



DANGER
KEEP OUT OF REACH OF CHILDREN
READ LABEL BEFORE USE

GROLAN[®]

FUNGICIDE

Fungicide for selective control of black spot or mildew on apples, pears and grapes

ACTIVE INGREDIENT: Contains 700g/kg dithianon in the form of a water dispersible granule

GSGI.880/F01



GROLAN®



HAZARD CLASSIFICATIONS:

Acute Oral Toxicity Category 3; Acute Inhalation Toxicity Category 4; Serious Eye Damage Category 1; Skin Sensitisation Category 1; Specific Target Organ Toxicity Repeated Category 1; Hazardous to aquatic environment Acute / Chronic Category 1; Hazardous to Terrestrial Vertebrates.

TOXICITY: This substance is toxic if swallowed; may cause an allergic skin reaction; causes serious eye damage; is harmful if inhaled; causes damage to organs through prolonged or repeated exposure.

ECOTOXIC: Very toxic to aquatic life with long lasting effects. Hazardous to terrestrial vertebrates.

PRECAUTIONS

HANDLING: Obtain special instructions before use. DO NOT handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area.

PERSONAL PROTECTION: When mixing, and preparing spray and during application, wear cotton overalls buttoned to the neck and wrist, a washable hat, suitable gloves and face protection (face shield). DO NOT eat, drink or smoke while using this product. DO NOT breathe dust/ fumes/ gas/ mist/ vapours or spray. Avoid contact with skin, eyes and clothing. Wash hands and exposed skin thoroughly with water after handling. IF ON SKIN, IF SWALLOWED, IF INHALED or IF IN EYES wash with water for several minutes. Remove and wash contaminated protective clothing which should not be allowed out of the workplace. Store work clothing separately. Immediately call the Poison Centre or doctor and get medical attention / advice if you feel unwell. If medical advice is needed, have product container or label at hand.

STORAGE: Store in original container, tightly closed, in a locked, dry, cool, well-ventilated place away from food and animal feeds. Stores containing 100 kg or more of this product invoke requirements for NZ HSWA safety controls (emergency response plans, secondary containment, signage and location certificate).

NOTE: Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

PRODUCT DISPOSAL: Dispose of this product only by using according to the label or at an approved landfill in accordance with local bylaws and regulations. DO NOT burn product. DO NOT contaminate water with product or the equipment wash water. Avoid contamination via drains from farmyards and roads.

CONTAINER DISPOSAL: Triple rinse empty container and add rinsate to the spray tank. Recycle through Agrecovery (0800 247 326, www.agrecovery.co.nz).

SPILLS: Avoid release to the environment. Wear appropriate protective clothing as described in PERSONAL PROTECTION section and prevent material from entering waterways. Sweep and shovel up spill and place in sealable container labelled for disposal. Avoid dust formation. Wash affected area with water and detergent. Absorb and collect washings and place in the same sealable container as the spilled material. Dispose of the waste safely in suitable landfill in accordance with local bylaws and regulations.

TRANSPORT: The product is classified as dangerous goods for transport. Refer to Safety Data Sheet.

RECORD KEEPING: Records of use must be kept. Storage, application and record keeping must be as described in the current version of the New Zealand Standard for the Management of Agrichemicals NZS8409.

SAFETY DATA SHEET: A safety data sheet is available from Grosafe Chemicals Ltd.

FIRST AID: If medical advice is needed, have product container or label at hand. IF SWALLOWED: Immediately call the NATIONAL POISON CENTRE 0800 POISONS (0800 764 766) or doctor/physician. Rinse mouth. IF ON SKIN: Remove contaminated clothing and wash with plenty of water. If skin irritation occurs or if you feel unwell, get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

EMERGENCY RESPONSE 0800 CHEMCALL: 0800 243 622

DIRECTIONS FOR USE

RESISTANCE MANAGEMENT GROUP **M9** FUNGICIDE

GROLAN® contains dithianon, a quinone fungicide with a multi-site contact mode of action. Resistance to this fungicide could develop from excessive use. To minimise this risk use strictly in accordance with the label instructions and resistance management strategies that exist for any fungus listed on the label.

GROLAN® should be used in a programme that incorporates fungicides with different modes of action to that of a Group M9 fungicide.

Refer to the NZCPR web site < www.resistance.nzpps.org > for more detailed information.

GENERAL INFORMATION

GROLAN® is a protectant fungicide that inhibits spore germination. It has good adhesion to plant surfaces and is relatively rainfast. It is compatible with IMC programmes involving *T. pyri*.

It is an offence to use this product on animals.

Remove domestic animals from the operating area. DO NOT spray over, or allow drift over, surface water. DO NOT allow spray drift outside the target area to occur. Clean out application equipment thoroughly after use. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites.

Equipment

Apply using equipment that is well maintained and accurately calibrated to the desired application rate to achieve full coverage of target fruit and foliage. Fine droplets are more effective than coarse droplets. Ensure the underside of plants are treated.

Mixing

Half fill the spray tank with water then, with the agitators running, pour in the required quantity of **GROLAN®** and top up with water. Maintain agitation continuously.

Application

Complete spray coverage is essential for consistent disease control with any fungicide. Forward speeds should be sufficiently slow to ensure full spray coverage of the crop being treated. DO NOT over spray. For specified crops, DO NOT apply less than the label recommended minimum rate of **GROLAN®**.

Compatibility

GROLAN® is not compatible with chlorpyrifos EC, iprodione, prothiofos, vinclozolin, and alkaline materials such as lime, lime sulphur or Bordeaux mixture. DO NOT mix adjuvants (stickers, rain fasteners etc) with **GROLAN®** or apply within 48 hours (before or after) of a **GROLAN®** spray. DO NOT apply summer oils within 21 days (before or after) of a **GROLAN®** spray. **GROLAN®** may be applied in tank mixture with oil over the green tip period.

APPLICATION RATES

The rates recommended are for high volume spraying to the point of run off. For concentrate spraying adjust dilution rate accordingly. Ensure complete spray coverage for best results.

CROP	DISEASE	RATE/100L	COMMENTS
Apples	Black spot Glomerella	18g	Apply GROLAN® at 7-10 day intervals over the primary black spot infection period from green tip to petal fall, and then continue at 10-14 day intervals from first cover onwards. Use under cold, frosty or slow drying conditions may cause fruit russetting. In tank mixture with a suitable DMI fungicide GROLAN® may be applied at 11g/100 litres over the russet sensitive period from pink to second cover when an infection period has occurred.
Grapes	Black spot (Anthracnose) Downy mildew	55g	Apply GROLAN® at 10-14 day intervals from bud swell. During wet downy mildew periods spray at 10 day intervals. <i>Note: May cause superficial berry smudge on some varieties.</i>
Pears	Black spot	25g	Apply GROLAN® at 7-10 day intervals over the primary black spot infection period from green tip to petal fall, and then continue at 10-14 day intervals from first cover onwards. Use under cold, frosty or slow drying conditions may cause fruit russetting on smooth skin varieties.

WITHHOLDING PERIOD:

It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.

APPLES AND PEARS, DO NOT APPLY LATER THAN 42 DAYS BEFORE HARVEST. GRAPES, DO NOT APPLY LATER THAN 21 DAYS BEFORE HARVEST.

LEAF PLUCKING IN VINEYARDS: SHEEP MUST NOT BE SENT FOR SLAUGHTER OR MILKED FOR 6 MONTHS AFTER BEING REMOVED FROM THE VINEYARD (AND PLACED ON CLEAN FEED).

Registered pursuant to ACVM Act 1997, No. P010209 See www.foodsafety.govt.nz for registration conditions
Approved under the HSNO Act 1996, HSR100837 See www.epa.govt.nz for approval controls

WARRANTY: This formulation is warranted to contain the specified active ingredient within accepted analytical tolerance when packed. The user bears the risk for damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.

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Batch No:

Date of Manufacture:

Grolan® is a registered trademark of Grosafe Chemicals Ltd.

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