

# Developed for the industrial vegetation management industry

## Best uses

Developed for the industrial vegetation management industry. Esplanade® is ideal for use around railways, roadsides, utility rights-of-way and around farm buildings.

## Key strengths

Esplanade herbicide is advancing weed control. This total vegetation control (TVC) product is unlike anything else on the market; a pre-emergent herbicide that features a new mode of action, providing effective, long-lasting control.

### Attributes of Esplanade

- Convenient and easy-to-use packaging
- Odourless and nonstaining to surfaces
- Minimal PPE requirement as compared to traditional vegetation management herbicides
- Up to 60 times less active ingredient on the ground compared to some competitive products. Delivers a more sustainable solution for you and your customers
- Applied at a low use rate of 375 mL/ha and formulated as a 200 g/L suspension concentrate (SC)
- Less post-emergent herbicide applications result in reduced labour and fuel costs
- Up to eight months of residual control even under the most difficult conditions on over 33 weed species

### Solutions for tough weeds

- Superior broad-spectrum control of over 33 weed species, including annual grasses and broadleaf weeds
- A single application of Esplanade herbicide will control giant foxtail, green foxtail and yellow foxtail
- Unique mode of action helps manage herbicide resistance on key weeds

### Weed species controlled

- Annual sow thistle
- Barnyard grass
- Black mustard
- Bluestem broomsedge
- Common groundsel
- Common sweetclover
- Cudweed
- Dog fennel
- Downy brome
- Field bindweed
- Giant foxtail
- Green foxtail
- Italian ryegrass
- Kochia\*\*
- Lamb's quarters
- Large crabgrass
- Medusa head
- Morning glory
- Prickly lettuce\*\*
- Red root pigweed\*\*
- Shepherd's purse
- Spotted spurge
- St. John's wort
- Stork's bill
- Sweet clover
- Volunteer common rye
- Wild barley
- Wild mustard
- Wild oats
- Yellow foxtail
- Yellow starthistle

\*\* Suppression only  
375mL/Ha Application Rate



**Active ingredient**  
indaziflam 19.05%



**Mode of action**  
Inhibition of cellulose biosynthesis inhibitor (CBI)



**Group**  
29



**Formulation**  
Suspension



**Packaging**  
Case = 4 x 1 L  
Case = 2 x 10 L

## How to use Esplanade

Esplanade herbicide provides preemergent, residual control of weeds. Apply to the target surface before weeds germinate. Esplanade herbicide should be applied to the soil as a uniform broadcast or band application. Esplanade herbicide applied alone will not control weeds that are already emerged. If weeds have emerged, a foliar active post-emergent herbicide must be added. Esplanade herbicide treatments are most effective in controlling weeds when adequate moisture is present and the application is followed by rain before weed seed germination. Weed seeds and seedlings must come into contact with Esplanade herbicide before emergence to be controlled. If sufficient moisture is present, some weeds may germinate and emerge from below the treated layer. Excessive plant debris present on the soil surface at the time of application may prevent uniform product distribution from reaching the soil and reduce weed control. Performance may be improved by removing excessive debris before product application. Avoid disturbing treated soil after application of Esplanade herbicide. If treated soil is moved during tillage practices or in another manner in such a way that the herbicide barrier is no longer intact, weeds may emerge from areas where treated soil has been disturbed.

## Mode of action

The active ingredient in Esplanade, indaziflam, is a cellulose biosynthesis inhibitor (CBI) and is classified as a Group 29 herbicide. Esplanade is the most powerful CBI herbicide discovered to date. It works by inhibiting crystalline cellulose deposition in the plant cell wall, affecting cell wall formation, cell elongation and division. Consequently, only actively growing meristematic root and shoot tissues of germinating weeds are affected.

## Resistance management

Esplanade herbicide is a Group 29 herbicide. Any weed population may contain or develop plants naturally resistant to Esplanade herbicide and other Group 29 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed. Currently, no Group 29 resistant weeds have been reported in Canada.

## Environmental fate

Soil biotransformation is expected to be the major route of transformation in the environment, with soil persistence ranging from slightly persistent to moderately persistent, depending on soil type.

Volatility	Half-life in soil (days)	Half-life in water (days)	Leaching
Low (nonvolatile in the environment)	9.3 to 71	13 to 22.5	The main ingredient, Indaziflam, is moderately mobile and not expected to leach

## Wildlife safety assessment

The active ingredient in Esplanade is designed to affect plant life and does not pose a risk to other wildlife or humans as it can be used safely when used according to the label directions. There are no grazing or haying restrictions for nonlactating or lactating animals (including cattle, horses, sheep and goats) when using Esplanade herbicide alone as directed.

The active ingredient in Esplanade does not present a risk to wild mammals, birds, fish or amphibians.

- Nonlethal to terrestrial vertebrates
- Nonlethal to bees, earthworms and parasitoid wasps

Earthworms	Bees	Birds
LC <sub>50</sub> : > 1000 mg/kg/2 - considered negligible	LD <sub>50</sub> : > 100 µg ai/bee (x 1.12) - considered negligible	200 mg ai/kg bw/d - considered negligible

## Human safety assessment

The acute toxicity of the active ingredient found in Esplanade is low via oral, dermal and inhalation routes of exposure. It is nonirritating to the eyes and skin and did not cause an allergic reaction in testing. Testing shows it is not carcinogenic.

Acute oral toxicity	Acute dermal toxicity	Acute inhalation toxicity	Eye irritation
LC <sub>50</sub> : > 5,000 mg/kg	LC <sub>50</sub> : > 2,000 mg/kg	LC <sub>50</sub> (rat): > 1 mg/L Exposure time: 4 hours	No eye irritation

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