



MUSCLE-UP®

360 SL



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Reg. No. L7935 Act No. 36 of 1947 (RSA) Reg. No. W130367, Act no. 18 of 1999 (Botswana)



HRAC HERBICIDE GROUP CODE G

A water soluble concentrate non-selective, foliar applied systemic herbicide for the control of a wide range of annual and perennial weeds in agricultural, non-crop and industrial areas



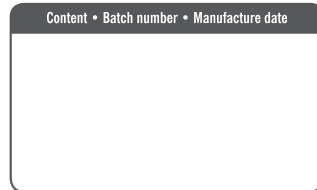
Active Ingredient

Glyphosate (glycine)
(Isopropylammonium salt)

360 g/l



Registered and Distributed by:
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MUSCLE-UP 360 SL 01-2013/08



CAUTION



SHAKE WELL Shake well before use • Store at room temperature
Keep out of direct sunlight • Keep container closed when not in use



WARNINGS:

- Poisonous if swallowed.
- Irritating to eyes and skin.
- Store in a cool place.
- Store away from food, feed, fertilizer and other agricultural products.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry interval: Do not enter treated area until spray deposit has dried unless wearing protective clothing.
- Aerial application: Notify all inhabitants in the immediate vicinity of the area to be treated of your intention, and issue the necessary warnings. Do not spray over adjacent areas or water nor allow spray to drift there.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

- Do not inhale fumes or spray mist.
- Avoid skin and eye contact when mixing the product.
- Wash with soap and water after use and accidental skin contact.
- Wash contaminated clothing.
- Do not eat, drink or smoke while mixing or applying the product or before washing hands and face.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator after use. Dispose of wash water where it will not contaminate crops, grazing, rivers, dams and boreholes.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Rinse the empty container three times with a volume of water equal to a minimum of 10% of that of the container. Add the rinsing to the contents of the spray tank before destroying the empty container.

- Destroy the empty container by perforation and flattening and do not use for any other purpose.
- At high concentrations foaming may be experienced. This can be overcome by adding an anti-foaming agent to the spray solution.

RESISTANCE WARNING:

For resistance management, **MUSCLE-UP® 360 SL** is a group code G herbicide. Any weed population may contain individuals naturally resistant to **MUSCLE-UP® 360 SL** and other group code G herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **MUSCLE-UP® 360 SL** or any other group code G herbicide.

To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered products from different herbicide group codes.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE: Use only as indicated.

- The efficacy of **MUSCLE-UP® 360 SL** is significantly improved when used in combination with **POWER-UP®**. Use only clean water in spray mixture, and add **POWER-UP®** according to label recommendations before adding **MUSCLE-UP® 360 SL** to the spray water.
- The visible effect of **MUSCLE-UP® 360 SL** on treated foliage usually only appears after 10 – 14 days of treatment, but may vary depending on weather conditions and weed species.
- Perennial weeds should be treated during peak growth in summer. A second application may be necessary. Difficult to control perennials should be treated in autumn when nutrients are being translocated to their roots, bulbs, stolons and rhizomes. Any regrowth should be spot sprayed.
- **MUSCLE-UP® 360 SL** is a non-selective systemic herbicide and is only active when applied to the green foliage and bark of plants.
- **MUSCLE-UP® 360 SL** is actively absorbed through leaves and immature bark of most plants and trees. Contact with immature bark, such as in trees younger than three years, can result in serious localised or translocated damage. Therefore contact with leaves, green or immature bark and fruit of **DESIRE®** plants, whether direct or by spray drift, must be **AVOIDED**. Always make sure that **ONLY UNDESIRE®** plants are treated.

- Do not spray onto pruned vines or fruit trees until wounds have sealed completely.
- **MUSCLE-UP® 360 SL** has NO pre-emergence activity; therefore repeat applications are necessary when applied on its own to control weeds germinating from seed. Ensure that target weeds are fully exposed to the **MUSCLE-UP® 360 SL** spray.
- **MUSCLE-UP® 360 SL** should be applied to actively growing weeds that are not dormant or under temperature or moisture stress. Ensure full and even coverage onto target weeds.
- Do not spray whilst weeds are wet, dormant, under stress or covered in a layer of dust or silt or when damaged by frost.
- Rain or irrigation within 4 – 6 hours of application can reduce the effectiveness of **MUSCLE-UP® 360 SL**.
- When applied in a tank mix with other chemicals, the label recommendations of all products apply.
- Pre-plant weed control on sandy soil (< 10 % clay) should take place at least 7 days before transplanting tomato or tobacco seedlings.

MIXING INSTRUCTIONS:

Half fill the spray tank with clean water. Add the required quantity of **POWER-UP®** and then **MUSCLE-UP® 360 SL** while agitating. Fill spray tank to the required volume with clean water. When using tank mixes, follow the respective manufacturers' label recommendations. It is recommended that **MUSCLE-UP® 360 SL** be added before the additional products, if tank mixtures are used. Tank mixtures **must** be sprayed out immediately and not allowed to stand in the spray tank overnight. Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

COMPATIBILITY:

The compatibility of **MUSCLE-UP® 360 SL** with other products depends on the formulations of the respective products, as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made. **MUSCLE-UP® 360 SL** is compatible with Diuron 800 SC, MCPA (potassium salt), 2,4-D amine Terbutylazine 900 WDG and Simazine SC.

APPLICATION:

- Always ensure that spray equipment is clean, and correctly calibrated under field conditions before spraying to ensure even and accurate application.
- Use low spray pressure (100 – 200 kPa) to avoid spray drift.
- Constant agitation throughout the spray operation is essential.

- Avoid the use of hard or muddy water, or water with a high colloidal content derived from soils high in organic matter.
- Ensure a fine even droplet distribution and thorough coverage of target weeds.

GROUND APPLICATION:

Conventional ground equipment such as knapsack sprayers, tractor-mounted booms or hand-held spray guns may be used. Equipment should be calibrated to spray 30 – 600 L/ha to ensure optimum spray deposits. Where spray drift is a problem, use low drift nozzles and/or keep pressure below 200 kPa (2 bar).

AERIAL APPLICATION:

MUSCLE-UP® 360 SL may be applied aerially, provided that the spray mixture is distributed evenly over the target area and the loss of spray material during application is restricted to a minimum. Aerial application of **MUSCLE-UP® 360 SL** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SABS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- **Volume:** A spray mixture volume of 30 l per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- **Droplet coverage:** 25 to 35 droplets per cm^2 must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 300 to 400 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable **atomising equipment** that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the **wingtip vortices**.
- The difference in **temperature** between the wet and dry bulb

- thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the **wind** speed exceeds 15 km/h.
- Stop spraying under **turbulent**, unstable and dry conditions during the heat of the day.
- Spraying under temperature **inversion conditions** (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).

- damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

CROP USE RESTRICTIONS:

CROP	RATE (ℓ/ha)	REMARKS
Vineyards	Annual weeds: 1,0 – 3,0 Perennial weeds: See specific rates in tables below	Do not use in vineyards younger than 2 years or near interplants less than 2 years old. Apply only as a directed spray to vines prior to bud burst. Use only in the dormant pre-bud burst stage for cover crop destruction in late winter in the Western Cape. In low growing bush or trellised vines smaller than 60 cm high, use only pre-bud burst. Do not permit spray or drift to contact buds, foliage or green stems, suckers or fresh wounds otherwise severe injury or destruction may result. Allow 10 days between pruning and application to prevent uptake from wounds. For residual control, tank mix with the recommended rates of Terbutylazine 900 WDG and Simazine SC.
Apples, Pears and Grapevines	Annual weeds: 1,0 – 3,0 Perennial weeds: See specific rates in tables below	Use only as a directed spray in orchards older than 2 years or near interplants less than 2 years provided the green bark and foliage is protected from the spray or drift. Do not permit spray or drift to contact leaves, green bark or fruit as severe damage or destruction may result. Allow 10 days between pruning and application to prevent uptake from wounds. Use the higher rate on larger, more mature weeds. Bananas: protect suckers and green stems from spray contact. Blackberry: use only wide type equipment and prevent direct crop contact. Pineapples and prickly pears: apply only as a directed inter-row application. Sisal: apply to nursery and mature plants.

NOTE: For improved control of *Erodium moschatum*, *Medicago polymorpha*, *Oenothera stricta*, *Plantago lanceolata*, *Polygonum aviculare* and *Rumex angiocarpus*, add 3,0 – 4,0 litres of MCPA to 1,4 – 2,0 litres **MUSCLE-UP® 360 SL**. Do not use this mixture to control *Arctotheca calendula*, *Bromus* spp., *Echium vulgare*, *Eriharta* spp., *Lolium* spp., *Malva parviflora* and *Sonchus oleraceus*. Use higher rate for bur clover (*Medicago polymorpha*), prostrate knotweed (*Polygonum aviculare*) and sheep sorrel (*Rumex angiocarpus*).

FORESTRY USAGE:

SITUATION	WEED SPECIES	RATE (ℓ/ha)	ℓ/100 ℓ WATER	REMARKS
Weed control in established plantations	Black wattle (<i>Acacia mearnsii</i>)	3,0	1,5	Apply as full cover spray to young trees up to 1 m high.
	Bugweed (<i>Solanum mauritianum</i>)	2,0	1,5 0,5	Large trees: Cut as low to the ground as possible and allow regrowth to 50 cm before application. Saplings: Apply as full cover spray to foliage.
	American bramble (<i>Rubus</i> spp.)	6,0	3,0	Slash rank growth in winter. Apply when new growth is more than 50 cm high. Any regrowth should be sprayed with 1.5 % solution.
	Ink berry (<i>Phytolacca heptandra</i>)	3,0	1,5	Apply as full cover spray up to 1 m high.
	Bush buffalo grass (<i>Setaria megaphylla</i>)	6,0	3,0	Apply to actively growing plants in summer or autumn. Any regrowth should be resprayed with 1.5 % solution.
Firebreaks, either tracer belts or total area	Refer to weed list.	4,0	2,0	A minimum of 200 ℓ/ha spray volume should be used when applying the 2 % solution.
Band application as planting preparation	Refer to weed list.	4,0	2,0	A follow-up spot-spray treatment may be necessary to control certain hardy perennials using a 2 % solution.
<i>Eucalyptus grandis</i> control	5 % solution 7 % solution	Single stem stumps: Apply 50 ml of solution to the cleaned cambium region of the cut stump surface immediately after felling. Multi-stem stumps: Apply 100 ml of solution to the cleaned cambium region of each cut stump surface immediately after felling. If regrowth occurs, spray with a 2% percent solution.		
Application method, 5% and 7% solution:				
<ul style="list-style-type: none"> Use a low pressure knapsack or hand sprayer with a hollow cone nozzle. Apply as soon after felling as possible after removal of sawdust on cut surface. Stumps which coppice after treatment should be under cut or ringbarked to expose the entire cambium region, which must then be treated. A fuzzy coppice regrowth may occur which normally dies back. If not, remove it by hand or apply a 2 % solution, avoiding drift onto newly planted seedlings. Species other than <i>Eucalyptus grandis</i> or clones thereof, may show a variable response to MUSCLE-UP® 360 SL and may require re-treatment. 				

SUGAR CANE USAGE:

SITUATION	RATE (ℓ/ha)	REMARKS
Last ratoon eradication	8,0 – 10,0	Minimum tillage: Allow regrowth after final harvest to a height 45 cm (complete tillering) then apply to emerged tillers.
	4,0 – 8,0	Combination tillage: Apply MUSCLE-UP® 360 SL on the regrowth of last ratoon at 35-100 cm in height. Allow 1-10 days to elapse and shear cane stool at a depth of 10-15 cm below the soil surface using a blade shear or similar implement. This treatment will also control certain weeds. Apply the higher rate on productive soils where regrowth can occur.
Pre-plant spray	1,0 – 3,0	Annual weeds: Apply to actively growing weeds.
	Refer to table	Perennial weeds: Apply to actively growing weeds.
Spot eradication	10 % solution	Apply as a directed spray to foliage of diseased or off-type stools.
Spraying around fields	2 % solution	Apply to actively growing weeds around fields, telephone poles, etc.
Sugar cane ripening	Ground application: 0,75 ℓ/ha Aerial application: 1,0 ℓ/ha	Apply to actively growing cane with at least 8 green leaves and not more than 15% flowered stalks during the late season.

- Cane harvested from April – July: Apply 6 – 8 weeks prior to harvest.
- Cane harvested from October – January: Apply 4 – 6 weeks prior to harvest.
- **Do not attempt to ripen sugar cane which is stressed.**
- Do not apply to sugarcane to be harvested for seed purposes.
- **MUSCLE-UP® 360 SL** will ripen sugar cane which is regarded as being mature (up to 90% purity), but best results are obtained when cane quality is low (young, immature cane or early and late in the milling season).
- Continue irrigation as long as possible after application, where applicable, before starting the drying-off period.
- All currently approved commercial varieties can be ripened.
- Most of the sucrose increase is concentrated in the top nodes with maximum at the base of the fourth leaf sheath.
- Chemical activity is sometimes evident within 3 – 4 weeks after application, by slight leaf yellowing in early season cane and bud swell with side shooting in late season cane. Apical growth ceases and spindle death may occur.
- Ratoon cane may have increased tiller population and/or slightly stunted tillers with chlorotic leaves, which will recover.

UNWANTED TREES AND WOODY PERENNIALS – ALIEN INVADERS AND NOXIOUS WEEDS:

SPECIES CONTROLLED	RATE (ℓ/ha)	ℓ/100 ℓ WATER	REMARKS
Red sesbania (<i>Sesbania punicea</i>)	3,0	1,5	Seedling plants less than 1 m high: Use 1,5 % solution. Tall shrubs: Slash and spray regrowth with 1,5 – 2,0% solution at 1 m high.
Bugweed (<i>Solanum mauritanium</i>)	2,0	1,5	Apply in spring or summer Large trees: Cut as low to the ground as possible, allow to regrow to 50 cm before application.
		0,5	Saplings: Apply directly to foliage.

SPECIES CONTROLLED	RATE (ℓ/ha)	ℓ/100 ℓ WATER	REMARKS
Black wattle (<i>Acacia mearnsii</i>)	3,0	1,5	Apply to young trees up to 1 m high.
American bramble (<i>Rubus</i> spp.)	6,0	3,0	Slash rank growth in winter. Apply when new growth is more than 0,5 m high. If regrowth occurs, spray with 1,5 % solution.
Port Jackson Willow (<i>Acacia saligna</i>)	2,0 4,0	1,5	Apply 3,0 % solution to flowering plants. For seedlings with 1 – 12 leaves apply as full cover spray to leaves and stems. For plants with 12 or more leaves apply as full cover spray to leaves and stems.
Mauritius thorn (<i>Caesalpinia decapetula</i>)	3,0	1,5	Full cover spray up to 1 m in height.
Lantana camara (<i>Lantana camara</i>)	6,0	3,0	Apply to actively growing plants in summer or autumn.
Trifid weed (<i>Cromolaena odorata</i>)	8,0	1,0	Slash established plants and allow to regrow to between 50 and 120 cm. Spray 1% solution ensuring complete coverage. Previously slashed multistem plants may require a follow-up treatment.

PERENNIAL GRASSES:

SPECIES	RATE (ℓ/ha)	ℓ/100 ℓ WATER	REMARKS
Common couch (<i>Cynodon dactylon</i>)	6,0 9,0	3,0	Summer rainfall region: Apply to active growth in summer or autumn before frost. If regrowth occurs, spot spray with 2,0 % solution. Winter rainfall region: As above in autumn.
Weeping love grass (<i>Eragrostis curvula</i>)	2,0	1,5	Apply to active growth in summer or autumn.
Common paspalum (<i>Paspalum dilatatum</i>)	6,0	3,0	Apply in summer at flower but before seed drop. If regrowth occurs, spray with 1,5 % solution or 3,0 ℓ/ha.
Couch paspalum (<i>Paspalum paspaloides</i>)	8,0 9,0	3,0	Apply in summer at flowering but before seed drop. If regrowth occurs, spray with 2 % solution or 4,0 ℓ/ha. Use the higher rate (9,0 ℓ/ha) in the winter rainfall region in autumn before frost.
Common buffalo grass (<i>Panicum maximum</i>)	6,0	3,0	Apply in summer to actively growing plants in the early growth stage. If regrowth occurs, spray with 1,5 % solution or 3,0 ℓ/ha.
Kikuyu (<i>Pennisetum clandestinum</i>)	4,0	1,5	Apply in summer to actively growing plants. If regrowth occurs, spray with 1,5 % solution or 3,0 ℓ per hectare.
Bush buffalo grass (<i>Setaria megaphylla</i>)	6,0	3,0	Apply in summer or autumn. If regrowth occurs, spray with 1,5 % solution or 3,0 ℓ/ha.

SPECIES	RATE ($\text{€}/\text{ha}$)	$\text{€}/100 \text{ €}$ WATER	REMARKS
Johnson grass (<i>Sorghum halepense</i>)	4,0	1,5	Apply in summer or autumn. If regrowth occurs, spray with 1,5 % solution or 3,0 $\text{€}/\text{ha}$.
Common wild sorghum (<i>Sorghum verticilliflorum</i>)	4,0	2,0	Apply to actively growing plants in summer or autumn.
Wild grain sorghum (<i>Sorghum bicolor</i>)	2,0	1,5	Apply to actively growing plants in summer or autumn.
Nasella tussock (<i>Stipa trichotoma</i>)	4,0	2,0	Treat in winter using 400 $\text{€}/\text{ha}$ total mixture. Spot spray regrowth or spray in early spring with 2 % solution.
Bush buffalo grass (<i>Setaria chevallien</i>)	6,0	3,0	Apply to actively growing plants in summer or autumn.

PERENNIAL AND AQUATIC WEEDS:

SPECIES	RATE ($\text{€}/\text{ha}$)	$\text{€}/100 \text{ €}$ WATER	REMARKS
Plantain (<i>Plantago lanceolata</i>)	3,0	1,5	Apply before flowering.
Small mallow (<i>Malva parviflora</i>)	3,0	1,5	Apply before flowering with the recommended rate of Simazine SC.
Field bindweed (<i>Convolvulus arvensis</i>)	6,0	3,0	Apply when flowering commences. Follow up with 1,5% solution on regrowth.
Purple nutsedge (<i>Cyperus rotundus</i>)	6,0	3,0	Apply at flowering, spray regrowth with 3,0 $\text{€}/\text{ha}$ or spot spray using 1,5% solution.
Yellow nutsedge (<i>Cyperus esculentus</i>)			
Water hyacinth (<i>Eichhornia crassipes</i>)	6,0	3,0	Apply when maximum exposure of new leaves are visible.
Common reed (<i>Phragmites australis</i>)	6,0	3,0	Apply at 20 – 30% flowering stage. Slash regrowth, treat new regrowth at 40 cm in height.

MINIMUM TILLAGE:

SITUATION	RATE (ℓ/ha)	REMARKS
MUSCLE-UP® 360 SL can be applied to most pre-plant situations following harvest of previous crop.	1,0 – 3,0	Annual weeds only. Use the higher rate on weeds exceeding the 12 leaf stage or established plants. For <i>Coryza</i> spp. use 2,0 – 3,0 ℓ/ha.

TANK MIX COMBINATIONS:

For improved or extended annual weed control, **MUSCLE-UP® 360 SL** can be tank mixed with the following herbicides, provided all dosage rates and recommendations are adhered to:

2,4-D amine at 0,5 – 2,0 ℓ/ha to control winter and early summer weeds in fallow lands prior to planting 2,4-D tolerant crops.

MCPA 400 at 2,0 – 5,0 ℓ/ha depending on soil type to control winter and early summer weeds prior to planting MCPA tolerant crops.

Alachlor EC at the specific crop rate can be applied pre-emergence of the crop for extended control of certain grasses and certain broadleaf weeds.

Refer to above product labels for more details prior to use.

PASTURE ESTABLISHMENT:

SITUATION	REMARKS
CONVENTIONAL Perennial running grass infestation Light pressure Heavy pressure Pre-sowing weed control	Mechanical plus chemical establishment: Prepare pasture seedbed. Allow perennial running grasses and annual weeds to emerge. Apply MUSCLE-UP® 360 SL at recommended rates for weed species present. Sow new pasture 3 – 4 days following application. Cultivate weeds and allow to regrow before spraying at the recommended rate for weeds present. Allow 7 days after spraying before cultivating for seedbed preparation and planting. New germinating annual weeds can be controlled with 1,0 – 3,0 ℓ/ha. <i>Cyperus</i> spp. require 6,0 ℓ/ha rate. Sow new pasture 3 – 4 days following application.
DIRECT DRILL Pasture replacement and veld improvement	Reduce trash by mowing and heavy grazing 3 – 4 weeks prior to application on regrowth. Drill the new pasture 3 – 4 days following application.

Remarks

- Use recommended rates for specific weed problems.
- Ensure adequate coverage of all weeds.
- Do not spray old, heavy Kikuyu or Cynodon growth with a reduced green leaf area. Burn at the end of winter to reduce dry mass and allow to regrow in summer and spray regrowth in late summer for autumn establishment of new pasture.

GROWTH REGULATION:

WEED	RATE (mℓ/ha)	REMARKS
TUFTED PERENNIAL GRASSES Common Paspalum (<i>Paspalum dilatatum</i>) Fescue (<i>Fescus</i> spp.) Rescue grass (<i>Bromus unioloides</i>) Rye grass (<i>Lolium</i> spp.) Tall Paspalum (<i>Paspalum urvillei</i>)	400 – 800 mℓ	Apply MUSCLE-UP® 360 SL 5 – 10 days after mowing. Use the shorter interval in spring and summer when growth is most active. Application should replace 2 – 4 mowings depending on dosage rate, species and climatic conditions. Higher dosage rates will have a longer growth regulation period and a corresponding increase in initial chlorosis (yellowing).
Common thatch (<i>Hyparrhenia hirta</i>) Smuts finger grass (<i>Digitaria eriantha</i>)	400 – 1 000 mℓ	Perennial grasses are more sensitive to MUSCLE-UP® 360 SL in autumn and chlorosis can be expected to be greater in this period. Use the lower dosage rates to avoid chlorosis.
Ratstail dropseed (<i>Sporobolus africanus</i>)	600 – 1 000 mℓ	
RUNNING PERENNIAL GRASSES Couch grass (<i>Cynodon dactylon</i>)	400 – 1 000 mℓ	Perennial grasses are more sensitive to MUSCLE-UP® 360 SL in autumn and chlorosis can be expected to be greater in this period. Use the lower dosage rates to avoid chlorosis.
Kikuyu Grass (<i>Pennisetum clandestinum</i>)	200 – 600 mℓ	
BIENNIAL AND PERENNIAL BROADLEAF WEEDS Musk heron's bill (<i>Erodium moschatum</i>) Small mallow (<i>Malva parviflora</i>) Plantain (<i>Plantago lanceolata</i>)	600 – 800 mℓ	In orchards and vineyards in the winter rainfall region where the inter-row is not irrigated (drip irrigation) the lower dosage rate should be used in late spring and summer application on grasses (eg. fescues). Do not apply to plants under stress conditions (drought, waterlogging, etc).
ANNUAL WEEDS AND SEEDLINGS Well developed annual weeds, seedlings and young plants may be controlled.	200 – 1 000 mℓ	Remove all excess plant material after mowing, prior to spraying. Apply 50 – 200 ℓ/ha spray volumes and ensure even droplet distribution on target foliage.
FOLLOW-UP TREATMENT	Up to 600 mℓ	Apply the lower rate option to all weeds in table above.

NB. All "REMARKS" above apply to all listed weeds

NON-CROP AND INDUSTRIAL USE:

SITUATION	RATE (ℓ/ha)	REMARKS
All non-crop areas	1,0 – 3,0 2,0 – 10,0	Annual weeds only. Will control most annual and perennial weeds. Spot spraying of regrowth with a 1,5% solution may be necessary. For longer term weed control, add the recommended rates of Diuron 800 SC, Terbutylazine 900 WDG or Simazine SC.

ACKNOWLEDGEMENT OF TRADEMARKS AND REGISTRATION UNDER ACT 36 OF 1947

Power-Up® (Reg. No. L6463, Act No. 36 of 1947)
MCPA
2,4-D amine
Terbutylazine 900 WDG

Ag – Chem Africa (Pty) Ltd
Various
Various
Various

Atachlor EC
Diuron 800 SC
Simazine SC

Various
Various
Various