

# Pre and post emergent herbicide, strong on grasses in IVM and forestry situations.

### Product overview

Excalibur® IVM is registered for the control of annual and perennial grasses and broadleaf weeds in commercial and industrial areas, rights of way and forestry situations.

Excalibur is a 750 g/kg is a WDG (Water Dispersible Granule) formulation containing the active ingredient sulfometuron methyl.

The product provides strong grass weed activity (both pre and post emergence) in industrial and forestry weed control situations. To strengthen activity, it is commonly utilised in mixes with broadleaf herbicides (such as Victory IVM Herbicide) to optimise broad spectrum control.

## Mode of Action



## Excalibur spectrum of weed control

Excalibur is labelled for control of a very broad range of weeds, including the following;

#### **Annual Weeds Controlled**

Barley Grass (Hordeum leporinum), Bent Grass (Agrostis spp.), Brome Grass (Bromus spp.), Capeweed (Arctotheca calendula), Clover (Trifolium spp.), Cudweed (Grapholum luteoalbum), Datura (Thornapples) (Datura spp.), Erodium (Storksbills) (Erodium spp.), Fireweed (Senecio linearfolius), Fleabane (Conyza canadensis), Geranium, Gooseberry (Physalis spp.), Hare's-Tail Grass (Lagunus ovatus), Lupins (Lupinus spp.), Onion Grass (Romulea longifolia), Rye Grass (Lolium spp.), Silver Grass (Vulpia bromoides), Wild Oat (Avena fatua), Winter Grass (Poa annua)

### **Perennial Weeds Controlled**

From seed. Dock (Rumex spp.), Flatweed (Hypochoeris radicata), Fog Grass (Holcus lanatus). Mallow (Malva spp.), Pale Rush (Juncus pallidus), Sedge (Cyperus spp.), Serradella, Sida (Paddy's Lucerne) (Sida spp.), Soft Roly-Poly (Salsola kali), Sorrel (Acetosella vulgaris) SUPPRESSION ONLY Couch Grass (Cynodon dactylon), Spear Thistle (Cirsium vulgare)

### Features and benefits

- Strength on grass control
- Compatible with key herbicides utilised in IVM and forestry weed control
- More tools to utilise in your weed management programs
- Lox Tox LD<sub>50</sub> > 5000
- Cost effective with proven results
- Post emergent control through foliar and root activity as well as Pre-emergent residual control.
  Selected with the right combination product, total weed control can be achieved
- A great tool to utilise as part of an integrated weed management program
- Excalibur when used in accordance with the forestry label is safe around native tree species listed on the label
- Low rates can be used in combination with partner products to provide excellent weed control performance at a cost effective price.

## An integrated weed management approach

Excalibur is compatible with a broad range of Herbicides. Best weed control and extended residual activity will be achieved with Excalibur, when the product is used in combination with the following ADAMA IVM focused herbicides. Cavalier® 500 (oxyfluorfen), Simanex® (simazine), Firepower® (haloxyfop), Victory® IVM Herbicide (clopyralid), Wipe-out® Pro 540 (MEA glyphosate), Wipe-out® 450 (glyphosate) and Wipe-out Bio. 360 (glyphosate), Exonerate® Herbicide (glufosinate), Lynx® (metsulfuron methyl), Wetspray 1000. Excalibur does have limited pre emergent activity on Thistles. To overcome this add Victory IVM (clopyralid) to your mix to significant improve weed control performance.

## Excalibur® IVM

## How Excalibur® IVM works

Excalibur contains sulfometuron methyl which is rapidly absorbed by foliage and the roots of sensitive plants. Therefore, this product controls weeds through "Foliar and root uptake".

Visual symptoms such as chlorosis may not appear for several days with root and shoot growth of sensitive weeds being inhibited almost immediately. The plants die within 7 to 21 days after application.

Root uptake activity begins immediately after sufficient rainfall (approx. 12 mm to 25 mm) or soil moisture is sufficient to move the product into the soil profile. Applications made to moist soil reduces movement risks.

Seed germination can occur after application as this product does not inhibit seed germination. It relies on rainfall/moisture to move the chemical into the root zone for root absorption where weed control is achieved.

Reported field half-lives range from 20 to 28 days, depending on soil type, vegetation cover, and pH.

Applications of Excalibur in soils with higher pH are known to have a slower breakdown and a longer half-life. Product longevity can also increase in dry periods.

In forestry plantings care may be needed as some sandy soils low in organic matter have shown some seedling tree stunting at common rates used. (Eg. 40 to 50 g/ha) Excalibur is a schedule 5 chemistry, with a  $LD_{50}$  rating of > 5000 mg/kg. The mode of action is a Group B which is a member of the sulfonylurea group of herbicides and being considered as an ALS inhibitor.

Excalibur (sulfometuron methyl) interferes with an enzyme only found in plants (acetolactate synthase). In simple terms these products inhibit cell division in plants. The primarily breakdown pathways are acid hydrolysis and microbial activity (the main processes) and through the action of sunlight (photo degradation). Excalibur (sulfometuron-methyl) does not bind strongly to soil and is slightly soluble in water but is rapidly degraded and does not appear to pose a threat to groundwater. It is recommended that sulfometuron-methyl should not be applied to saturated soils due to migration risks.

#### Excalibur® IVM Application methods.

- Boom
- Knapsack
- High volume hand gun spray
- Aerial application.

#### Excalibur® IVM Use Rates

- Industrial rate ranges: 200 g/ha to 800 g/ha
- Combination products rate ranges: 40 g/ha to 75 g/ha
- General rate ranges for handgun use: 20g to 80g/ 100 L water (hand gun spraying)
- Knapsack rate ranges: 3 g to 12 g/15L
- Forestry Eucalyptus ssp. Preplant 50 q to 70 q/ha (boom or aerial) Note: Post plant as a directed spray.

In Preplant tree plantings, allow 1 day per gram plant back. Extend this in dry periods and soils with a high pH.

Excalibur when used in accordance with the label, is safe around a range of tree species.

### Restraints

DO NOT apply Excalibur to drainage ditches and channels. DO NOT apply Excalibur during periods of intense rainfall, or to soils saturated with water, as off-target movement may occur.

Refer to the label for further instructions.





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