

The vegetation manager's choice for controlling unwanted weeds, brush and trees in and along rights-of-way.

Tordon 101 is a herbicide containing *picloram* and 2,4-D as the active ingredients.

Tordon 101 controls unwanted broadleaf weeds, brush and trees, along electrical power lines, railway beds, roadsides, pipelines and other rights-of-way. It is a selective herbicide and will not harm grasses.

How it is applied

Tordon 101 can be applied to unwanted vegetation with a foliar or cut stump application, depending on the vegetation manager's assessment of plant type and size, location and environmental concerns.

- Foliar application involves mixing Tordon 101 with water and applying it to the leaves of the plants during the spring and summer.
- Cut stump treatment is the application of Tordon 101 in a concentrated water solution directly to the stump surface after the tree has been cut.

How it works

The herbicide's active ingredient works like a natural growth regulator affecting enzymes unique to plants. It enters the treated vegetation through the leaves or the stump surface and travels throughout the plant via the plant's own transportation system. It induces unregulated growth, which disrupts food production and causes the plant to die from lack of nutrients.

Benefits of vegetation control

For most right-of-way uses, safety remains a major reason for managing vegetation.

Roadways. For driver and passenger safety, vegetation must not be allowed to block traffic signs or roadside markers. It must not obstruct driver vision at road edges, intersections, railway crossings and curves. Vegetation may also attract grazing animals causing increased road hazards. In winter, excessive vegetation in ditches interferes with snow removal and shades the roadbed, which can result in higher winter road maintenance costs and safety issues.

Powerlines. Trees growing into power lines can cause power outages, fires, pose a safety risk to the public and make line maintenance difficult and dangerous. Areas around transmission line towers and substations must be kept vegetation free to reduce fire hazard and the risk of electrocution for maintenance crews.

Railways. Railway companies need to maintain weeds along rights-of-way to maintain roadbeds, visibility and reduce the risk of fires. Weeds hold water around railway ties, which causes the ties to rot and possibly cause a derailment. Sparks from the rails can also ignite trees and brush which are too close to the roadbed, creating a fire hazard for nearby residents.

Why not just cut the vegetation?

Mowing, trimming and cutting remain important parts of any right-of-way maintenance program. But these mechanical methods tend to be very labor intensive, expensive and dangerous for the workers. They can also lead to soil erosion and damage to compatible species such as low-growing shrubs.

In certain areas, mechanical methods simply cannot be used. Steep terrain may limit access by mowers and can be dangerous for a chainsaw operator. The crushed stone construction of railway beds and substations makes mechanical weed control impossible.

Tordon 101 controls unwanted brush and weeds and eliminates re-sprouting. This improved control allows the crews to visit the right-of-way less frequently, meaning less physical impact on the environment.

Rates and directions for use on the Tordon 101 label have been reviewed and accepted by Health Canada's Pest Management Regulatory Agency (PMRA).

Health and safety

The typical treatment process ensures safety for applicators and the public.

- Treatments are planned by professional vegetation managers, who specify the vegetation targeted for control, the application method(s), and the rates required for control.
- An experienced crew foreman oversees the application process to ensure all workers follow the product label and the plan outlined by the vegetation manager.
- Before application begins, the crew tests and calibrates the equipment according to the label directions.
- Tordon 101 is applied to the targeted vegetation by trained, certified professional applicators in designated areas using the appropriate application techniques. Crews are trained to use extra caution around sensitive areas, such as yards and water bodies, by leaving untreated “buffer” zones for added protection.

Is Tordon 101 considered toxic?

If ingested, Tordon 101 has a low toxicity when compared to many substances we come in contact with daily. A scientific measure of relative oral toxicity is “LD₅₀ in mg/kg”. This chart indicates some LD₅₀ values for comparison.

| Substance | LD ₅₀ | Toxicity |
|-----------------|------------------|----------|
| Picloram active | >5000 | Least |
| Table salt | 3000 | |
| Tordon 101 | 2598 | |
| Vitamin A | 2000 | |
| Aspirin | 1000 | |
| Nicotine | 53 | Most |

It's unlikely anyone, even an applicator, could receive a large enough dose of Tordon 101 to be harmed.

Tordon 101 and berries

As a precaution, Dow AgroSciences recommends that people should not consume berries that have been treated

with Tordon 101. However, scientists have studied accidental ingestion to determine the No Observable Adverse Effect Level (NOAEL). Based on these levels, scientists have determined that when Tordon 101 is applied at the highest labeled use rate, an average person (68 kg/150 lb.) could consume 20 liters of berries every day for the rest of his or her life without experiencing adverse effects.

Entering treated areas

To avoid exposure from an application, it is recommended that people avoid treated areas until leaves, stems and bark are dry. If someone unknowingly walked through a treated area, they may be exposed to the spray solution by rubbing up against a tree which is still damp.

The dose received from this type of activity will not cause any harm. The PMRA has determined that there is a very large margin of safety from exposure when walking through a treated site even when the vegetation is still wet.

Tordon 101 and wildlife

Tordon 101 only affects plants, and does not have any effect on animals or insects. The PMRA requires extensive testing to ensure Tordon 101 has no adverse effects to pets, livestock or wildlife. Wildlife that may graze treated vegetation will not be adversely effected. Harvested animal products will not have accumulated Tordon 101 in the meat or fat. The active ingredients are rapidly excreted in urine and manure in an unchanged form by mammals.

Tordon 101 and the environment

Picloram, the active ingredient in Tordon 101, attaches to organic material in surface soil layers. This restricts its movement deeper into the soil, and thus the potential to reach groundwater or be found in surface runoff. *Picloram* is degraded by microorganisms in the soil. Although Tordon 101 is not used for controlling weeds in aquatic environments, should it reach a stream, pond or ditch, it will be degraded rapidly by processes that occur in the presence of sunlight and water. In soil or water, *picloram* breaks down into naturally occurring compounds such as carbon dioxide and water.

What else do you need?

For even more information on how Dow AgroSciences can meet your vegetation management needs, call the Solutions Center at 1-800-667-3852 or visit us at www.dowagro.ca.

