



Du Pont (Australia) Ltd. A.C.N. 000 716 469  
168 Walker Street North Sydney, N.S.W. 2060  
Telephone (02) 9923 6111 Facsimile (02) 9923 6132  
24hr Transport Emergency Number (02) 9963 1301 Medical Emergency 1800 674 415

## MATERIAL SAFETY DATA SHEET

\* Rubigan is a Registered Trademark of Gowan Company, L.L.C.  
N/R In Product Identification section means Not Regulated as a Dangerous Good and no UN number is allocated.

ISSUED DUPONT 22/08/05

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### PRODUCT: DUPONT RUBIGAN<sup>®</sup> SC FUNGICIDE

*Not Classified as Hazardous According to Criteria of NOHSC*

#### PRODUCT IDENTIFICATION

UN No: N/R Poisons: S5 (Fed)

Tradenames: DuPont Rubigan<sup>®</sup> SC fungicide  
Manuf.: DuPont  
ManCode:

Use: For control of black spot on apples, pears and nashi; powdery mildew on apples, grapevines, cucurbits and tolerant ornamentals, as specified on the label.

Ingredients:	CAS No:	Proportion:
Fenarimol	60168-88-9	11.6 %
Propylene glycol	57-55-6	88.4 %

#### Physical Description / Properties

Appearance:

Odour: Mild odour  
Colour: Light tan to cream  
Form: Liquid

#### Other Properties

Boiling point: (@ 1 atmosphere) 100° C  
Chemical Family: Pyrimidine  
Explosive properties: Not explosive, not flammable  
pH: (Aqueous 50/50) 6.0 to 7.5  
Solubility: Miscible in water, fenarimol has low water solubility 0.0137 g/L at 25° C  
Specific gravity: 1.033 – 1.055 g/mL at 20° C

#### HEALTH HAZARD INFORMATION

##### Acute Effects

Eyes: Mild eye irritant. Not classified as an eye irritant according to the criteria of NOHSC

Skin: Not harmful by contact. Prolonged or repeated contact with the concentrate may cause slight irritation, drying or flaking of the skin. Not a skin sensitiser. Not classified as a skin irritant according to the criteria of NOHSC.

Inhaled: Mists are not likely to be hazardous. Not classified as hazardous by inhalation according to the criteria of NOHSC.

Swallowed: Slightly toxic by ingestion. Not classified as hazardous by ingestion according to the criteria of NOHSC.

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**PRODUCT: DUPONT RUBIGAN® 120SC SYSTEMIC FUNGICIDE****HEALTH HAZARD INFORMATION: (Continued)****Chronic Effects**

None established for finished product.

**Fenarimol:**

In animals, has been shown to cause liver and kidney effects at high doses. Did not cause cancer in long-term animal studies. Did not cause birth defects in animal studies, but did produce other foetal effects at doses non-toxic to the mother such as reduced fertility, birth difficulties and reduced live born litter size. This effect is from a hormonal mechanism that is not present in humans. Fenarimol does not cause genetic change and in-vitro and animal mutagenicity studies were negative.

**First Aid****Eyes:**

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Seek Medical attention immediately.

**Skin:**

Remove contaminated clothing and wash affected skin with soap and plenty of water. Wash contaminated clothing before reuse. Seek Medical attention if irritation develops.

**Inhaled:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek Medical attention.

**Swallowed:**

If swallowed call Poisons Information Centre. Phone Australia 13 11 26 or a Doctor immediately.

**Advice to Doctor**

No specific requirements. Treat symptomatically.

**Toxicity Data:**

Acute Oral LD<sub>50</sub> (rat): > 2000 mg/kg

Acute Dermal LD<sub>50</sub> (rabbit): > 4000 mg/kg

**PRECAUTIONS FOR USE****Exposure Standards:**

None established for formulated product.

**Propylene glycol:**

OSHA PEL: 100 ppm      ACGIH – TLV: 100 ppm

**Engineering Controls:**

Provide general and/or local exhaust ventilation.

**Personal Protection:**

Manufacturing and Packaging employees

Eye/Face: Use safety glasses.

Skin Protection: For handling prior to end-use, no precautions other than clean, body-covering clothing should be needed.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guidelines. If respiratory irritation is experienced, use an AS 1715 approved respirator.

**Applicators and mixers/loaders**

May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length PVC gloves. Wash hands after use. After each day's use, wash gloves and contaminated clothing.

**Flammability:**

Not flammable.

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**PRODUCT: DUPONT RUBIGAN® 120SC SYSTEMIC FUNGICIDE****PRECAUTIONS IN USE (Continued)****Environment:**

Fenarimol is broken down by photodegradation and has a half-life of approximately twelve hours in intensive sunlight. If incorporated into the soil, fenarimol may persist for one year depending on soil conditions. Fenarimol has minimal leaching ability and usually remains in the top five to ten centimetres of the soil profile. Fenarimol has low toxicity to honey bees, earth worms and livestock, and has moderate to high toxicity to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighbouring areas. Do not apply when weather conditions favour runoff or drift from the target area. Do not contaminate water when disposing of equipment wash waters.

**SAFE HANDLING INFORMATION****Storage and Transport:**

Avoid freezing. DO NOT store near heat or open flame. Store in original container only. Keep container tightly closed. DO NOT consume food, drink or tobacco in the areas where they may become contaminated with this material. Store in well ventilated area. Do not store near food, feedstuffs, fertilisers or seed.

**Spills and Disposal:**

Review FIRE AND EXPLOSION HAZARDS and SAFETY PRECAUTIONS before proceeding with cleanup. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean up. Dyke spill. Prevent liquid from entering sewers, waterways or low areas. Shovel or sweep up. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State, and local regulations. Remove non-useable solid material and/or contaminated soil, for disposal in an approved and permitted landfill. DO NOT flush to surface water or sanitary sewer system. DO NOT reuse container. Triple rinse the container, then puncture and dispose of in a sanitary landfill, or by other approved methods. Do not burn empty container or product.

**Fire/Explosion Hazard:**

Flammable Limits in Air, % volume: LFL/UFL Water based product

Not a fire and explosion hazard. Evacuate personnel to a safe area. Wear self-contained breathing apparatus and full protective equipment. Suitable extinguishing media: water spray, dry powder, foam, carbon dioxide (CO<sub>2</sub>). On small fires, if area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the contamination hazard. If product is involved in fire and water evaporates, toxic, irritating vapours may be produced.

**Reactivity Data:**

Stable at normal temperatures and storage conditions. No incompatibilities reasonably foreseeable. Polymerisation is not known to occur.

**REGULATORY INFORMATION**

Package and Labelling: S5 (Fed)  
Contains: Fenarimol (11.6%)

**SOURCE INFORMATION****Technical Data:**

Source MSDS: Dow AgroSciences Rubigan 120 SC, revised February 2001  
Gowan Company Rubigan A.S, revised 15<sup>th</sup> July 2002

**ADDITIONAL INFORMATION****Contact Points:**

For sales, technical, and product related enquiries contact DuPont's North Sydney office on (02) 9923 6111. Outside the Sydney metropolitan area 1800 252 997 is a toll free number to North Sydney Office. To assist communications, ask for the Customer Service, Technical, or Marketing personnel for the product family relative to the inquiry.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.