette and summer squash (permanent protection with full enclosure), Cucumber (permanent protection with full enclosure), Gherkin (permanent protection with full enclosure protected), Pepper and chilli (permanent protection with full enclosure) Peppers-chilli (protected) Tomato (permanent protection with full enclosure) Pumpkin (permanent protection with full enclosure), Melon (permanent protection with full enclosure ), Watermelon (permanent protection with full enclosure), Winter squash and pumpkin (permanent protection with full enclosure)	400	1 per crop (See Other Specific Restrictions 2-5)	1 day before harvest
	OR 200	2 per crop (See Other Specific Restrictions 2-5)	1 day before harvest

### IMPORTANT INFORMATION

FOR USE ONLY AS A HORTICULTURAL INSECTICIDE

Crop/Situation	Maximum Individual Dose (mL/ha)	Maximum Number of Treatments	Latest Time of Application
Ornamental plant production (protected)	400	1 per crop (See Other Specific Restriction 1-5)	
	OR 200	2 per crop (See Other Specific Restrictions 1-5)	

#### Other Specific Restrictions:

- Ornamental crops – Do Not Handle treated crops or contaminated surfaces for at least 8 days after treatment.
- Treatments must only be made under “permanent protection” situations which provide full enclosure (including continuous top and side barriers down to below ground level) and which are present and maintained over a number of years.
- Reasonable precautions must be taken to prevent access of birds, wild mammals and honey bees to treated crops.

- (4) To minimise airborne environmental exposure, vents, doors and other openings must be closed during and after application until the applied product has fully settled.
- (5) The use of this product in recirculating water systems in a glasshouse may result in dilute pesticide waste that requires disposal. All dilute pesticide waste must be disposed of safely and legally to protect humans, wildlife and the environment, especially groundwater and surface water. Pesticide disposal advice is detailed in the "Code of Practice for Using Plant Protection Products (Section 5: Disposing of Pesticide Waste)

**READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE.**

## NOTES

SEQUOIA insecticide has a specific pest spectrum. SEQUOIA is safe to crops on the label but in the case of known sensitive varieties it is recommended that growers test the product on a small number of plants before treating the whole crop. It is recommended especially in sensitive ornamental crops.

## MODE OF ACTION

SEQUOIA is a xylem mobile systemic insecticide with translaminar movement which enters the insect primarily through contact and ingestion. Contact occurs by direct application. Ingestion occurs in aphids through the stylet (feeding tube) from within the vascular system of the plant. Following entry to the insect SEQUOIA acts on the insect nicotinic-Acetylcholine

site at a unique target receptor. Symptoms appear almost immediately and complete mortality occurs within a few hours.

## PROTECTED CROPS OF TOMATO, AUBERGINE (including pepinos) AND PEPPER (including chilli pepper)

<b>Pest</b>	<i>Aphis gossypii</i> (Cotton or Melon aphid) <i>Myzus persicae</i> (peach-potato) aphid <i>Aphis nasturtii</i> (Buckthorn aphid)
<b>Rate</b>	200ml Product/ha
<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	Two – applied between the 1st primary shoot visible (BBCH 20) and fruit ripening (BBCH 87).
<b>Time and mode of application</b>	Apply at the presence of the first aphid neonates with SEQUOIA at 200 mL product/ha rate. The application can be repeated after a minimum of 14 days if needed. Use a maximum of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides which have different modes of action to ensure a good resistance management strategy.

<b>Latest time of application</b>	1 day before harvest
<b>Pest</b>	<i>Trialeurodes vaporariorum</i> (Greenhouse whitefly) <i>Bemisia tabaci</i> (Sweet-potato whitefly)
<b>Rate</b>	400 ml Product/ha
<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	One applied between the 1st primary shoot visible (BBCH 20) and fruit ripening (BBCH 87).
<b>Time and mode of application</b>	Apply at the presence of the first neonates with SEQUOIA at 400 mL product/ha rate. Use a maximum of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides which have different modes of action to ensure a good resistance management strategy.
<b>Latest time of application</b>	1 day before harvest

## PROTECTED CROPS OF COURGETTE, CUCUMBER, GHERKIN, MELON, WATERMELON AND PUMPKIN

<b>Pest</b>	<i>Aphis gossypii</i> (Cotton or Melon aphid) <i>Myzus persicae</i> (peach-potato) aphid <i>Aphis nasturtii</i> (Buckthorn aphid)
<b>Rate</b>	200ml Product/ha
<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	Two – applied between the 1st primary shoot visible (BBCH 20) and fruit ripening (BBCH 87).
<b>Time and mode of application</b>	Apply at the presence of the first aphid neonates with SEQUOIA at 200 mL product/ha rate. The application can be repeated after a minimum of 14 days if needed. Use a maximum of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides which have different modes of action to ensure a good resistance management strategy.
<b>Latest time of application</b>	1 day before harvest

<b>Pest</b>	<i>Trialeurodes vaporariorum</i> (Greenhouse whitefly) <i>Bemisia tabaci</i> (Sweet-potato whitefly)
<b>Rate</b>	400 ml Product/ha
<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	One applied between the 1st primary shoot visible (BBCH 20) and fruit ripening (BBCH 87).
<b>Time and mode of application</b>	Apply at the presence of the first neonates with SEQUOIA at 400 mL product/ha rate. Use a maximum of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides which have different modes of action to ensure a good resistance management strategy.
<b>Latest time of application</b>	1 day before harvest

### ORNAMENTAL PLANT PRODUCTION (PROTECTED)

SEQUOIA can be used on the following crops: Chrysanthemum, Calendula spp (Marigolds, Aster), Bellis perennis (Daisy), Geranium, Nicotiana, Euphorbia, Gerbera and Lantana.

SEQUOIA is safe to crops on the label but in the case of known sensitive varieties it is recommended that growers test the product on a small number of plants before treating the whole crop.

<b>Pest</b>	<i>Aphis gossypii</i> (Cotton or Melon aphid) <i>Myzus persicae</i> (Peach-potato aphid) <i>Aphis fabae</i> (Black bean aphid) <i>Macrosiphum euphorbiae</i> (Potato aphid)
<b>Rate</b>	200 ml Product/ha
<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	Two – applied between the 2 leaves stage upto the 1 <sup>st</sup> flower petals appearing (BBCH12-59).
<b>Time and mode of application</b>	Apply at the presence of the first neonates with SEQUOIA at rate of 200 ml/ha. The interval between 2 sprays should be a minimum of 14 days. Use a maximum amount of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides to ensure a good resistance management strategy.
<b>Latest time of application</b>	8 day before harvest
<b>Pest</b>	<i>Trialeurodes vaporariorum</i> (Greenhouse whitefly) <i>Bemisia tabaci</i> (Sweet-potato whitefly)
<b>Rate</b>	400 ml Product/ha

<b>Water volume</b>	400 - 1200 litres of water per hectare
<b>Maximum number of applications</b>	One applied between the 1st primary shoot visible (BBCH 20) and fruit ripening (BBCH 87).
<b>Time and mode of application</b>	Apply at the presence of the first neonates with SEQUOIA at 400 mL product/ha rate. Use a maximum of 400 ml Product/ha in a year. When possible apply SEQUOIA in programmes with other insecticides which have different modes of action to ensure a good resistance management strategy.
<b>Latest time of application</b>	8 days before harvest

## RESISTANCE

### GENERAL

To reduce the possibility of the development of resistance:

- Any insect control agent may become less effective over time if target insects develop resistance to its mode of action. Adherence to the following recommendations will help to ensure the prolonged usefulness of insect control products:
- Total reliance on one pesticide will hasten the development of resistance: sulfoxaflor (IRAC Group 4C) has a different mode of action profile and cross resistance pattern from other insecticides and will ideally be applied in planned programs with other insecticides with different modes of action.

- As a general principle, the exclusive or continuous use of the same active substance or mode of action on consecutive generations of insects should be avoided. It is recommended to apply sulfoxaflor with an interval equivalent to two generations of the pest but not less than 14 days, where repeat applications are necessary. The maximum number of treatments of sulfoxaflor is two per year, which will reduce the risk of resistance developing, especially if it is alternated with other insecticides that have different modes of action.
- Avoid using less than the labelled rate of SEQUOIA when applied alone or in tank mixtures.
- For guidance, consult with local extension specialists for information on local resistance management programmes.
- If possible, include multiple tactics (e.g. cultural or biological controls) when using Integrated Pest Management Programs.

## INTEGRATED PEST MANAGEMENT

SEQUOIA may adversely impact on beneficial insects used in IPM as well as bees used for pollination services. For further information and the latest advice on beneficial insects and mites and their integrated use with SEQUOIA, consult Dow AgroSciences Ltd.

## **BEES**

For glasshouse uses, growers should cover or remove bumble bee colonies at the time of application and re-introduce at an appropriate time after the spray deposits have dried. Under commercial conditions this is usually a period of 24 hours after application.

When used according to good agricultural practice, SEQUOIA will pose a low risk to bees and beneficial arthropods. For further information and the latest advice on beneficial insects and mites and their integrated use with SEQUOIA consult Dow AgroSciences

## **MIXING**

To ensure thorough mixing of the product invert the container several times before opening. Half fill the spray tank with water, begin agitation and add the required quantity of SEQUOIA. Fill up the spray tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing. Use the spray solution immediately after preparation.

## **SPRAY VOLUME**

Water volume should reflect the need for uniform cover and penetration of the leaf canopy.

## **APPLICATION EQUIPMENT**

Apply SEQUOIA using an appropriate sprayer, which is able to ensure good and even coverage of foliage and good penetration of crop canopy. Ensure the equipment is in good working order and has been calibrated according to the manufacturers' recommendations.

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## **NOTES**

Wash spray tank and equipment (including knapsack sprayers) thoroughly with water and a liquid detergent immediately after use. Spray out. Fill with clean water mix for a while and spray out again before using another product.

## **TRADEMARK ACKNOWLEDGEMENTS**

SEQUOIA is a trademark of the Dow Chemical Company (Dow) or an affiliate company of Dow.



### **Dow AgroSciences Conditions of Supply**

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after application which may affect the performance of the goods, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.



<http://uk.dowagro.com/wp-content/uploads/SEQUOIA-SDS.pdf>

**Alternatively contact your supplier**

SPECIMEN

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SPECIMEN



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**Toxic to aquatic life with long lasting effects.**

Collect Spillage

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except

for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

Contain 1,2 benzisothiazolin-3-one. May produce an allergic reaction

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

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**Maximum Individual Dose:** } Full details are given

**Maximum Number of Treatments:** } in the Important

**Latest Time of Application:** } Information area

**Other Specific Restrictions:** } on the attached leaflet

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**PROTECT FROM FROST**

**0.25 litres e**