



MATERIAL SAFETY DATA SHEET

Syngenta Crop Protection Canada, Inc.
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**In Case of Emergency, Call
1-800-327-8633 (FAST MED)**

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MSDS prepared by:
Department of Regulatory & Biology Development
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SECTION – 1: PRODUCT IDENTIFICATION

Product Identifier: CITATION® 75WP INSECTICIDE Formulation No.: A6808B
Registration Number: 24465 (Pest Control Products Act)
Chemical Class: Substituted Melamine (Triazine) Insect Growth Regulator.
Synonym: Cyromazine.

Active Ingredient (%): Cyromazine (75.0%) CAS No.: 66215-27-8

Chemical Name: N-cyclopropyl-1,3,5-triazine-2,4,6-triamine.

Product Use: Wettable Powder Agricultural Insecticide to be mixed with water and sprayed to control insects on mushrooms, greenhouse ornamentals and certain vegetables. For further details please refer to product label.

SECTION – 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen	WHMIS†
Amorphous Silica	80 mg/m ³ /%SiO ₂ TWA (total dust)	10 mg/m ³ TWA (respirable dust)	6 mg/m ³ TWA **	IARC Group 3	Not Established
Crystalline Silica, Quartz (CAS # 14808-60-7)	10 mg/m ³ / (%SiO ₂ +2) (respirable dust)	0.025 mg/m ³ (respirable silica)	0.05 mg/m ³ (respirable dust)**	IARC 1; ACGIH A2	Yes
Kaolin Clay (CAS # 1332-58-7)	15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)	2 mg/m ³ TWA (respirable)	10 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)**	No	Not Established
Sodium Alkyl naphthalene- sulfonate	Not Established	Not Established	15 mg/m ³ TWA (total dust)*	No	Not Established
Cyromazine (75.0%)	Not Established	Not Established	3 mg/m ³ TWA ***	No	Not Established

* Recommended by manufacturer

** Recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

† Material listed in Ingredient Disclosure List under Hazardous Products Act.

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

SECTION – 3: HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Causes eye, skin and respiratory passage irritation. Dust may be irritating to nose and throat.

Hazardous Decomposition Products

Can decompose at high temperatures and form toxic gases.

Physical Properties

Appearance: Gray-tan powder.

Odour: Sweet, musty.

Unusual Fire, Explosion and Reactivity Hazards

This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly.

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Potential Health Effects

Relevant routes of exposure: Skin, eyes, mouth, lungs.

SECTION – 4: FIRST AID MEASURES

IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital. Have the product container, label or Material Safety Data Sheet with you when calling Syngenta, a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given. Call the Syngenta Emergency Line [**1-800-327-8633 (1-800-FASTMED)**], for further information.

EYE CONTACT: Flush eyes with clean water, holding eyelids apart for a minimum of 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta, a poison control center or doctor for treatment advice. Obtain medical attention immediately if irritation persists.

SKIN CONTACT: Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes. Call Syngenta, a poison control centre or doctor for treatment advice.

INHALATION: Move victim to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call Syngenta, a poison control centre or doctor for treatment advice.

INGESTION: If swallowed, immediately contact Syngenta, a poison control centre, doctor or nearest hospital for treatment advice. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

NOTES TO PHYSICIAN:

There is no specific antidote. Treat symptomatically.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED:

Asthma or other respiratory conditions aggravated by chemical irritants. Persons with pre-existing dermatitis should use extra care in handling this product.

SECTION – 5: FIRE FIGHTING MEASURES

Flash point and method: Not applicable.

Upper and lower flammable (explosive) limits in air: Not applicable.

Auto-ignition temperature: Not applicable.

Flammability: Not applicable.

Hazardous combustion products: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Conditions under which flammability could occur: This product presents a slight dust explosion hazard.

Keep fire exposed containers cool by spraying with water.

Extinguishing media: Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist, (avoid use of water jet). Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.

Sensitivity to explosion by mechanical impact: None known.

Sensitivity to explosion by static discharge: Slight dust explosion hazard.

SECTION – 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Wear suitable protective clothing and eye protection to prevent skin and eye contact. Use adequate ventilation and wear equipment and clothing as described in Section 8 and/or the product label.

Procedures for dealing with release or spill: This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly. Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Scoop or sweep up material, keeping dust to a minimum, and place into a disposable container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory authority.

SECTION – 7: HANDLING AND STORAGE

Handling practices: KEEP OUT OF REACH OF CHILDREN. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Protect product, wash or rinse water, and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people.

Appropriate storage practices/requirements: This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly. Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

National Fire Code classification: Not applicable.

SECTION – 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Applicable control measures, including engineering controls: This product is a combustible powder and like all combustible powders can ignite, burn and form explosive mixtures with air if not handled correctly.

This product is intended for use outdoors where engineering controls are not necessary. If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

CONSULT THE PRODUCT LABEL FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS.

Personal protective equipment for each exposure route:

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly after handling and before eating, drinking, applying cosmetics or handling tobacco.

INGESTION: Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

EYES: Where eye contact is likely, use chemical splash goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

SKIN: Where contact is likely, wear chemical-resistant gloves (such as nitrile or butyl), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

INHALATION: A respirator is not normally required when handling this substance. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. A NIOSH-certified combination air-purifying respirator with an N, P or R 95 or HE class filter and an organic vapour cartridge may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a pressure demand atmosphere-supplying respirator if there is any potential for uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

SECTION – 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Gray-tan powder.

Formulation Type: Wettable powder.

Odour: Sweet, musty odour.

pH: 8 – 10 (1% aqueous suspension).

Vapour pressure and reference temperature: 1.3×10^{-9} mmHg @ 20 °C (Cyromazine Technical).

Vapour density: Not applicable.

Boiling point: Not applicable.

Melting point: 224 – 225 °C.

Freezing point: Not applicable.

Specific gravity or density: 0.323 g/cm³.

Evaporation Rate: Not available.

Water/oil partition coefficient: Not available.

Odour threshold: Not available.

Viscosity: Not applicable.

Solubility in Water: 8 g/L @ 25 °C.

SECTION – 10: STABILITY AND REACTIVITY

Chemical stability: Stable under normal use and storage conditions.

Conditions to avoid: See "Unusual Fire, Explosion and Reactivity Hazards", Section 3. Do not touch water soluble bags with wet gloves as they will dissolve.

Incompatibility with other materials: None known.

Hazardous decomposition products: Can decompose at high temperatures forming toxic gases.

Hazardous polymerization: Will not occur.

SECTION – 11: TOXICOLOGICAL INFORMATION**Acute toxicity/Irritation Studies (Finished Product):**

Ingestion:	<u>Slightly Toxic</u> Oral (LD50 Rat):	4,460 mg/kg body weight
Dermal:	<u>Slightly Toxic</u> Dermal (LD50 Rabbit):	> 2,010 mg/kg body weight
Inhalation:	<u>Slightly Toxic</u> Inhalation (LC50 Rat):	> 2.5 mg/L air - 4 hours

Eye Contact: Mildly Irritating (Rabbit)
Skin Contact: Moderately Irritating (Rabbit)
Skin Sensitization: Not a Sensitizer (Guinea Pig)

Reproductive/Developmental Effects

Cyromazine: None observed.

Chronic/Subchronic Toxicity Studies

Cyromazine: None observed.

Carcinogenicity

Cyromazine: None observed.

Other Toxicity Information:

None.

Toxicity of Other Components

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the “other components” in the formulation.

Amorphous Silica

Amorphous Silica is listed as an IARC (Group 3) carcinogen: not classifiable as a human carcinogen (No Data Available) with limited animal evidence. Prolonged exposure to amorphous silica may cause damage to respiratory system and irritation to skin and eyes.

Crystalline Silica, Quartz

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Kaolin Clay

May cause eye and respiratory tract irritation.

Long term exposure to high concentrations of this dust may produce x-ray evidence of dust in the lungs. Continued long-term exposure may affect respiratory function in some individuals.

Sodium Alkylphthalenesulfonate

Exposure can result in eye, skin and respiratory tract irritation.

Other materials that show synergistic toxic effects together with the product: None known.

Target Organs

Active Ingredient

Cyromazine: None known.

Inert Ingredients

Crystalline Silica, Quartz	Respiratory tract.
Kaolin Clay	Respiratory tract.
Amorphous Silica	Respiratory tract, skin, eye
Sodium Alkylphthalenesulfonate	Eye, skin, respiratory tract

SECTION – 12: ECOLOGICAL INFORMATION

Summary of Effects

CITATION 75WP is a wettable powder that is mixed with water and sprayed for control of various insect pests on selected agricultural crops. The active ingredient, cyromazine, is practically nontoxic to insects (bees) and birds, but is slightly toxic to fish and aquatic invertebrates (water flea).

Eco-Acute Toxicity

Cyromazine Technical:

Green Algae 5-Day EC ₅₀	124 ppm
Bees LC ₅₀ /EC ₅₀ (Contact)	>25 µg/bee
Invertebrates (Water Flea) LC ₅₀ /EC ₅₀	>92.8 ppm
Fish (Trout) 96-hr LC ₅₀ /EC ₅₀	>87.9 ppm
Fish (Bluegill) 96-hr LC ₅₀ /EC ₅₀	>89.7 ppm
Bird (8-day Dietary – Bobwhite Quail) LC ₅₀ /EC ₅₀	> 5,620 ppm
Bird (8-day Dietary – Mallard Duck) LC ₅₀ /EC ₅₀	> 5,620 ppm

Eco-Chronic Toxicity

Cyromazine:

Fish (Fathead) Early Life Stage MATC	22 mg/L
Invertebrate (Water Flea) Life Cycle MATC	0.45 mg/L

Environmental Fate

Cyromazine has a low bioaccumulation potential, and low to moderate mobility in soil. It is not persistent in soil, but is relatively stable in water. The average soil half-life is 41 days. The main route of degradation is biodegradation. For CITATION, the bulk material sinks in water (after 24 h).

SECTION – 13: DISPOSAL CONSIDERATIONS

Waste disposal information: Do not reuse empty containers unless they are specifically designed to be re-filled. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

SECTION – 14 : TRANSPORT INFORMATION

Shipping information such as shipping classification:

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL
Not Regulated.

SECTION – 15: REGULATORY INFORMATION

WHMIS classification for product: Exempt

A statement that the MSDS has been prepared to meet WHMIS requirements, except for use of the 16 headings.

This MSDS has been prepared in accordance with WHMIS requirements, but the data are presented under 16 headings.

Other regulations; restrictions and prohibitions

Pest Control Products (PCP) Act Registration No.: 24465

SECTION – 16: OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Syngenta will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

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