

## DIRECTIONS FOR USE

### FOLIAR SPRAY APPLICATIONS

Crop	Insect	Rate	WHP	Critical Comments
Cotton	Aphids	250mL/ha + Penatra Penetrant at 0.2% v/v (2mL/L water)	13 weeks	<p>The addition of Penatra Penetrant or equivalent is critical for the performance of Rygel Imidacloprid.</p> <p>Apply early in the establishment of an aphid infestation when numbers are low (i.e. no more than 1 or 2 leaves per plant with honeydew present). Applications made later than this may result in reduced control.</p> <p>Shorter residual control may be evident and a repeat application of a registered aphicide (follow the Cotton Insecticide Resistance management strategy for cotton aphid may be required to achieve complete control:</p> <ul style="list-style-type: none"> <li>• If application of Rygel Imidacloprid plus Penatra or equivalent are timed too late (see above); or</li> <li>• If existing high density aphid colonies (hotspots) are present; or</li> <li>• If aphids have established throughout the plant canopy (especially lower in the canopy); or</li> <li>• If there is high re-infestation; or</li> <li>• If there is rapid crop growth; or</li> <li>• If Rygel Imidacloprid plus Penatra or equivalent is used following a spray-failure (eg resistance to organophosphates or carbamate insecticides). Note: Where resistance to carbamates or organophosphates is suspected, Rygel Imidacloprid plus Penatra or equivalent should be used first so as not to delay control of the aphids present.</li> </ul> <p>Aphids treated with Rygel Imidacloprid plus Penatra or equivalent may still be present on the plant but will not be feeding. Control of aphids should initially be assessed by a reduction in fresh honeydew and not on the presence of aphids on the plant. After ingesting Rygel Imidacloprid aphids may take up to 5 days to die.</p>
	Mirids Brown flea beetle			Apply when pest numbers reach treatment threshold levels as determined by field checks.
Stone fruit	Green Peach aphid Black peach aphid	<p><b>Dilute Spraying</b> 25mL/100L</p> <p><b>Concentrate Spraying</b> Refer to Mixing/Application section</p>	21 days	Apply at first sign of aphid infestation. Apply as a full cover spray, ensuring thorough coverage. Apply by dilute or concentrate spraying equipment. Apply the same total amount of product to the target crop whether applying this product by dilute or concentrate methods. Do not use in equipment that requires rates greater than 125mL/100L of water (i.e. greater than 5 X concentrate)

Crop	Insect	Rate	WHP	Critical Comments
Cucurbits	Green Peach Aphid	25mL/100L or 300mL/ha	1 days	Apply at first sign of aphid infestation.
Capsicum			7 days	
Eggplant				
Potato				
Tomato			3 days	
Brassicas	Grey cabbage Aphid Turnip Aphid		7 days	Apply at first sign of aphid infestation. Add a wetting agent.
Sweet potato	Silverleaf Whitefly including type B	25mL/100L or	7 days	Apply at first sign of whitefly or melon thrips infestation. Apply dilute sprays (25mL/100L) to run off. Ensure thorough coverage of underside of leaves. Use of droppers will improve coverage of underside of leaves.
Cucumber			1 day	
Egg-plant	Melon Thrips	250mL/ha	7 days	
Roses	Aphids	25mL/100L	-	
Ornamental plants	Aphids Azalea Lace Bug Bronze Orange Bug Harlequin Bug Citrus mealy Bug Greenhouse Thrips Fullers Rose Weevil			
	Hibiscus Flower Beetle	50mL/100L		Spray buds and flowers as needed.
	Longtailed Mealybug	50mL/100L + surfactant		Apply 3 sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
	Psyllids	25mL/100L		Spray at first sign and then a week later.
	Soft Scales	25mL/100L		Spray in late spring or when small scales are first seen. Apply 3 sprays 2 weeks apart. Use a non-ionic surfactant at label rate.
Turf	First instar larvae of: African Black Beetle, Argentinian Scarab, Pruinose Scarab	2.5L/ha or 25mL/100L Spray with at least 400 L water per hectare to ensure even coverage. Preferably spray on to wet or dewy grass. Irrigate with 12 mm of water commencing within one hour of		Apply at peak egg hatch that is mid Spring to mid Sumer depending on species.

Crop	Insect	Rate	WHP	Critical Comments
		application.		
	Larvae of Billbug			Monitor adult activity through late Spring and early Summer. Spray when numbers peak, or when small larvae (4mm) are found in the thatch or surface soil. Early application is essential to minimise grass damage due to feeding.
Duboisia	Green Peach Aphid	25mL/100L		Apply when aphid numbers reach spray threshold as determined by regular monitoring. Ensure thorough coverage of all leaves.
Pananus trees	Flatid ( <i>Jamella australiae</i> )	<b>Spot Spray</b> 875mL/100L of water <b>Stem Injection</b> 1.75L/1L of water		<b>Spot Spray:</b> Spray 100mL of mixture directly into the leafy throat of each head. <b>Stem Injection:</b> Drill holes 0.5 to 1cm in diameter and 10cm deep at an angle of 30°, 1 to 1.5 m above ground level. Drill one hole per limb (or trunk in single trunked trees). Apply 5mL of mixture in each hole and seal the hole. Do not re-apply in the same holes. Uptake of Rygel Imidacloprid 200 SC Insecticide, and therefore control of the pest in heavily infested heads already showing severe damage, will be slow and may be incomplete.

#### SOIL DRENCHED APPLICATIONS

Crop	Insect	Rate	Critical Comments
Apples	Woolly aphid	<b>Chemical control</b> 12mL/1L of water/tree	For trees up to 7 years of age. During late summer or autumn, apple trees with woolly aphid colonies or damage should be identified and marked for treatment the following season. At green tip to petal fall, apply 1 litre of the prepared Rygel Imidacloprid mixture to moist soil immediately around the base of the tree trunk. Ensure the mixture infiltrates the soil around the trunk and does not run-off the soil. Control weeds before application. Do not remove or disturb soil around the trunk during the season. If aerial colonies are present at application, maximum effectiveness may not be achieved until the following season. Do not treat more than once in any 3 year period.
		<b>Beneficial insect plus chemical control</b> (e.g. <i>Aphelinus mali</i> plus Rygel Imidacloprid 200 SC Insecticide) 3mL/1L of water/tree	
Elm	Elm leaf beetle	7mL/25mm of tree diameter at breast height	Mix the required dose in sufficient water to adequately treat each tree. Use at least 50L of mix per tree up to a tree diameter of 400-500mm and then add 100L per tree for larger trees. Inject mix to a depth of 20-30cm in a minimum of 4 injection sites per tree 0.75 to 1.5m apart, arranged in an evenly spaced grid to just beyond the dripline. Ensure root zone is adequately moist with active root growth. Keep treated area moist for 7-10 days after treatment. Treat at least 6-10 weeks prior to pest attack in the late winter or early spring when roots are active. DO NOT treat if the soil is waterlogged.
Seedling Eucalyptus (to 1 m high) in pots	Chrysomelid Beetle larvae, Psyllids	2.5mL/plant	Mix in water up to 0.5L per 3 L pot and apply to soil. Use less water for smaller pots. DO NOT dilute to the point where mix runs out the bottom of pots.
Azaleas in pots	Azalea Lace Bug	3.5 mL/250mL water per pot	Use as a soil drench for pots up to 20L capacity. Prior to application remove mulch and dead vegetation, and moisten the soil surface. Apply the Rygel Imidacloprid mixture, and then water it in well immediately after application.

Crop	Insect	Rate	Critical Comments
Ornamentals in pots	Scarab Beetle larvae	3.5 mL/5L water	Use as a soil drench, 5L of mixture will treat twenty 6L pots. Prior to application remove mulch and dead vegetation, and moisten the soil surface. Apply the Rygel Imidacloprid mixture, and then water it in well immediately after application.
Roses	Aphids	3.5 mL/2L water per plant	Use as a soil drench by pouring mixture evenly around drip zone. Use this rate for plants up to 1m high. For each additional metre of plant height, add 2mL extra of Rygel Imidacloprid to 2L of water. Prior to application remove mulch and dead vegetation, and moisten the soil surface. Apply the Rygel Imidacloprid mixture, and then water it in well immediately after application.
For soil drench treatments, remove mulch and dead vegetation, and moisten the soil surface first. Apply Rygel Imidacloprid mixture, then water it in well immediately after application.			

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION**

**WITHHOLDING PERIODS**

- Apples: NOT required when used as directed**
- Cotton: DO NOT harvest for 13 weeks after application**  
**DO NOT graze or cut for stockfood**
- Cucurbits: DO NOT harvest for 1 day after application**
- Tomatoes: DO NOT harvest for 3 days after application**
- Brassicas, Capsicum, Egg Plant, Potatoes, Sweet potatoes: DO NOT harvest for 7 days after application**
- Stone fruit: DO NOT harvest for 21 days after application**

**DO NOT graze any treated area, or cut for stock food.**  
**DO NOT feed produce harvested from treated area to animals, including poultry.**

**CAUTION**  
**KEEP OUT OF REACH OF CHILDREN**  
**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

## Rygel

# Imidacloprid 200 SC Insecticide

Active Constituent: 200 g/L IMIDACLOPRID

For the control of various insect pests of cotton, fruit, vegetables and ornamentals.

GROUP	4A	INSECTICIDE
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APVMA Approval No: 62629/0509

Pack Size: 1L, 5L, 10L, 20L, 60L, 110L

### GENERAL INSTRUCTIONS

#### INSECTICIDE RESISTANCE WARNING

GROUP	4A	INSECTICIDE
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For insect resistance management Rygel Imidacloprid 200 SC Insecticide is a Group 4A Insecticide.

Some naturally occurring insect biotypes resistant to Rygel Imidacloprid 200 SC Insecticide and other group 4A insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Rygel Imidacloprid 200 SC Insecticide or other Group 4A insecticides are used repeatedly. The effectiveness of Rygel Imidacloprid 200 SC Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Rygel Australia Pty Ltd accepts no liability for any losses that may result from the failure of Rygel Imidacloprid 200 SC Insecticide to control resistant insects. Rygel Imidacloprid 200 SC Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Rygel Australia Pty Ltd representative or local agricultural department agronomist.

#### INSECTICIDE RESISTANCE MANAGEMENT STRATEGY

##### Cotton Aphid in cotton

Observe the cotton industry Insecticide Resistance Management Strategy (IRMS).

##### Aphids, whitefly and melon thrips in various crops

Do not apply Rygel Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) in consecutive sprays within and between seasons. Rotate with registered insecticides from other mode of action groups.

##### Confined Environments such as glasshouses

Annuals - Do not apply more than one spray of Rygel Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) to any one crop.  
Perennials – Rotate with registered insecticides from other groups. Use a maximum of three Rygel

Imidacloprid 200 SC Insecticide (or other Group 4A insecticides) sprays in any 12 month period.

#### MIXING/APPLICATION

Prior to pouring, shake container vigorously, then add the required amount of Rygel Imidacloprid 200 SC Insecticide to water in the spray vat while stirring or with agitators in motion.

#### Special instructions for Stone Fruit

##### Dilute Spraying (Stone fruit)

- Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed.
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off.
- The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.
- Add the amount of product specified in the Directions for Use table for each 100L of water. Spray to the point of run-off.
- The required dilute spray volume will change and the sprayer set up and operation may also need to be changed as the crop grows.

##### Concentrate Spraying (Stone fruit)

- Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed
- Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen volume.
- Determine the appropriate dilute spray volume (see Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate.
- The mixing rate for concentrate can then be calculated in the following way:

##### Example Only

1. Dilute spray volume as determined above: For example 1,500L/ha.
2. Your chosen spray volume: For example 500L/ha.

3. The concentrate factor in this example is: 3 x (i.e. 1,500L divided by 500L = 3)
4. If the dilute label rate is 10mL/100L, then the concentrate rate becomes 3 x 10, that is 30mL/100L of concentrate spraying.
  - The chosen spray volume, amount of product per 100L of water, and the sprayer set up and operation may need to be changed as the crop grows.
  - Do not use a concentrate rate higher than that specified in the Critical Comments.
  - For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

#### **APPLICATION (Cotton)**

Thorough coverage of cotton plants is essential to achieve maximum performance from Rygel Imidacloprid 200 SC Insecticide plus Gulf Ag Penatra Penetrant. Equipment should be calibrated to achieve a minimum of 60 droplets/cm<sup>2</sup> on the target foliage. A droplet Volume Median Diameter (VMD) for optimum performance from Rygel Imidacloprid 200 SC Insecticide plus Penatra is dependent on equipment and is defined below. Do not apply when unfavourable environmental conditions may reduce the quality of spray coverage.

##### **Ground Application (Cotton)**

Application using ground equipment should be made using **hollow cone nozzles** with a **minimum spray volume of 100L/ha**. Hollow cone nozzles are recommended but if flat fan nozzles are used, higher water volumes will be required and nozzles should be configured to ensure thorough coverage. A droplet VMD of 150-180 microns must be used. Where multiple nozzles per row are used, they should be of the same specification to ensure that each nozzle contributes an equal proportion of the required dose. Where multiple nozzles per row are used (particularly for banded application) ensure the correct nozzle overlap pattern is achieved on the target foliage. **Banded applications less than 100% are not recommended beyond the 15-node stage.**

##### **Aerial Application (Cotton)**

Apply in a minimum spray volume of 25L/ha. A droplet VMD of 120-150 microns must be used. Do not exaggerate swath width or exceed a swath of 20 to 22 m. Do not apply Rygel Imidacloprid plus Penatra using Ultra Low Volume (ULV) methods. The use of large droplet placement equipment is not recommended.

#### **EXPORT OF TREATED PRODUCE**

Growers' should note that MRLs or import tolerances do not exist in all markets for edible produce treated with Rygel Imidacloprid 200 SC. If you are growing produce for export, please check with Rygel Australia Pty Ltd for the latest information on MRLs and import tolerances before using Rygel Imidacloprid.

#### **NOTE ON ORNAMENTALS**

Rygel Imidacloprid 200 SC Insecticide has been used on a wide range of ornamental plant species without damage. However, some species and varieties are particularly sensitive to chemical

sprays and as this is often related to local conditions it is advisable to treat only a small number of plants first, in order to ascertain their reaction before treating the whole crop.

#### **COMPATIBILITY**

Rygel Imidacloprid 200 SC Insecticide is compatible with propineb, bitertanol or methamidophos. Do not mix concentrates together but add each to the spray tank separately. As formulations of other manufacturers' products are beyond the control of Rygel Australia Pty Ltd, all mixtures should be tested prior to mixing commercial quantities. As changes in climatic conditions can alter the sensitivity of plants to mixtures of sprays, Rygel Australia Pty Ltd cannot be responsible for the behaviour of such mixtures.

#### **PROTECTION OF LIVESTOCK**

Dangerous to bees. DO NOT spray any plants in flower while bees are foraging. DO NOT graze any treated area, or cut for stock food. DO NOT feed produce harvested from treated area to animals, including poultry. DO NOT graze treated turf or feed turf clippings from any treated area to poultry or livestock.

#### **PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

DO NOT contaminate streams, rivers or waterways and drains with this chemical or used containers. A spray-drift minimisation strategy should be employed at all times when aerially applying sprays. The strategy envisaged is exemplified by the cotton industry's Best Management Practices Manual.

#### **STORAGE & DISPOSAL**

Store in the closed, original containers in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycle or designated collection point.

If not recycling, break, crush, and or puncture and bury empty containers in a local authority landfill. Empty containers and product should not be burnt.

#### **SAFETY DIRECTIONS**

Harmful if swallowed. May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. When preparing product for use wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles. Wash hands after use. After each day's use wash gloves, goggles and contaminated clothing.

#### **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.

#### **MATERIAL SAFETY DATA SHEET**

Additional information is listed in the Material Safety Data Sheet, which can be obtained from the supplier.

**CONDITIONS OF SALE**

The use of Rygel Imidacloprid 200 SC Insecticide being beyond the control of the manufacturer, no warranty expressed or implied is given by Rygel Australia Pty Ltd regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and Rygel Australia Pty Ltd accepts with no responsibility for any consequences whatsoever resulting from the use of this product.

**In an Emergency Dial 000 Police or Fire Brigade**