

SECTION 1: PRODUCT INFORMATION

Product Identifier: MINECTO™ DUO 40WG

Formulation Number: A16901B

Registration Number: 30900 (Pest Control Products Act)

Product Use: Insecticide. Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

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For further information, contact: 1-87-SYNGENTA (1-877-964-3682)

In Case of Emergency, Call: 1-800-327-8633 (FAST MED)

SECTION 2: HAZARDS IDENTIFICATION

Classification in accordance with UN GHS Version 5.

Hazard Classification(s): Not classified under GHS.

Hazard Symbol(s): Not applicable.

Signal Word: Not applicable.

Hazard Statement(s): Not applicable.

Precautionary Statement(s):

Prevention: Not applicable.

Response: Not applicable.

Storage: Not applicable.

Disposal: Not applicable.

Other Hazards Which do not To avoid risk to human health and the environment, comply with the instructions for use.

Result in GHS Classification: This material is capable of forming flammable dust clouds in air.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Average % by weight
3-bromo-1-(3-chloro-2-pyridinyl)-N-[4-cyano-2-methyl-6-[(methylamino)carbonyl]phenyl]-1H-pyrazole-5-carboxamide	Cyantraniliprole	736994-63-1	20.0
3-[(2-chlor-5-thiazolyl)methyl]tetrahydro-5-methyl-N-nitro-4H-1,3,5-oxadiazin-4-imine	Thiamethoxam	153719-23-4	20.0
Diatomaceous earth, uncalcined (less than 1% crystalline silica)	Diatomaceous earth	61790-53-2	10 - 20
Naphthalenesulfonic acid, dibutyl-, sodium salt (1:1)	Sodium dibutyl-naphthalene sulfonate	25417-20-3	1 - 10

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

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 Safety Data Sheet with you when calling Syngenta, a poison control centre 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 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eyes. Call Syngenta, a poison control centre 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 running water for a minimum of 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 do so. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control centre. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

Most Important Symptoms/Effects, Acute and Delayed:

May irritate the eyes.

Indication of Immediate Medical Attention and Special Treatment:

There is no specific antidote.

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Suitable (and Unsuitable) Extinguishing Media: Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist. Cool closed containers exposed to fire with water spray. Do not use a solid water stream as it may scatter and spread the fire.

Specific Hazards Arising from the Product: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material.

This material can become readily charged in most operations.

Can decompose at high temperatures forming toxic gases. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Special Protective Equipment and Precautions for Fire-Fighters: Wear full protective clothing and self-contained breathing apparatus. Evacuate non-essential 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 run-off can cause environmental damage. Contain run-off water with, for example, temporary earth barriers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Control the spill at its source. Clean up spills immediately, observing precautions outlined in Sections 7 and 8. Use adequate ventilation and equipment and wear clothing as described in Section 8 and/or the product label.

Environmental Precautions: Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory body.

Methods and Materials for Containment and Cleaning Up: Scoop or sweep up material and place into a disposal container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into a compatible disposal container. On soils, 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.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

This material can become readily charged in most operations.

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. Avoid breathing vapours, dust or spray mist. Wear full protective clothing and equipment (see Section 8). 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.

Conditions for Safe Storage, Including Any Incompatibilities: Store in original container in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C. Refer to the product label for specific storage recommendations, including minimum storage temperature and freeze/thaw stability. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

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 AND/OR ON-FARM APPLICATIONS.

Control Parameters:

Component	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen	WHMIS†
Cyantranilprole	Not established	Not established	5 mg/m ³ TWA***	No	Not established
Thiamethoxam	Not established	Not established	3 mg/m ³ TWA***	No	Not established
Diatomaceous earth	80 mg/m ³ total dust	Not established	6 mg/m ³ TWA**; 4 mg/m ³ TWA (BC); 1.5 mg/m ³ (respirable) (BC); 10 mg/m ³ TWA (inhalable aerosol) (ON); 3 mg/m ³ TWA (respirable aerosol) (ON); 6 mg/m ³ TWA (QC)	IARC Group 3	Not established
Sodium dibutyl-naphthalene sulphonate	Not established	Not established	Not established	No	Not established
Starch	15 mg/m ³ (total); 5 mg/m ³ (respirable)	10 mg/m ³	10 mg/m ³ TWA (total)**; 5 mg/m ³ TWA (respirable)**; 10 mg/m ³ TWA (AB/BC/ON/QC)	No	Not established

- * Recommended by Manufacturer
- ** Recommended by NIOSH
- *** Syngenta Occupational Exposure Limit (OEL)
- **** Recommended by AIHA (American Industrial Hygiene Association)
- † Material listed in Ingredient Disclosure List under the Hazardous Products Act

Appropriate Engineering Controls: If necessary, ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV (threshold limit value). Warehouses, production areas, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

Individual Protection Measures:

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 safety shower.

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

Inhalation: A particulate filter respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH certified respirator with any N, R, P or HE filter. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Beige to brown granules.

Formulation Type: Wettable granules.

Physical State: Solid.

Odour: Not available.

Odour Threshold: Not available.

pH: 9.5 (1% in water).

Melting Point: Not available.

Freezing Point: Not applicable.

Initial Boiling Point and Boiling Range: Not available.

Flash Point: Not available.

Evaporation Rate: Not applicable.

Flammability (solid/gas): Not available.

Lower Explosive Limit: Not available.

Upper Explosive Limit: Not available.

Vapour Pressure: Cyantraniliprole: 1.40×10^{-16} mmHg @ 20 °C.
 Thiamethoxam: 2.00×10^{-11} mmHg @ 20 °C.

Vapour Density: Not available.

Relative Density: 0.55 – 0.59 g/cm³.

Solubility(ies): Cyantraniliprole: 12.3 mg/L @ 20 °C, pH 7 (water).
 Thiamethoxam: 4,100 mg/L @ 20 °C, pH 7 (water).

Partition Coefficient (n-octanol water): Cyantraniliprole: 1.9
 Thiamethoxam: - 0.1

Auto-Ignition Temperature: Not available.

Decomposition Temperature: Not available.

Viscosity: Not applicable.

Other Information: Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive.

Chemical Stability: This material can become readily charged in most operations.

Possibility of Hazardous Reactions: This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

Conditions to Avoid: Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material.

Incompatible Materials: No substances are known which lead to the formation of hazardous substances or thermal reactions.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

SECTION 11: TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Dermal, inhalation, oral.

Symptoms of Acute Exposure: May irritate eyes.

Potential Health Effects: Not applicable.

Acute Toxicity/Irritation Studies (Finished Product):

Ingestion: Low Acute Toxicity
 Oral (LD50 Rat) > 5,000 mg/kg body weight

Dermal: Low Acute Toxicity
 Dermal (LD50 Rat) > 5,000 mg/kg body weight

Inhalation: Low Acute Toxicity
 Inhalation (LC50 Rat) > 5.04 mg/L air – 4 hours

Eye Contact: Minimally Irritating (Rabbit)

Skin Contact: Non-Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

Specific Target Organ Toxicity (STOT) Single Exposure:

Cyantraniliprole: Not classified as a specific target organ toxicant, single exposure.

Thiamethoxam: Not classified as a specific target organ toxicant, single exposure.

Specific Target Organ Toxicity (STOT) Repeated Exposure:

Cyantraniliprole: The following effect occurred at levels of exposure that significantly exceed those expected under labeled usage conditions. Oral dog. Exposure time: 90-d. Altered blood chemistry, liver effects.

Thiamethoxam: Did not show neurotoxicity in animal experiments.

Carcinogenicity:

Cyantraniliprole: Animal testing did not show any carcinogenic effects.

Thiamethoxam: Liver tumours at high doses noted in mice that are not relevant to humans.

Reproductive Toxicity:

Cyantraniliprole: Animal testing showed no reproductive toxicity.
 Thiamethoxam: Did not show reproductive toxicity effects in animal experiments.

Mutagenicity:

Cyantraniliprole: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
 Evidence suggests this substance does not cause genetic damage in animals.
 Evidence suggests this substance does not cause genetic damage in cultured mammalian cells.
 Evidence suggests this substance does not cause genetic damage in cultured bacterial cells.
 Thiamethoxam: Did not show mutagenic effects in animal experiments.

Aspiration Hazard:

Cyantraniliprole: Not classified as an aspiration hazard.
 Thiamethoxam: Not classified as an aspiration hazard.

Other Toxicity Information:

Thiamethoxam: No adverse effects are expected below the occupational exposure limit and when the product is handled and used according to the label.

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.

Diatomaceous earth: The carrier in this product is naturally occurring diatomaceous earth. Natural diatomaceous earth contains a small percentage of naturally occurring crystalline silica, which is considered a probable human carcinogen. Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. The amount of crystalline silica in this product is minimal and the potential for over-exposure in manufacturing operations is low.

Sodium dibutyl-naphthalene sulphate: Harmful if inhaled or swallowed. Causes skin and serious eye irritation.

Starch: May cause eye and skin irritation. May cause respiratory tract irritation. Low hazard for usual industrial handling. Prolonged contact can cause chemical pneumonitis.

SECTION 12: ECOLOGICAL INFORMATION

Eco-Acute Toxicity:

Cyantraniliprole:
 Invertebrates (Water Flea) 48-hour LC₅₀/EC₅₀ 204 ppm
 Fish (Rainbow Trout) 96-hour LC₅₀/EC₅₀ 12.6 ppm

Thiamethoxam:
 Invertebrates (Water Flea) 48-hour LC₅₀/EC₅₀ > 106 ppm
 Fish (Rainbow Trout) 96-hour LC₅₀/EC₅₀ > 100 ppm
 Birds (8-day dietary – Bobwhite Quail) LC₅₀ > 5,200 ppm

Persistence & Degradability:

Cyantraniliprole: Low persistence in soil. Low persistence in water.
 Thiamethoxam: Moderately persistent in soil. Low persistence in water.

Bioaccumulation Potential:

Cyantraniliprole: BCF < 500; does not bioaccumulate.
 Thiamethoxam: BCF < 500; does not bioaccumulate.

Mobility in Soil:

Cyantraniliprole: Moderate mobility in soil.
 Thiamethoxam: Moderately mobile in soil.

Other Adverse Effects: Not applicable.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Methods:

Waste from residues: Refer to the product label for specific disposal/recycling information.
 Do not contaminate ponds, waterways or ditches with chemical or used container.
 Do not dispose of waste into sewer.
 Where possible recycling is preferred to disposal or incineration.
 If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Refer to the product label for specific disposal/recycling information.
 Empty remaining contents
 Triple rinse containers
 Empty containers should be taken to an approved waste handling site for recycling or disposal.
 Do not reuse empty containers.

SECTION 14: TRANSPORT INFORMATION

TDG Classification – Road/Rail:

Not regulated as a dangerous good.

Water Transport – International (IMDG):

UN Number: UN 3077
 Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Cyantraniliprole/Thiamethoxam),
 Marine Pollutant.
 Transport Hazard Class: Class 9
 Packing Group: PG III
 Environmental Hazards: Marine pollutant.

Air Transport (IATA-DGR):

UN Number: UN 3077
 Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Cyantraniliprole/Thiamethoxam).
 Transport Hazard Class: Class 9
 Packing Group: PG III
 Environmental Hazards: Environmentally hazardous.

Special Precautions for User:

Not applicable.

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable.

SECTION 15: REGULATORY INFORMATION

There are Canada-specific environmental requirements for handling, use and disposal of this pest control product that are indicated on the product label.

Hazardous Products Act Information:

This product has been classified in accordance with the amended Hazardous Products Act and the Hazard Criteria of the Hazardous Products Regulations (HPR), and the SDS contains all the information required by the HPR.

Hazardous Products Act Information: WHMIS 2015 Classification

This product is exempt under WHMIS 2015.

Pest Control Products Act (PCPA) Registration No.: 30900

Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act (PCPA). These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. Following is the hazard information required on the pest control products label:

PCPA Label Hazard Communications:

Read the label and booklet before using.

Keep out of the reach of children.

Allergens Contained in the Pest Control Product:

Not applicable.

NPRI Components:

Not applicable.

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 product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant SDS. Hazardous properties of all ingredients have been considered in the preparation of this SDS. Read the entire SDS for the complete hazard evaluation of this product.

Full Text of Abbreviations:

AB – Province of Alberta

BC – Province of British Columbia

BCF – Bioconcentration factor

EC₅₀ – Effective concentration, 50%

GHS – Globally Harmonized System of Classification and Labeling of Chemicals

LC₅₀ – Lethal concentration, 50%LD₅₀ – Lethal dose, 50%

IARC – International Agency for Research on Cancer

IATA-DGR – International Air Transport Association Dangerous Goods Regulations

IMDG – International Maritime Code for Dangerous Goods

NTP – National Toxicology Program

ON – Province of Ontario

OSHA – Occupational Safety & Health Administration

PEL – Permissible Exposure Limit

TDG – Transportation of Dangerous Goods

TLV – Threshold Limit Value

QC – Province of Quebec

SDS – Safety Data Sheet

WHMIS – Workplace Hazardous Materials Information System

Changes since last revision: Converted to SDS format.

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Prepared by: Syngenta Canada Inc.

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END OF SAFETY DATA SHEET.