

**TOXIC**  
**KEEP OUT OF REACH OF CHILDREN**

**zelam**

# **Mortar™**

**INSECT GROWTH REGULATOR**

**For the control of mealybugs, scales, froggatt's  
apple leafhopper and whitefly on a wide range  
of fruit and greenhouse crops**

**I N S E C T I C I D E**

**NET CONTENTS: 5 LITRES**

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## PLEASE READ ENTIRE LABEL BEFORE MIXING OR USE

**ACTIVE INGREDIENT:** Contains 440g/litre buprofezin in the form of a suspension concentrate.

**WARNING:** May be harmful if swallowed, inhaled or absorbed through the skin. May cause skin irritation. May cause organ damage from repeated oral exposure at high doses.

**FIRST AID:** If swallowed DO NOT induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. DO NOT scrub the skin. If splashed in eyes, wash out immediately with water for at least 15 minutes. If inhaled move the victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

**PERSONAL PROTECTION:** Avoid contact with skin or inhalation of spray mist. Gloves should be worn at all times. Wear eye protection when handling the concentrate. Ensure adequate ventilation when handling the concentrate. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work. Do not eat, drink or smoke while using this product.

**ECOTOXIC:** Harmful to aquatic organisms. Avoid contamination of any water supply with chemical or empty container.

**STORAGE:** Store in original container, tightly closed, away from foodstuffs. Keep out of reach of children.

**SHelf LIFE:** When stored appropriately, this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

**DISPOSAL:** For containers of 20 litres or less, rinse container until wash water is clear. Dispose of container at an approved landfill or other approved facility. Avoid contamination of any water supply with product or empty container.

**MATERIAL SAFETY DATA SHEET:** Additional information is listed in the MSDS available from Zelam Limited or [www.zelam.com](http://www.zelam.com).

**ERMA NEW ZEALAND:** Additional information is available from the ERMA NZ website - [www.ermanz.govt.nz](http://www.ermanz.govt.nz). Approval Code: HSR002487

**NOTICE TO BUYER:** The manufacturer and vendors of **Mortar** warrant the formulation to contain the specified active ingredient within accepted tolerance but make no warranty of any kind on the uses of material and accept no responsibility, whether the material is used in accordance with the label directions or not.

**DIRECTIONS FOR USE:** All recommended rates are for high volume spraying to run off. For maximum effect, complete coverage and wetting of all surfaces inhabited by pest insects is required. For concentrate spraying, adjust dilution rates to apply the same quantity per hectare, of **Mortar**, as for high volume spraying.

CROP	INSECTS	USE RATE AND SCHEDULE
Pipfruit	Mealybugs, scales & Froggatt's apple leafhopper	Mix 30 ml per 100 litres of water. Apply twice, 10-14 days apart, between greentip and start of pink. A third application should be applied between the middle and end of November. Do not apply after the end of November. On mature apples apply 3000 litres spray mix per hectare. On mature pears apply 5000 litres spray mix per hectare.
Grapes	Mealybugs	Mix 30 ml per 100 litres of water. Apply twice, 14-21 days apart, between bud movement and start of flowering. Bud movement applications should be mixed with 1% spraying oil. Apply not less than 1000 litres spray mix per hectare.
Golden Queen Peaches	Mealybugs	Mix 30 ml per 100 litres of water. Apply twice, 10-14 days apart, between bud movement and start of pink. On mature peaches apply 3000 litres spray mix per hectare.
Citrus	Scales	Mix 30 ml per 100 litres of water. Apply twice, 10-14 days apart, when scale is first apparent. Where populations persist, re-apply at intervals of not less than one month. Where season long spray programmes are needed, alternate <b>Mortar</b> with other approved insecticides to prevent possible development of resistant scale. Do not apply more than 4 applications of <b>Mortar</b> per season. Apply not less than 2500-3000 litres spray mix per hectare.
Kiwifruit	Armoured Scales	Mix 30 ml per 100 litres of water. Apply between greentip and opening of the first female flowers. Where two applications of an insecticide are required over this period, use <b>Mortar</b> for only one application. Apply 2000 litres spray mix per ha.
Tamarillo	Whitefly	Mix 30 ml per 100 litres of water. Apply between pruning and before fruit set. Later applications, no closer than 28 days apart, should be made when whitefly populations exceed 20 adults per leaf. Other insecticides may be tank mixed or alternated with <b>Mortar</b> to control adult whitefly. Apply not less than 1000 litres spray mix per hectare.
Persimmon	Mealybugs	Mix 30 ml per 100 litres of water. Apply twice, 10-14 days apart between greentip and blossom. Apply not less than 2500 litres spray mix per hectare.
<b>Greenhouse Crops:</b> <i>Tomatoes, cucumbers, peppers, melons, eggplant, zucchini, papino, Ornamentale rose, poinsettia, bouvardia, gerbera</i>	Greenhouse Whitefly	Mix 30 ml per 100 litres of water. Apply at first appearance of whitefly. If necessary, repeat at application intervals of not less than three weeks. To help prevent possible development of resistant whitefly it is suggested no more than two applications of <b>Mortar</b> per crop or season be applied in greenhouses.

**MODE OF ACTION:** **Mortar** is an Insect Growth Regulator that primarily interferes with the moulting of immature stages of mealy bug, scales and whitefly. It does not control adults. Pest populations therefore decrease with the passage of generations and results are seldom quickly visible.

**SELECTIVITY:** **Mortar** is effective against a few sucking insects only. It is safe to predator mites, bees and most parasites or predators of target pest insects such as *Encarsia* wasp parasite of whitefly. **Mortar** is compatible with Integrated Pest Management (IPM) and Integrated Fruit Production (IFP) programmes.

**RESISTANCE PREVENTION:** **Mortar** is of a unique chemical group. Thus it is useful within resistance prevention programmes when alternated or mixed with conventional insecticides.

**WITHHOLDING PERIODS:** Pipfruit - 56 Days; Grapes - Do not apply after the start of flowering; Golden Queen Peaches - Do not apply after the 1st flower buds have opened; Citrus - 14 Days; Kiwifruit - Do not apply after the first female flower buds have opened; Tamarillo - 7 Days; Persimmon - Do not apply after the first flower buds have opened; Tomatoes, cucurbits, peppers, eggplants - 3 Days.

**REGISTERED TO:** Tapuae Partnership,  
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BATCH NO:  
  
D.O.M:

