



The miracles of science™



HARMONY® M

Reg. No. L 3840 Act No. 36 of 1947

Reg. Nr. L 3840 Wet Nr. 36 van 1947

A water dispersible granule post-emergent herbicide acting through the roots and foliage for the control of broadleaf weeds as listed in wheat, barley, and oats in the winter rainfall region and wheat in the summer rainfall region.

'n Water dispergeerbare fyn korrel na-opkom onkruidodder wat deur beide wortels en blare opgeneem word, vir die beheer van breëblaar-onkruid, soos aangedui in koring, gars en hawer in die winterreënvalgebied en in koring in die somerreënvalgebied.

SEE ENCLOSED LEAFLET FOR FULL PARTICULARS

SIEN INGESLOTE PAMFLET VIR VOLLEDIGE BESONDERHEDE

ACTIVE INGREDIENT

Thifensulfuron (sulfonyl urea)

...680 g/kg....

Metsulfuron methyl (sulfonyl urea)

.....68 g/kg....

AKTIEWE BESTANDDEEL

Thifensulfuron (sulfonielureum)

Metsulfuronmetiel (sulfonielureum)

Nett Mass

500g

Netto Massa

REGISTERED BY / GEREGISTREER DEUR:

DUPONT DE NEMOURS SOUTH AFRICA
(PTY) LTD
Co. Reg. No. 2009/014079/07
P O BOX / POSBUS 3332
HALFWAY HOUSE 1685
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UN No. / VN Nr. 3077

BATCH NUMBER
DATE MANUFACTURED

LOTNOMMER
DATUM VERVAARDIG

					CAUTION VERSIGTIG			
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HARMONY[®] M

Reg. No. L3840 Act No. 36 of 1947)

Contains Thifensulfuron and Metsulfuron methyl

WARNINGS:

- The product may irritate eyes, nose, throat and skin.
- Keep out of reach of children and uninformed persons
- Store in a cool, dry place.
- Store away from food and feeds.
- **Aerial application:** Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas. Should the recommended dosage rate be exceeded, damage to the crop may occur.

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 soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weeds 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:

1. Do not smoke, drink or eat while using this product.
2. Avoid contamination of food, feed, drinking water and eating utensils.
3. For safety when mixing:
 - Do not inhale dust.
 - Wear eye protection (at least glasses).
 - Wear rubber gloves.
 - In the event of contact with eyes, wash with water immediately.
 - In the event of contact with skin, wash with water immediately.
 - In the event of contact with clothes, remove and wash.
4. For safety when spraying:
 - Avoid contact with the spray as much as possible.
 - Avoid spray drift onto susceptible crops, grazing, rivers, dams and areas not under treatment.
5. For safety after spraying:
 - Wash yourself.
 - Change and wash work clothes.
 - Clean applicator thoroughly after use using the following method:
 - i. Drain tank completely then flush tank, boom and hoses with clean water. Drain again.
 - ii. Fill the tank with clean water and add household ammonia (contains 3 % active) at the rate of 1 l for every 100 l water. Circulate the ammonia solution through the tank, boom and hoses for at least 15 minutes. Drain completely.
 - iii. To remove traces of ammonia, rinse the tank with clean water and flush through booms and hoses.
 - iv. Repeat step (ii).
 - v. Nozzles and filters must be removed and cleaned separately with ammonia solution at the same concentration as above.
 - vi. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.

6. Do not spray, drain or flush equipment on or near desirable trees or plants or where their roots may extend.

CONTAINER DISPOSAL:

- Containers and packages must be completely emptied before being disposed of.
- Shake out thoroughly into the application hopper before destroying empty container.
- Never re-use for any purpose.

RESISTANCE STATEMENT:

When herbicides with the same mode of action are used in the same land for several consecutive years, it is possible that a selection of naturally occurring resistant weed species may take place. These will propagate and become dominant. A weed species is resistant to a herbicide if it survives a treatment correctly carried out at the recommended dose and application timing.

If a weed species is resistant to one sulfonyl urea product (Ally® 20 DF, Glean®, Finesse®, Express A, Granstar®) it can be expected that it will be resistant to all sulfonyl urea herbicides. Development of resistance can be avoided by alternating with product having a different mode of action but the same effect on the weed species or by using a tank mixture of the two products.

USE RESTRICTIONS:

1. **FOLLOW-UP CROPS:**

1.1. **Winter rainfall area:**

TREATED AREAS SHOULD NOT BE PLANTED WITH ANY CROP OTHER THAN SMALL GRAIN CEREALS (WHEAT, BARLEY, OATS) WITHIN 10 MONTHS OF **HARMONY® M** TREATMENT. WHEAT MAY BE PLANTED WITHIN 1 MONTH, WHILE BARLEY AND OATS MAY BE PLANTED 6 MONTHS AFTER **HARMONY® M** APPLICATION.

1.2. **Summer rainfall area**

TREATED AREAS SHOULD NOT BE PLANTED WITH ANY CROP WITHIN 5 MONTHS OF A **HARMONY® M** TREATMENT.

2. **TIMING OF APPLICATION:**

2.1. **HARMONY® M** should not be applied to wheat or barley within 14 days after the use of HOELON (Reg. No. L796 Act No. 36 of 1947), or PUMA SUPER (Reg. No. L3847 Act No. 36 of 1947) application.

2.2. Do not apply HOELON or PUMA SUPER after a **HARMONY® M** application.

2.3. **HARMONY® M** should not be applied within 10 days before or after a GRASP (Reg. No. L3638 Act No. 36 of 1947) application.

3. **FACTORS AFFECTING WEED CONTROL:**

Variable weed control or re-growth may occur should one or more of the following conditions occur or be present:

3.1. Any stress conditions resulting from, for example drought, cold weather conditions, disease, insect damage or mineral element deficiencies during the time of application or for a period of 4 weeks after application.

3.2. Where the crop plant population density (stand) is low.

3.3. Should an application of **HARMONY® M** take place later than the recommended timing after emergence in the winter rainfall region and the irrigation areas of the summer rainfall region.

3.4. Light sandy acid soils which have a tendency to leach or become waterlogged.

AND/OR

An excessive number of stones covering the soil surface.

Under risky conditions as described in 3.4 the herbicide should not be applied in the Winter Rainfall Region later than 2 weeks after germination of the weeds

4. **UNDERSOWN CEREALS:**

HARMONY® M must not be applied to cereals under sown with pastures.

DIRECTIONS FOR USE :**USE ONLY AS DIRECTED**

1. A dosage rate variation of up to 7,5 % can occur if the measuring cup is used to measure the required dosage rate. For total accuracy the dosage rates must be weighed out.

2. **GENERAL:**

2.1. Apply **HARMONY® M** as a post emergence spray to both the crop and the weeds.

2.2. Although weeds sprayed with **HARMONY® M** will stop growing soon after application, thereby eliminating competition, the maximum visual effect of the herbicide will occur 28 days after application.

2.3. **HARMONY® M** has a limited residual action on germinating weeds. Factors such as soil pH, soil moisture and weeds present will affect the residual action. If soil moisture is adequate, rates of 27.5 g to 30 g **HARMONY® M** per ha will have a limited residual action against susceptible weeds for a period of up to 40 days after initial application.

2.4. Although temporary yellowing of the leaves of the crop and/or a reduction in straw length may occur after the application of **HARMONY® M**, yield will not be affected.

3. **CLIMATE:**

Apply **HARMONY® M** in the OFS only after the first winter/spring rains have fallen. Both wheat and broadleaf weeds must be actively growing. Usually +/- 3 days after the first winter/spring rains (10-15 mm) have fallen, both the wheat and broadleaf weeds should be growing actively. Use the finger-rub test to determine the amount of sap in the weed plants. A drop of liquid can be squeezed out of the plant if it is growing actively.

4. **CULTIVARS:**

HARMONY® M can be applied to all wheat, barley and oats cultivars.

5. **COMPATIBILITY:**

5.1. **HARMONY® M** is NOT compatible with the following products

GRASP (Reg. No. L3638 Act No. 36 of 1947)

HOELON (Reg. No. L796 Act No. 36 of 1947)

TILT (Reg. No. L1048 Act No. 36 of 1947)

5.2. **HARMONY® M** is compatible with the following products:

5.2.1. **Winter rainfall region**

ADDIT (Reg. No. L3839 Act No. 36 of 1947)

AGRAL 90 (Reg. No. L2987 Act No. 36 of 1947)

BAYLETON EC (Reg. No. L1740 Act No. 36 of 1947)

BLADBUFF (Reg. No. L3351 Act No. 36 of 1947)

*COPPER OXYCHLORIDE (Reg. No. L3376 Act No. 36 of 1947)

EKATIN (Reg. No. L3664 Act No. 36 of 1947)

GET-DOWN (Reg. No. L3389 Act No. 36 of 1947)

IMPACT (Reg. No. L4088 Act No. 36 of 1947)

KELPAK (Reg. No. L2414 Act No. 36 of 1947)

LORSBAN EC (Reg. No. L3580 Act No. 36 of 1947)

MANGANESE SULPHATE WS (Reg. No. B2223 Act No. 36 of 1947)

METASYSTOX EC (Reg. No. L326 Act No. 36 of 1947)

PARATHION EC (Reg. No. L3547 Act No. 36 of 1947)

PUNCH C (Reg. No. L3626 Act No. 36 of 1947)

ROXION (Reg. No. L3548 Act No. 36 of 1947)

SPORTAK (Reg. No. L2631 Act No. 36 of 1947)

VIGIL (Reg. No. L3680 Act No. 36 of 1947)

ZINC OXIDE (Reg. No. B2227 Act No. 36 of 1947)

*Rates above 0,5 kg per ha in combination with **HARMONY® M** may cause chlorosis of the crop.

5.2.2. **Summer rainfall region**

ADDIT (Reg. No. L3839 Act No. 36 of 1947)

AGRAL 90 (Reg. No. L2987 Act No. 36 of 1947)

ARMOBLEN 650 (Reg. No. L4159 Act No. 36 of 1947)

BLADBUFF (Reg. No. L3351 Act No. 36 of 1947)

BP AGRIPRON SUPER	(Reg. No. L3022 Act No. 36 of 1947)
DEMETON	(Reg. No. L3581 Act No. 36 of 1947)
GET-DOWN	(Reg. No. L3389 Act No. 36 of 1947)
GLEAN	(Reg. No. L1672 Act No. 36 of 1947)
LORSBAN EC	(Reg. No. L3580 Act No. 36 of 1947)
METASYSTOX 250 EC	(Reg. No. L326 Act No. 36 of 1947)
MONOCRON	(Reg. No. L3551 Act No. 36 of 1947)
PARATHION EC	(Reg. No. L3547 Act No. 36 of 1947)

6. **QUALITY OF DILUTION WATER**

Use only water of which the quality is suitable for overhead irrigation. Do not use water of which the conductive potential exceeds 1,0 m S/cm, or has a resistance lower than 300 ohm, or if the pH is greater than 8.

7. **MIXING INSTRUCTIONS**

7.1. Mix the required amount of **HARMONY® M** with a small amount of water to form a smooth cream without any remaining granules.

7.2. Half fill the spray tank, or pre-mix tank in case of aerial application with water. Add the creamed product to the tank through a sieve. Top up the required volume while agitating continuously, then proceed as follows:

High volume (e.g. ground sprayer)

Add the required amount of AGRAL 90 (winter rainfall region only) or ADDIT to the spray mixture and wait until thoroughly mixed before application.

Low volume (e.g. by aircraft)

Sprinkle the correct amount of GET-DOWN onto the surface of the most turbulent portion of the spray mixture. Add the required amount of AGRAL 90, ADDIT, ARMOBLEN 650, BP AGRIPRON SUPER or HERBIPLUS to the spray mixture and allow to agitate for two minutes, so as to ensure thorough mixing before the mixture is pumped into the aircraft.

NOTE: Ensure that thorough agitation of the spray mixture is maintained at all times.

NOTE: Under no circumstances should unused spray mixture be kept overnight.

8. **APPLICATION**

8.1. **Ground application**

Apply by means of a tractor mounted boom sprayer which is correctly calibrated to deliver at least 110-200 l spray mixture per ha at a constant speed and pressure (100-200 kPa) to ensure even distribution. Avoid overlapping of spray mixture and prevent over-application.

8.2. **Aerial Application**

The spray mixture must be evenly distributed over the target area. Keep the loss of spray material to a minimum during application. Adhere to the following to ensure satisfactory results:

- Use only correctly calibrated aircraft.
- Minimum spray volume of 30 l per ha.
- Droplet spectrum VMD of 250 - 300 microns.
- Minimum 25-40 droplets per cm² must reach the target area.
- Use correct swath widths appropriate to each type of aircraft.
- Flying height of 3 metres above target area at wind speeds of 0-8 km per hour and 2 metres at wind speeds of 8-15 km per hour.
- Stop spraying when wind speed exceeds 15 km per hour.
- Do not spray when the difference between wet and dry bulb reading as determined by a whirling hygrometer exceeds 8 °C.
- Do not spray during the heat of the day.
- Re-spray headlands where obstacles were encountered.
- Obtain assurance from the aerial spray operator that the above requirements will be met.
- Ensure that fields are accurately marked.

TABLE 1:
SPECIFIC APPLICATION RATES
WINTER RAINFALL REGION : WHEAT, BARLEY AND OATS
(WESTERN AND SOUTHERN CAPE)

- Apply as a post-emergence application when the crop is in the 2-5 leaf stage.
- Ground application: Apply at least 200 l spray solution per ha.
- Aerial application: Apply at least 30 l spray solution per ha.
- Established weeds which have not been controlled by cultivation or weeds that show signs of re-growth, will not be controlled.

1.1 The following weeds species are normally controlled if sprayed from the seedling stage up to the time of application as:

RATE	BOTANICAL NAME	COMMON NAME	TIME OF APPLICATION
<u>Ground application</u> 15 g HARMONY® M per ha plus 10 ml AGRAL 90 OR 100 ml ADDIT per 100 l spray solution	<i>Cenia turbinata</i> <i>Raphanus raphanistrum</i> <i>Sisymbrium thellungii</i> <i>Spergula arvensis</i>	Goose daisy Wild radish Common wild mustard Corn spurry	Post-emergence not later than 3 weeks after weed emergence. Under risky conditions described in 3.4 do not apply later than 2 weeks after weed emergence
<u>Ground application</u> 30 g HARMONY® M per ha plus 10 ml AGRAL 90 OR 100 ml ADDIT per 100 l spray solution <u>Aerial application</u> 30g HARMONY® M per ha plus 15g GET-DOWN plus 15 ml AGRAL 90 OR 150 ml ADDIT per 30 l spray solution	<i>Amsinckia menziesii</i> <i>Anagallis arvensis</i> <i>Cenia turbinata</i> <i>Chenopodium album</i> <i>Emex australis</i> <i>Erodium moschatum</i> <i>Foeniculum vulgare</i> <i>Fumaria muralis</i> <i>Oxalis pes-caprae</i> <i>Pentzia grandiflora</i> <i>Pentzia suffruticosa</i> <i>Polygonum aviculare</i> <i>Raphanus raphanistrum</i> <i>Sisymbrium thellungii</i> <i>Spergula arvensis</i> * <i>Vicia hirsuta</i>	Fiddle neck Pimpernel Goose daisy White goosefoot Spiny Emex Musk herons bill Fennel Fumitory Yellow sorrel Stinkweed Karoonbush Prostrate knotweed Wild radish Common wild mustard Corn spurry Tiny purple vetch	Post-emergence but not later than 4 weeks after weed emergence.

* Variable control of *Vicia hirsuta* may occur as a result of the long germination period of this weed which may lead to **HARMONY® M** sprays being applied before germination of all *Vicia* plants has taken place.

1.2 Weeds Suppressed by 30 g **HARMONY® M** per ha:
Lolium spp. Ryegrass
Arctotheca calendula Cape Marigold

TABLE 2:
SPECIFIC APPLICATION RATES
SUMMER RAINFALL REGION : WHEAT
(TRANSVAAL AND NORTHERN CAPE IRRIGATION AREAS AND O.F.S.)

- Apply as a post-emergence application when the crop is in the 2 leaf to pre-flowering stage.
- Ground application: Apply 110-200 ℓ spray solution per ha.
- Aerial application: Apply at least 30 ℓ spray solution per ha.
- Established weeds which have not been controlled by cultivation or weeds that show signs of re-growth, will not be controlled.

2.1 The following weed species are normally controlled if sprayed from the seedling stage up to the leaf stage as indicated. Application beyond the optimum leaf stage will only provide suppression of the weeds.

RATE	BOTANICAL NAME	COMMON NAME	OPTIMUM LEAF STAGE DURING APPLICATION
Ground application: 15 g HARMONY® M plus 1,0 ℓ ADDIT per 100 ℓ spray solution or 50-100 mℓ Armoblen 650/100 ℓ spray solution or 500 mℓ BP Agripron Super/100 ℓ spray solution	<i>Amaranthus spp.</i>	Pigweed	2-3
	<i>Bidens pilosa</i>	Black jack	2-3
	<i>*Bilderdykia convolvulus</i>	Climbing knotweed	2-3
	<i>Chenopodium album</i>	White goosefoot	2-3
	<i>Datura ferox</i>	Large thorn apple	2-3
	<i>Polygonum aviculare</i>	Prostrate knotweed	2-3
	<i>Raphanus raphanistrum</i>	Wild radish	2-3
Ground application: 20 g HARMONY® M per ha plus 1,0 ℓ ADDIT per 100 ℓ spray solution or 50- 100 mℓ Armoblen 650/100 ℓ spray solution or 500 mℓ BP Agripron Super/100 ℓ spray solution	<i>Amaranthus spp.</i>	Pigweed	3-4
	<i>Bidens pilosa</i>	Black jack	3-4
	<i>*Bilderdykia convolvulus</i>	Climbing knotweed	3-4
	<i>Chenopodium album</i>	White goosefoot	3-4
	<i>Datura ferox</i>	Large thorn apple	3-4
	<i>Lepidium brassiceae</i>	Pepperwort	3-4
	<i>Melilotus indica</i>	Annual yellow sweet clover	3-4
	<i>Polygonum aviculare</i>	Prostrate knotweed	3-4
	<i>Raphanus raphanistrum</i>	Wild radish	3-4

<p>Ground application: 25 g HARMONY® M per ha plus 1,0 l ADDIT per 100 l spray solution or 50- 100 ml Armoblen 650/100 l spray solution or 500 ml BP Agripron Super/100 l spray solution</p>	<p><i>Amaranthus spp.</i> <i>Bidens pilosa</i> <i>*Bilderdykia</i> <i>convolvulus</i> <i>Chenopodium album</i> <i>Datura ferox</i> <i>Lepidium brassiceae</i> <i>Melilotus indica</i></p> <p><i>Polygonum aviculare</i> <i>Raphanus</i> <i>raphanistrum</i> <i>Schkuhria pinnata</i></p>	<p>Pigweed Black jack Climbing knotweed</p> <p>Goosefoot Large thorn apple Pepperwort Annual yellow sweet clover Prostrate knotweed Wild radish</p> <p>Dwarf marigold</p>	<p>2-5 2-5 2-5</p> <p>2-5 2-5 2-5 2-5</p> <p>2-5 2-5</p> <p>2-4</p>
<p>Ground application: 27,5g HARMONY® M per ha plus 1,0 l ADDIT per 100 l spray solution or 50- 100 ml Armoblen 650/100 l spray solution or 500 ml BP Agripron Super/100 l spray solution</p> <p>Aerial application : 30g HARMONY® M per ha plus 50 g GET-DOWN per 100 l spray solution plus 1,0 l ADDIT per 100 l spray solution or 50- 100 ml Armoblen 650/100 l spray solution or 500 ml BP Agripron Super/100 l spray solution</p>	<p><i>Amaranthus spp</i> <i>Amsickia calycina</i> <i>Anagallis arvensis</i> <i>Bidens spp</i> <i>*Bilderdykia</i> <i>convolvulus</i> <i>Convolvulus arvensis</i> <i>Chenopodium album</i> <i>Conyza spp</i> <i>Datura spp</i> <i>Emex australis</i> <i>Euphorbia</i> <i>helioscopia Galinsoga</i> <i>parviflora Ipomoea</i> <i>purpurea</i> <i>Lepidium brssiceae</i> <i>Mililotus indica</i></p> <p><i>Physalis angulata</i> <i>Polygonum aviculare</i> <i>Raphanus</i> <i>raphanistrum</i> <i>Rumex angiocarpus</i> <i>Schkuhria pinnata</i> <i>Sonchus oleraceus</i> <i>Spergula arvensis</i> <i>Tagetes minuta</i> <i>Tribulus terrestris</i></p>	<p>Pigweed Fiddle neck Pimpernel Black jack Climbing knotweed</p> <p>Field bindweed White goosefoot Fleabane Thorn apple Spring emex Umbrella milkweed</p> <p>Gallant soldier Common moring glory Pepperwort Annual yellow sweet clover Wild gooseberry Prostrate knotweed Wild radish</p> <p>Sheep sorrel Dwarf marigold Sow thistle Corn spurry Khaki weed Dubbeltjie</p>	<p>2-6 2-6 2-6 2-6 2-6</p> <p>2-6 2-6 2-4 2-6 2-4 2-4</p> <p>2-4 2-4 2-6 2-6</p> <p>2-6 2-6 2-6 2-4 2-4 2-3</p>
<p>Ground application: 30 g HARMONY® M per ha plus 1,0 l ADDIT per 100 l spray solution or 50- 100 ml Armoblen 650/100 l spray solution or 500 ml BP Agripron Super/100 l spray solution</p>	<p><i>Helianthus annuus</i> <i>Glycine max</i></p>	<p>Volunteer sunflower Volunteer soyabeans</p>	<p>2-4 2-4</p>

* For satisfactory control of *Bilderdykia convolvulus* apply at least 200 l spray solution per ha.

2.1 **Weeds suppressed by 27,5 - 30,0 g HARMONY® M per ha.**

Portulaca oleracea Purslane (2-4 leaf stage only)

Oenothera spp Evening primrose (2-4 leaf stage only)

2.3 **Weeds not controlled**

Argemone subfusiformis White flowered Mexican poppy.

2.4 **Residual action**

HARMONY® M at 15,0 to 25,0 per ha has no residual action on weeds as listed under 2.1.

HARMONY M at 27,5 g to 30 g per ha has no residual action on the following weeds:

Datura spp. Thorn apple

Helianthus annuus Volunteer sunflower

Glycine max Volunteer soyabeans

ACKNOWLEDGEMENT OF TRADEMARKS:

HOELON en PUMA SUPER

- Bayer (Pty) Ltd

LORSBAN

- Dow AgroSciences

GET-DOWN

- Airflow Systems

ADDIT, AGRAL, IMPACT, VIGIL and GRASP

- Syngenta

KELPAK

- Kelp Products (Pty) Ltd.

METASYSTOX and BAYLETON

- Bayer (Pty) Ltd

BLADBUFF

- Plaaskem (Pty) Ltd.

TILT

- Syngenta

SPORTAK

- Bayer (Pty) Ltd

EKATIN

- Syngenta

ARMOBLEN

- Akzo Chemicals

H & R AGRIPRON SUPER

- H & R GSP (Pty) Ltd