

# Topaz<sup>®</sup> 200 EW

syngenta.

Reg. No. L5246 Act No. 36 of 1947 N-AR 0985 (Namibia) W130593 (Botswana)

An emulsion oil in water systemic fungicide for the control of diseases as listed.

GROUP 3 FUNGICIDE

Active Ingredients:  
penconazole (triazole)..... 200 g/l

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WARNING

## Hazard statements:

Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging the unborn child. Toxic to aquatic life with long-lasting effects.

## Precautionary statements:

**Prevention:** Obtain special instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protective/face protection/hearing protection. **Response:** If exposed, concerned or rash occurs, get medical advice/attention. Collect spillage.

## EMERGENCY TEL NO.:

+27 82 446 8946 (Griffon)

UN 3082

Registration holder  
Syngenta South Africa (Pty) Ltd  
Co. Reg. No. 1998/013761/07  
Private Bag X 60  
HALFWAY HOUSE, 1685  
Tel.: +27 11 541 4000

## 1. WARNINGS:

**Hazard statements:** Causes serious eye irritation. May cause an allergic skin reaction. Suspected of damaging the unborn child. Toxic to aquatic life with long lasting-effects. Collect spillage.

**Withholding periods:** Minimum number of days between last application and harvest.

APPLES AND PEARS.....	14 days
BRUSSEL SPROUTS.....	7 days
CUCURBITS (excluding patty pans).....	7 days
LUPINS.....	7 days
PATTY PANS.....	1 day
PEAS AND MANGE TOUTS.....	7 days
PEAS (green fodder).....	14 days
TABLE AND WINE GRAPES .....	14 days
PEPPERS (bell pepper/chilli pepper/pimento/sweet pepper/paprika/piquant).....	7 days

**NOTE:** Compliance with these withholding periods will ensure that residues do not exceed local maximum residue limits (MRL).

- Harmful if swallowed, inhaled, or absorbed through the skin.
- May irritate the skin and eyes.
- Toxic to aquatic organisms.
- **Flammable:** Do not store or use near open flame.
- Store in original tightly closed containers away from sun and damp in a well-ventilated area. Avoid temperatures below 0°C and above 35°C.
- Store away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **Re-entry:** Do not enter treated area until spray deposit has dried unless wearing protective clothing.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

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, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against 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 and the environment, or harm to people 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, that could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

## 2. PRECAUTIONS:

**Precautionary statements:** **Prevention:** Obtain special instructions before use. Avoid breathing mist or vapours. Wear protective gloves/protective clothing/eye protective/face protection/hearing protection. **Response:** If exposed or concerned, get medical advice/attention.

- Do not inhale the spray mist.
- Avoid contact with skin and eyes.
- Wear a face shield and rubber gloves when handling concentrate.
- Wash with soap and water after use.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.
- Avoid drift of spray onto other crops, pastures, rivers, dams, boreholes and areas not under treatment.
- Clean applicator after use. Dispose of rinsate where it will not contaminate crops, pastures, rivers, dams and boreholes.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Rinse the empty container three (3) times with a volume of clean water equal to a minimum of 10% of the container. Add the rinsate to the content of the spray tank before destroying the container in the prescribed manner.
- Do not use empty container for any other purpose.

### 3. RELEVANT SUBSTANCES:

Chemical name	
penconazole (ISO)	
Classification	Concentration (% w/w)
Acute Tox. 4; H302 Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410  M-Factor (acute aquatic toxicity): 1 M-Factor (chronic aquatic toxicity): 1	≥ 10 - < 20
Chemical name	
1,2-benzisothiazol-3(2H)-one	
Classification	Concentration (% w/w)
Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411  M-Factor (Acute aquatic toxicity): 1	≥ 0,05 - < 0,1

### 4. RESISTANT MANAGEMENT:

**TOPAZ 200 EW** is a group code 3 fungicide. Any fungus population may contain individuals naturally resistant to **TOPAZ 200 EW** and other group code 3 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly and exclusively in programs. These resistant fungi may not be controlled by **TOPAZ 200 EW** or any other group code 3 fungicides.

#### To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with products from different fungicide group codes.
- Refer to individual product labels when alternating products or when using tank mixtures.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.
- Where repeated applications are required **TOPAZ 200 EW** should be applied in two (2) blocks of two (2) applications each alternated with non-cross resistant fungicides.

For specific information on resistance management contact the registration holder of this product (Syngenta South Africa) or visit the FRAC website at <http://www.frac.info/frac/index.htm>.

#### 4.1 General

- **TOPAZ 200 EW** should always be applied preventatively as prescribed in the RECOMMENDATIONS table.
- **TOPAZ 200 EW** must be applied as a full-cover spray.

- Do not reduce the dosage rates or extend the spray intervals beyond that recommended on the label.
- Never use **TOPAZ 200 EW** as a corrective or curative treatment or after the unsuccessful application of any product.

### 5. USE RESTRICTIONS:

#### APPLES AND PEARS:

- For scab control always apply **TOPAZ 200 EW** in combination with unrelated broad spectrum fungicides. See APPLICATION RATES.
- Such combinations are recommended in a preventative spray program in areas where, and during periods when conditions are favourable for the development of scab.
- It is recommended to change to a preventative contact fungicide spray program during December.

### 6. PRODUCT PROPERTIES:

**TOPAZ 200 EW** is a systemic fungicide that moves acropetally within the plant. In a protective program **TOPAZ 200 EW** effectively controls powdery mildew in the following crops:

*Sphaerotheca fuliginea* and *Erysiphe cichoracearum* in cucurbits; *Erysiphe pisi* in peas and mange touts; *Leveillula taurica* on pepper crops; *Oidium* spp. in lupins; *Mycosphaerella bassicicola* in brussels sprouts; *Oidium tuckeri* in table and wine grapes and *Podosphaera leucotricha* in apples. It is also effective in the control of apple scab (*Venturia inaequalis*) in apples, as well as pear scab (*V. pirina*) in pears.

### 7. DIRECTIONS FOR USE: Use only as indicated.

#### 7.1 Compatibility

The compatibility of **TOPAZ 200 EW** with other products may be influenced by the formulation of the products involved as well as the quality of the water. Since the formulation of other products may change without the knowledge of Syngenta and the quality of water may vary from farm to farm, a physical compatibility test should always be carried out prior to application.

**TOPAZ 200 EW** is compatible with most commonly used crop protection chemicals used on the crops as listed.

#### 7.2 Mixing Instructions

##### Replace cap after use.

- Add the required quantity of **TOPAZ 200 EW** to sufficient water to form a homogeneous emulsion, stir well and add to the rest of the water in the spray tank.
- Stir constantly while mixing as well as during application.
- When a wettable powder is sprayed as a tank mix with **TOPAZ 200 EW**, the wettable powder (pre-creamed) should be mixed first and well agitated, and thereafter the **TOPAZ 200 EW** added and the spray tank filled to its final volume.
- If tank mixes are made, wait until all the **TOPAZ 200 EW** is dissolved before adding the other products.



### Tractorised mistblower and air assisted recycling sprayers:

- Fill the spray tank one-third with water.
- Continuously agitate.
- Pour the required quantity of product directly into the tank and continue to agitate.
- Continue agitating and fill the tank with water.

### Ensure thorough agitation of the mixture in the tank during mixing and spraying.

## 8. APPLICATION TECHNIQUES:

Ensure that the applicator to be used is in a good working condition and correctly calibrated. Use the spray volumes as indicated to ensure good coverage. Ensure thorough agitation of the mixture in the tank during mixing and spraying.

### 8.1 Ground Application

**TOPAZ 200 EW** may be applied with conventional high-volume spray equipment. Calibrate the apparatus before application to ensure that the correct dosage is applied. The distribution of the spray volume must be uniform throughout the target area.

### 8.2 Aerial Application

Aerial application of this product may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS 10118 (Aerial Application of Agricultural Remedies). It is important to ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria are met:

#### a) Application parameters:

- **Volume:** A volume of 30 ℓ/ha is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy or be held responsible for any adverse effects if the product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** A droplet coverage of 25 - 30 droplets per cm<sup>2</sup> must be at the target.
- **Droplet size:** A droplet spectrum with a VMD of 280 - 300 microns is recommended. Ensure that the production of fine droplets (less than 150 microns - high drift evaporation potential) is restricted to a minimum.
- **Flying height:** The height of the spray boom should be maintained at 3 - 4 metres above the target. Do not spray when aircraft is in a climb, at the top, during a dive, or when banking.

#### b) Equipment:

- Use suitable atomising equipment (hydraulic nozzles or rotary atomisers) that will produce the desired droplet size and coverage but which will ensure the minimum loss of product either through endodrift (within target field) or exodrift (outside target field).
- The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span.
- All nozzles/atomisers should be positioned within the inner 60 - 75% of the wingspan to prevent droplets from

entering the wingtip vortices.

#### c) Meteorological conditions:

- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C. The addition of a suitable anti-evaporant is recommended if the VMD of the droplets is less than 200 - 250 microns.
- Stop spraying if the wind speed exceeds 15 km/h or reduces to less than 5 km/h.
- Aerial application of this product must not be done under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.
- Also note that the application of this product under temperature inversion conditions (spraying in or above the inversion layer) may lead to the following:
  - Reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - Damage to other sensitive crops and or non-target areas through the movement of the suspended spray cloud away from the target field.
- Under the following climatic conditions drift could occur for many kilometres away from the nearest spray path of the aircraft:
  - Cloudy weather with relative humidity above 80% and low air movement of less than 5 km per hour. When such conditions prevail, aerial application should **NOT** be carried out.
- Ensure that the aerial spray operator knows which fields to spray. Supply the precise identification to the operator of the fields to be sprayed preferably by means of a map or GPS coordinates. Indicate to the operator adjacent environmental sensitive areas or sensitive neighbouring crops, beehives or water sources that could be affected by the pesticide.

**Obtain assurance from the aerial spray operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.**

## 9. RECOMMENDATIONS:

For the best results, study the sections under 4 - 8 thoroughly.

### APPLES AND PEARS

Crop/Disease	Dosage
<b>APPLES</b> <b>Powdery mildew</b> ( <i>Podosphaera leucotricha</i> ) <b>Scab</b> ( <i>Venturia inaequalis</i> )	<b>Ground application</b> 12,5 ml/100 ℓ water plus mancozeb at the recommended dosage rate.
<b>PEARS</b> <b>Scab</b> ( <i>Venturia pirina</i> )	<b>Ground application</b> 12.5 ml/100 ℓ water plus mancozeb at the recommended dosage rate.
<b>Instructions</b> <ul style="list-style-type: none"><li>• Apply as a full-cover spray or alternatively according to tree row volume (TRV) (see COMMENTS below).</li><li>• Commence application at greentip and apply in a program at 7-day intervals up to the end of blossoming.</li><li>• Apply at 14-day intervals during the post-blossom stages.</li><li>• Do not exceed four (4) applications of <b>TOPAZ 200 EW</b> in one (1) growing season.</li></ul>	

## Comments:

a) Ensure that the correct amount of fungicide is applied per hectare. This is calculated from the tree row volume (TRV) formula (see below).

b) Post-infection (scab) applications:

The **TOPAZ 200 EW** broad spectrum fungicide combinations may be used curatively to supplement a preventative contact fungicide spray program. Curative applications are only recommended when adequate and reliable disease prediction systems are available. Treatment should be made within four (4) days of the onset of an infection period.

c) High-volume:

The water volume to be applied per hectare must be calculated according to the tree row volume (TRV) formula:

$$\ell/\text{ha} = \frac{\text{tree height} \times \text{tree diameter} \times 937}{\text{row width}}$$

The TRV calculation is the water volume required when the trees are in full leaf. Use the water volume required per hectare to calculate the amount of **TOPAZ 200 EW** required per hectare according to the various growth stages of a tree during the season.

**Water requirements per hectare as recommended according to the different growth stages of a tree:**

Growth stage	% High volume water requirement/ha
From green tip to $\pm$ 30% blossom	60%
From $\pm$ full blossom to $\pm$ middle November	80%
From $\pm$ start December	100%

d) Low-volume:

When **TOPAZ 200 EW** is applied as a low-volume spray, ensure that the correct amount of product as calculated for the high-volume requirement is applied per hectare.

## BRUSSELS SPROUTS

Disease	Spray interval	Dosage rate
<b>Ring Spots</b> ( <i>Mycosphaerella brassicicola</i> )	10 - 14 days	<b>Dilute spraying</b> 12.5 ml/100 ℓ water plus a mancozeb product at 150 g/100 ℓ water. <b>Concentrate spraying</b> 125 ml/ha plus a mancozeb product at 1.7 kg/ha.
<b>Remarks</b> <ul style="list-style-type: none"><li>Apply at the first sight of the disease symptom development.</li><li>Make repeat applications at 10 - 14-day intervals during periods that are conducive to disease development.</li><li>Apply no more than six (6) applications of <b>TOPAZ 200 EW</b> per season.</li><li>Apply sufficient water to cover the crop to the point of runoff.</li></ul>		

## CUCURBITS

(Excluding patty pans)

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Sphaerotheca</i> )	10 - 14 days	<b>Ground application</b> 22.5 ml/100 ℓ water

## CUCURBITS cont.

Disease	Spray interval	Dosage rate
<b>fuliginea</b> ( <i>Erysiphe cichoracearum</i> )	10 - 14 days	<b>Ground application</b> 22.5 ml/100 ℓ water
<b>Remarks</b> <ul style="list-style-type: none"><li>Commence application at the first signs of disease.</li><li>Do not exceed four (4) applications of <b>TOPAZ 200 EW</b> in one (1) season per crop.</li><li>It is recommended to alternate with a chemically unrelated fungicide.</li><li>Do not exceed the spray interval.</li></ul>		
<b>Spray volume</b> <ul style="list-style-type: none"><li><b>Tractor application:</b> Use at least 500 ℓ water/ha.</li></ul>		

## PATTY PANS

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Sphaerotheca fuliginea</i> ) ( <i>Erysiphe cichoracearum</i> )	10 - 14 days	<b>Ground application</b> 112.5 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>Commence application at the first signs of disease.</li><li>Do not exceed two (2) applications of <b>TOPAZ 200 EW</b> in one (1) growing season.</li><li>It is recommended to alternate with a chemically unrelated fungicide.</li></ul>		
<b>Spray volume</b> <ul style="list-style-type: none"><li><b>Tractor application:</b> Use up to 500 ℓ water/ha.</li></ul>		

## LUPINS

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Oidium</i> spp.)	21 - 28 days	<b>Ground and aerial application</b> 300 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>Do not exceed two (2) applications of <b>TOPAZ 200 EW</b> in one (1) growing season.</li><li>Commence application at the first signs of disease.</li></ul>		
<b>Spray volume</b> <ul style="list-style-type: none"><li><b>Tractor application:</b> 300 - 500 ℓ water/ha.</li><li><b>Aerial application:</b> 30 - 40 ℓ water/ha.</li></ul>		

## PEAS AND MANGE TOUT

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Erysiphe pisi</i> )	10 - 14-days	<b>Ground and aerial application</b> 110 ml/ha
<b>Remarks</b> <ul style="list-style-type: none"><li>Applications should be initiated when the disease is expected or when first signs of the disease are detected in the area.</li><li><b>Peas:</b> Do not exceed four (4) applications of <b>TOPAZ 200 EW</b> in one (1) growing season.</li><li><b>Mange Tout:</b> Do not exceed two (2) applications of <b>TOPAZ 200 EW</b> in one (1) growing season.</li></ul>		
<b>Spray volume</b> <ul style="list-style-type: none"><li><b>Tractor application:</b> Use at least 500 ℓ water/ha.</li><li><b>Aerial application:</b> 30 ℓ water/ha.</li></ul>		

## PEPPER CROPS

**PEPPER CROPS** cont.

*Capsicum* spp. (Bell pepper/chilli pepper/pimento/sweet pepper/paprika and piquant)

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Leveillula taurica</i> )	7 - 10 days	<b>Ground application</b> 45 mℓ/100 ℓ water or 225 mℓ/ha
<b>Remarks</b> <ul style="list-style-type: none"> <li>Commence application at the first signs of disease.</li> <li>Do not exceed two (2) applications of <b>TOPAZ 200 EW</b> in one growing season.</li> <li>It is recommended to alternate with a chemically unrelated fungicide, e.g., alternate <b>TOPAZ 200 EW</b> with AMISTAR (L6230) every seven (7) days.</li> </ul>		
<b>Spray volume</b> <ul style="list-style-type: none"> <li><b>Tractor application:</b> Use at least 500 ℓ water/ha.</li> </ul>		

**TABLE AND WINE GRAPES**

Disease	Spray interval	Dosage rate
<b>Powdery mildew</b> ( <i>Oidium tuckeri</i> )	10 - 14 days or 18 - 21 days	<b>Ground application</b> 15 mℓ/100 ℓ water or 22.5 mℓ/100 ℓ water
<b>Remarks</b> <ul style="list-style-type: none"> <li>Apply in a program spray schedule as a full-cover spray.</li> <li>Commence spraying when the first shoots are 100 - 250 mm long and repeat the treatment at intervals as indicated above.</li> <li>If the spray interval exceeds 14 days, use the higher rate.</li> <li>Do not exceed four (4) applications of <b>TOPAZ 200 EW</b> in one growing season.</li> <li>It is recommended to supplement the <b>TOPAZ 200 EW</b> spray program with THIOVIT JET (L1061) 2 - 3 times during the season.</li> </ul>		
<b>Spray volume</b> <ul style="list-style-type: none"> <li><b>Tractor application:</b> <b>Wine grapes:</b> Increase the spray volume progressively, from 250 ℓ/ha to reach 1 000 ℓ/ha at peaberry stage and repeat at this rate throughout the rest of the season. <b>Table grapes:</b> The spray volume should be increased progressively from 500 ℓ/ha to 1 200 ℓ/ha.</li> </ul>		

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