

Material Safety Data Sheet



Nova* 40W Agricultural Fungicide

*Trademark of Dow AgroSciences LLC - Dow AgroSciences Canada Inc. is a licensed user

In case of emergency Call CANUTEC at 613 996 6666

1. Product Identification:**Product name:** Nova* 40W Agricultural Fungicide**Product use:** Nova 40W is a systemic fungicide with protective and curative action. It is used to treat a wide range of fruit, vegetable and ornamental crops for a number of common fungal diseases.**Product code number:** 88804**GMID numbers:** 173237**MSDS number:** DASCI-189**Effective date:** July 6, 2006**Supplier:**Dow AgroSciences Canada Inc.
Suite 2100, 450 - 1st Street SW,
Calgary, Alberta,
Canada, T2P 5H1
www.dowagro.ca**Date printed:** July 6, 2006**This product is regulated under authority of the Pest Control Products Act****2. Composition:**

Component	CAS Number	% (w/w)
Myclobutanil	0088671-89-0	40.0
Other ingredients		60.0
Including:		
Titanium Dioxide	13463-67-7	0.5 to 0.7 ¹
Crystalline silica ¹	014808-60-7	0.6 to 1.6 ¹

¹As a component of the entire formulation

Note: The above ingredients are those contained in the formulation and do not reflect the components of the water-soluble packaging, which are considered to be non-hazardous, according to OSHA definition.

3. Hazard Identification:**Emergency Overview:**

This product is a tan powder with a mild odor contained in water-soluble pouches. This product may cause eye irritation with corneal injury. This product may cause skin irritation.

Potential Health Effects:**Eyes:** This product may cause moderate eye irritation and moderate corneal injury. Dust may irritate the eyes.**Skin contact:** Brief contact with this product may cause slight skin irritation with local redness.**Skin absorption:** Prolonged skin contact is unlikely to result in absorption of harmful amounts.**Ingestion:** Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.**Inhalation:** Dust may cause irritation of the upper respiratory tract (nose and throat) and lungs.**Eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first five minutes, and then continue rinsing the eyes. Obtain specialist medical attention without delay.**Skin:** Remove contaminated clothing at once. Then rinse skin immediately with plenty of water for 15 to 20 minutes. Get medical attention.**Ingestion:** Seek expert medical advice at once. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by qualified medical personnel. Never give anything by mouth to an unconscious person.**Inhalation:** If person is not breathing, call for medical assistance at once and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc.) Get medical attention.**Note to physician:**

There is no specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

4. First Aid Measures:**5. Fire-fighting Measures:****Flash point:** Not applicable

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Flammable limits: Not applicable

Auto-ignition temperature: Not available

Extinguishing media: Use CO₂, dry chemical or water spray.

Sensitivity to mechanical impact/static discharge: Not available

Unusual fire and explosion hazards: Pesticide particulates can become airborne. Combustion generates toxic fumes of hydrogen chloride. Dusts at sufficient concentrations can form explosive mixtures with air. The minimum ignition temperature of a dust cloud is 507°C and of a dust layer is 388°C. Contain firefighting water for future disposal.

Fire-fighting equipment: Wear positive-pressure self-contained breathing apparatus and full turnout gear.

6. Accidental Release Measures:

If the spill occurs out of doors, cover it with a moisture-proof material to prevent degradation of water-soluble pouches until recovery is completed. Sweep up small spills and store collected material in secure containers until safe disposal can be arranged. Do not vacuum up spilled material as the dust created may form an explosive mixture when mixed with air. Avoid the use of water for cleanup, since spent water must be collected and treated as hazardous waste. Use hot water and heavy duty detergent to clean up any residual stains on hard surfaces. Remnants of small spills on topsoil should be worked into the soil and allowed to degrade under natural conditions (see Section 13. Ecological Information – Degradation and Metabolism – Soil). Do not allow spilled material to contaminate water supplies. For large spills, dike and barricade the affected area and contact CANUTEC at 613 996 6666 and local authorities.

7. Handling and Storage:

Handling: Packages must be handled carefully to avoid breakage, or be allowed to warm to temperatures greater than 0°C before handling. Keep Nova 40W out of reach of children or animals. Practice good care and good safety precautions when handling this product. This product causes eye irritation. It is harmful if swallowed, inhaled, or absorbed through the skin. Contaminated clothing should be washed

separately from domestic laundry and line-dried. Once used for contaminated clothing, the washing machine should be operated through a complete cycle with hot water and soap only, prior to use for domestic laundry. Users should wash hands before eating, drinking, chewing gum, using tobacco or the toilet.

Storage: Store in original containers only. Store Nova 40W in a cool place, out of direct sunlight. Do not store this product at temperatures greater than 49°C for extended periods. Water-soluble packets may become brittle if stored at temperatures less than 0°C. Do not ship or store with drugs, food, feed, seed or clothing.

8. Exposure Controls, Personal Protection and Exposure Limits:

Exposure limits: Myclobutanil: Dow

AgroSciences Industrial Hygiene Guide is 1 mg/m³ TWA and 3 mg/m³ STEL.

Titanium Dioxide: ACGIH TLV is 10 mg/m³.

OSHA PEL is 15 mg/m³, total dust.

Crystalline silica: ACGIH TLV is 0.1 mg/m³ (respirable) for tripoli, and fused silica, 0.05 mg/m³ (respirable) for cristobalite, tridymite, and quartz. Quartz has an A2 designation. OSHA PEL is (30 mg/m³)/(%SiO₂+2) total dust, (250 mppcf)/(%SiO₂+5) or (10 mg/m³)/(%SiO₂+2) respirable for quartz, tripoli, and fused silica; the value for cristobalite and tridymite is ½ the value calculated from the respirable dust formula for quartz.

Engineering controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Breathing: Atmospheric levels should be maintained below the exposure guideline. If respiratory irritation is experienced, use an approved air-purifying respirator.

Protective clothing: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task being carried out.

Eyes: Use chemical workers goggles.

Other protection: None stated

9. Physical and Chemical Properties:

Boiling point: Not applicable

Vapor pressure: Not applicable

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Volatility: 0%
pH: 7.5 to 8.5 (as an aqueous suspension)
Appearance: Tan powdered solid
Odor: Mild
Coefficient of water/oil distribution: not available
Bulk density: 300 to 350 kg/m³
Evaporation rate: Not applicable
Solubility in water: Dispersible
Viscosity: Not applicable
Odor threshold: Not available
Melting point: Not available

10. Stability and Reactivity:

Stability: This product is stable under normal storage conditions.
Incompatibility: Avoid strong oxidizing agents.
Hazardous decomposition products: None known
Hazardous polymerization: Not known to occur

11. Toxicological Information:

Skin absorption: Acute dermal LD50 (rabbit) is >5000 mg/kg.
Ingestion: Acute oral LD50 (rat) is estimated to be >1600 mg/kg
Inhalation: Not available
Sensitization: Not available
Chronic effects: In animal tests myclobutanil has resulted in effects to the liver, testes, adrenal gland, kidney and thyroid. Repeated excessive exposure to crystalline silica may cause silicosis, a progressive and disabling disease of the lungs.
Cancer: Myclobutanil did not cause cancer in laboratory animals. This formulation contains crystalline silica, which is listed as a carcinogen by OSHA. Crystalline silica is listed by IARC and NTP as a carcinogen. Crystalline silica has been shown to cause cancer in laboratory animals and humans. Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer.

Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.
Birth defects: Myclobutanil did not cause birth defects in laboratory animals. Myclobutanil has been toxic to the fetus in laboratory animals at doses non-toxic to the mother.
Reproductive effects: For myclobutanil, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.
Mutagenicity: For myclobutanil, *in-vitro* and animal genetic toxicity studies were negative.

12. Ecological Information:

Myclobutanil is considered non-toxic to bees and practically non-toxic to birds on an acute basis or dietary basis, but highly toxic to aquatic organisms on an acute basis. Bio-concentration potential is not available.

Degradation and Metabolism:

Soil/Environment: In soil, myclobutanil half-life is 66 days (silt loam). Decomposition is through highly polar triazole compounds, with further degradation by ring splitting. No degradation occurs under anaerobic conditions.

Plants: Myclobutanil undergoes oxidation at the butyl group to a ketone and an alcohol, with partial conjugation to a glucoside.

Animals: Following oral administration, myclobutanil is rapidly excreted in the feces. Degradation is then as in plants.

13. Disposal Considerations:

Unused unwanted product: Contact Dow AgroSciences or your provincial regulatory agency for disposal information.

Container disposal: Refer to the product label for instructions regarding cleaning and disposal of empty pesticide containers. If these instructions are missing or not understood, contact Dow AgroSciences at 800 667 3852 or your provincial regulatory agency for direction.

14. Transport Information:

This product is classified as "Not Regulated" under regulations of the Transportation of Dangerous Goods Act.

15. Regulatory Information:

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Pest Control Products Act registration number: 22399

For information phone: 800 667 3852

Master reference: 007705

MSDS status: Revised sections:

- 2. Composition
- 3. Hazard Identification
- 4. First Aid Measures
- 6. Accidental Release Measures
- 8. Exposure Controls, Personal Protection and Exposure Limits
- 11. Toxicological Information
- 12. Ecological Information
- 15. Regulatory Information

Date of last revision: March 4, 2005

16. Other Information:

National Fire Code classification: Not regulated

NFPA ratings: Health: 2; Flammability: 1; Reactivity: 0.

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