

1. IDENTIFICATION

Product name: **TOPNOTCH® (PCP Reg. No.: 31126)**
 Chemical name of active ingredient(s): **Azoxystrobin:** Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate
Propiconazole: 1-[[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-yl]Methyl]-1H-1,2,4-triazole
 Manufacturer: ADAMA Agricultural Solutions Canada Ltd.
 302-179 McDermot Ave.
 Winnipeg Manitoba
 R3B 0S1
 Phone: 1-855-264-6262
 Phone: 1-800-535-5053
 For fire, spill, and/or leak emergencies, contact Infotrac:
 For medical emergencies and health and safety inquiries, contact Prozar: Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA/PEL	ACIGH/TLV	OTHER	NTP/IARC/OSHA (Carcinogenicity)
Azoxystrobin	131860-33-8	13.5	NE	NE	NA	NA
Propiconazole	60207-90-1	11.7	NE	NE	NA	NA
1-Octanol	111-87-5	<13.0			50 ppm (TWA)*	NA
Propylene Glycol	57-55-6	<5.0	NE	NE	10 mg/m ³ (TWA)*	NA

NA=Not applicable; NE: Not Established

* Recommended by AIHA (American Industrial Hygiene Association)

3. HAZARDS IDENTIFICATIONS**PHYSICAL PROPERTIES:**

Appearance: Cream or white to light yellow liquid
 Odor: Amine-like; aromatic

EMERGENCY OVERVIEW: KEEP OUT OF REACH OF CHILDREN. HARMFUL IF SWALLOWED. Severely irritating to the eye. DO NOT get in eyes. May irritate the skin. Avoid contact with skin and clothing. Wear long pants, a long sleeve shirt, shoes and socks and chemical-resistant gloves during mixing/loading, application, clean-up and repair activities. In addition, wear goggles or a face shield during mixing and loading.

Wash with soap and water after handling, and before eating, drinking or smoking. Remove clothing immediately if pesticide gets inside. Wash contaminated clothing, separately from household laundry, before re-use. Do not wear contaminated shoes. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SYMPTOMS OF ACUTE EXPOSURE: Eye and skin irritant.

HAZARDOUS DECOMPOSITION PRODUCTS: Can decompose at high temperatures forming toxic gases.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED: None known.

4. FIRST AID MEASURES

FIRST AID

IN CASE OF POISONING, contact a physician or a poison control centre immediately. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF IN EYES, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF INHALED, move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

TOXICOLOGICAL INFORMATION: There is no specific antidote if this product is ingested. Treat symptomatically.

5. FIRE FIGHTING MEASURES

FLASH POINT: > 102°C

FLAMMABLE LIMITS: LFL/UFL: Not applicable.

EXTINGUISHING MEDIA: Use dry chemical, foam or CO₂ extinguishing media.

FIRE & EXPLOSION HAZARDS: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion, including carbon monoxide and carbon dioxide.

FIRE-FIGHTING PROCEDURES: 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. If water is used to fight fire, dike and collect runoff.

HAZARDOUS DECOMPOSITION PRODUCTS: Can decompose at high temperatures forming toxic gases.

6. ACCIDENTAL RELEASE MEASURES

IN CASE OF SPILL OR LEAK:

Wear appropriate protective equipment (gloves, glasses, apron) when attempting to clean up the spill. If the container is leaking, secure leak and place the container into a drum or heavy gauge plastic bag.

For spills and leaks - contain the liquid with dikes of inert material (soil, clay, kitty litter, etc.). Absorb the spill onto inert material and shovel into a sealable waste container.

On hard surfaces - sprinkle spill area with detergent and scrub in a small quantity of water with a coarse broom. Let stand 10 minutes then absorb onto an inert material and shovel into the waste container.

On soil - remove the top 15 cm of soil in the spill area and replace with fresh soil. Dispose of all waste including scrub brush in accordance with provincial requirements.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING: Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours or spray mist. Wear full protective clothing and equipments. 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.

PRECAUTIONS TO BE TAKEN IN STORAGE: Keep in original container, tightly closed, during storage. Store in a cool, dry, well ventilated area away from feed and foodstuffs, and out of the reach of children and animals.

STORAGE TEMPERATURE (MIN/MAX): Do not store below 0 °C.

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.

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

EYE PROTECTION: Protective eyewear. Safety glasses or face shields.

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

HAND PROTECTION: Chemical-resistant gloves, such as barrier laminate, nitrile rubber, neoprene rubber, or Viton.

RESPIRATOR REQUIREMENTS: Use effective engineering controls to comply with occupational exposure limits. In case of emergency spills, use a NIOSH approved 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.

ADDITIONAL PROTECTIVE MEASURES: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Use adequate ventilation to minimize airborne concentrations of this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Cream or white to light yellow liquid

ODOUR: Amine-like; aromatic

pH: 5 (1% in water)

FLASH POINT: > 102°C

DENSITY: 1.06 g/mL

VISCOSITY: 925 mPas

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal use and storage conditions.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY WITH OTHER MATERIALS: Not known.

HAZARDOUS DECOMPOSITION PRODUCTS: Not known.

HAZARDOUS POLYMERIZATION: Can decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES: (Based on a substantially similar formulation)

Acute Oral LD50 (Rat): >1,030 mg/kg

Acute Dermal LD50 (Rat): > 5,000 mg/kg

Acute Inhalation LC50 (Rat): > 2.56 mg/L (4 hrs.)

Eye Irritation (Rabbit): Severely irritating

Skin Irritation (Rabbit): Moderately irritating

Dermal Sensitization (Guinea Pig): Not a contact sensitizer

Reproductive/Developmental Effects:

Azoxystrobin: Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages ($\geq 2,000$ mg/kg). In rabbits, no effect was observed up to the highest dose level (500 mg/kg/day). In rats, developmental effects were seen only at maternally toxic doses (100 mg/kg/day).

Propiconazole: None observed.

Chronic/Subchronic Toxicity Studies :

Azoxystrobin: In a rat 90-day feeding study, liver toxicity was observed at 2,000 ppm. This was manifest as gross distension of the bile duct, increased numbers of lining cells and inflammation of the duct. No toxicologically significant effects were seen in repeat dose dog studies. Data reviews do not indicate any potential for endocrine disruption. There is no evidence of neurotoxicity in any of the studies conducted with azoxystrobin.

Propiconazole: None observed.

Carcinogenicity:

Azoxystrobin: No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

Propiconazole: Increased incidence of liver tumors at extremely high doses (male mice).

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.

1-Octanol

Exposure may cause eye, skin and respiratory tract irritation. Prolonged skin contact may cause dermatitis and defatting.

Propylene Glycol:

Test results reported in Section 11 for the final product take into account any acute hazards related to the propylene glycol in the formulation.

Reported to cause central nervous system depression (anesthesia, dizziness, confusion), headache and nausea. Chronic dietary exposure caused kidney and liver injury in experimental animals.

Target Organs:

Active Ingredient:

Azoxystrobin: Liver.

Propiconazole: Liver

Inert Ingredients:

1-Octanol: Eye, skin, respiratory tract

Propylene Glycol: CNS. Kidney, liver.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: Toxic to aquatic organisms and non-target terrestrial plants. Toxic to certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to application sites such as hedgerows and woodland. To reduce runoff from treated areas into aquatic habitats, avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Azoxystrobin is persistent and will carryover. It is recommended that this product not be used in areas treated with azoxystrobin during the previous season. The properties of azoxystrobin indicate it may leach to groundwater. The use of BLANKET XCEL may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

ECO-ACUTE TOXICITY:

Azoxystrobin:

Fish (Rainbow Trout) 96-hour LC₅₀: 470 ppb

Green Algae 5-day EC₅₀ : 106 ppb

Invertebrates (Water Flea) 48-hour EC₅₀: 259 ppb

Birds (Mallard Duck) 14-day LD₅₀: > 250 mg/kg body weight

Propiconazole:

Fish (Rainbow Trout) 96-hour LC₅₀: 0.83 ppm

Green Algae 9-day EC₅₀ : 0.72 ppm

Invertebrates (Water Flea) 48-hour EC₅₀: 3.2 ppm

Birds (Mallard Duck) 14-day LD₅₀: > 2510 mg/kg body weight

ENVIRONMENTAL FATE:

Azoxystrobin:

Low bioaccumulation potential, low to moderate mobility in soil, but is moderately persistent to persistent in soil or water. The dissipation half-life in soil is 54 - 135 days and in water it is 187 - 239 days. Under field conditions the half-life in soil is 14 days. The main routes of degradation are by microbial degradation, hydrolysis, and formation of bound residues.

Propiconazole:

Low bioaccumulation potential. Not persistent in soil. Stable in water. Low mobility in soil. Sinks in water (after 24 hours).

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

CONTAINER DISPOSAL: Dispose of product containers, waste containers, and residues according to label instructions and provincial requirements.

14. TRANSPORT INFORMATION

CANADIAN TDG CLASSIFICATION: (Road/Rail)

Not regulated for land shipments.

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin, Propiconazole), 9, PGIII, Marine Pollutant

IATA (air): UN3082, Environmentally Hazardous Substance, Liquid, N.O.S. (Azoxystrobin, Propiconazole), 9, PGIII, Marine Pollutant

15. REGULATORY INFORMATION

CANADIAN REGULATIONS:

This product is exempt from the requirements of WHMIS and is registered under the *Pest Control Product Act*. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable.

Section 311/312: Acute health hazard (immediate)

Section 313: Propiconazole CAS No. 60207-90-1

CA PROPOSITION 65: Not applicable

CERCLA RQ: Not applicable

RCRA CLASSIFICATION: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA STATUS: The ingredients of this product are listed on the TSCA inventory or exempt.

16. OTHER INFORMATION

HAZARD RATINGS	NFPA	HMIS		
HEALTH:	2	1	0	MINIMAL
FLAMMABILITY:	1	1	1	SLIGHT
REACTIVITY:	0	0	2	MODERATE
			3	HIGH
			4	SEVERE

MSDS DATE: 2-12-2015.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult ADAMA Agricultural Solutions Canada Ltd. for further information.