

# JEWEL

Reg. No. / Nr L11801 Act No. 36 of 1947 / Wet Nr 36 van 1947

GROUP

2

HERBICIDE

**READ THE LABEL BEFORE USE**  
**KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

**A water dispersible granule herbicide for the control of invader weeds in natural pastures and conservation areas.**

**'n Waterdispergeerbare korrel onkruidodder vir die beheer van indringer plante in natuurlike weidings en bewaringgebiede.**

### Active Ingredient / Aktiewe Bestandeel

Metsulfuron-methyl (Sulfonylurea) .....contains 600 g a.i. per kg ..... Metsulfuron-metiel (Sulfonielureum)



**DANGER**

### Hazard Statements

Causes skin irritation.  
Causes serious eye damage.  
Toxic to aquatic life with long lasting effects.

### Precautionary Statements

IF ON SKIN: Wash with plenty of water.  
IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.



### REGISTRATION HOLDER / REGISTRASIEHOUER:

Agritech Bioscience (Pty) Ltd / (Edms) Bpk t/a Carabiner  
Reg. No. 2008/004392/07  
6 Antwerp Street, Apex, Benoni,  
1540  
South Africa / Suid-Afrika



Batch No./Date manufactured/Expiry date: Refer to details printed on container.

UN No. / VN Nr. 3077

Net volume kg Netto Volume

**In case of poisoning, call the following numbers:**

Poisons Information Helpline: +27 861 555 777

EMERGENCY NUMBER: +27 82 446 8946

## WARNINGS

- GHS Hazard statements

Causes skin irritation.  
Causes serious eye damage.  
Very toxic to aquatic life with long lasting effects.

Allow the following number of days between application and grazing of natural pastures.....28 days

- This product may irritate eyes, nose, throat, and skin.
- Store in the original container in a cool, dry, well-ventilated place out of direct sunlight.
- **RE-ENTRY:** Do not enter treated area within 2 days after treatment unless wearing protective clothing.
- **Aerial application:** Notify all inhabitants in the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow spray drift to contaminate adjacent areas such as crops, rivers, dams and wetlands.
- **JEWEL** is a highly active herbicide that in very small quantities, when used incorrectly, can cause serious damage to crop seedlings or deciduous fruit trees and grape vines during the budding and early season growth stages. When applied aerially under the following conditions serious may be caused as far as 3 – 5 kilometres away from the nearest flight path of the aircraft: cloudy weather with a relative humidity of above 80% and low air movement of less than 5 km per hour. Where such conditions prevail, aerial application must not be carried out where crop seedlings or deciduous trees and grape vines in the budding and early development growth stages are present within 5 km of the nearest flight path.
- **In case of poisoning immediately call a physician and make this label available to him/her.**

## DISCLAIMER

**Although this remedy has been 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 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

- GHS Precautionary statements

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read carefully and follow all instructions.  
Do not breathe dust/fumes/gas/mist/vapours/spray.  
Wash hands thoroughly after handling. Do not touch eyes.  
Avoid release to the environment.  
Wear protective gloves / eye protection/ face protection.  
IF ON SKIN: Wash with plenty of water.  
Specific treatment (see First Aid Treatment on this label).  
If skin irritation occurs: Get medical help.

Take off contaminated clothing and wash it before reuse.

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Get medical help.

Collect spillage.

Dispose of contents/container in accordance with national regulations.

- OPERATOR PROTECTION

- Handle with care.
- Do not inhale spray mist or fumes.
- Wash with soap and water after use and accidental skin contact as well as contact with contaminated clothing.
- Should eye contact occur, flush the eyes with plenty of clean water for 15 minutes holding eyelids open. Remove contact lenses, if present, after 1-2 minutes, continue rinsing. **Seek medical attention.**
- Avoid skin and eye contact by wearing protective clothing when mixing the product.
- Wash contaminated clothing after use.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.

- ENVIRONMENTAL PROTECTION

- Do not contaminate dams, rivers, lakes, or any other water sources.
- Prevent spray drift onto other non-target vegetation, crops, grazing, rivers, dams, or areas not under treatment.
- **Clean applicator after use:** Special attention and care must be taken in cleaning all equipment used in the mixing and application of **JEWEL** to avoid possible damage to other crops.
  - i) Drain tank completely and flush tank, boom, hoses, and nozzles with ample clean water.
  - ii) Drain tank again and fill with clean water.
  - iii) Add household ammonia at a rate of 1 litre for every 100 litres of water.
  - iv) Bleed the entire system once again to ensure that the ammonia solution has filled all hoses, boom, and nozzles.
  - v) Leave the ammonia solution in the system for approximately 1 hour before draining the tank and pipe system.
  - vi) Repeat steps iii) to v).
  - vii) Nozzles and filters should be removed and placed in an ammonia solution of the above concentration above for at least 1 hour.
  - viii) Contamination on mixing equipment should be washed with ammonia solution and any contamination on the outside of spraying equipment can be removed with clean water.

- STORAGE AND DISPOSAL

- Store under lock and key in the original container in a cool, dry place out of direct sunlight.
- Store away from food, feed, fertilizer, and seed.
- **KEEP OUT OF SIGHT AND REACH OF CHILDREN**, uninformed persons, untrained personnel, unauthorised personnel and animals.
- Do not allow access to this product by children, uninformed persons, untrained personnel, unauthorised personnel, or animals under any circumstances.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Containers and packages must be completely emptied before disposal.
- Dispose of rinsate where it will not contaminate crops, grazing, rivers, dams, and boreholes.

- **CLEAN THE EMPTY FOIL BAG AS FOLLOWS:** Shake all the pesticide formulation out of the bag into the spray or mixing tank. Turn the bag inside out. Hold the bag over the spray or mixing tank and rinse the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag into pieces and do not use for any other purpose. Store appropriately until it can be taken to a waste treatment facility authorised to destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations for disposal. Empty containers and product should not be burnt. Do not bury, burn or donate the bag to any other parties that may use it as a container for foodstuffs.
- **DO NOT REUSE THE EMPTY FOIL BAG FOR ANY OTHER PURPOSE.**

## RELEVANT SUBSTANCES

| Hazardous Ingredients                                  | Concentration (w/w) |
|--------------------------------------------------------|---------------------|
| Metsulfuron-methyl                                     | 60%                 |
| Alkyl naphthalene sulfonate (ANS) condensate blend     | >1 - <10%           |
| Sulphuric acid, mono C12-18-alkyl esters, sodium salts | >1 - <10%           |

## FIRST AID TREATMENT

If medical advice is needed, have product container or label at hand. Provide medical personnel with the product container, label or safety data sheet (SDS) when seeking medical attention.

**General Information:** Remove patient from exposed area. Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). **Seek medical attention.**

**Skin contact:** Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash thoroughly with soap and water (including hair, skin, and fingernails) Wash contaminated clothing before re-use. Persons providing first aid must wear gloves to avoid self-contamination. **Seek medical attention.**

**Eye contact:** Flush the eyes with plenty of clean water for 15 minutes holding eyelids open. Remove contact lenses, if present, after 1-2 minutes, continue rinsing. **Seek medical attention immediately.**

**Ingestion:** Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting unless instructed to do so by a poison control centre or medical doctor. One or two glasses of water may be given if the patient is alert. Loosen tight clothing. Remove the patient from the source of poisoning to a well-ventilated area and keep him/her calm and at rest. Keep airway open to maintain breathing, especially if person is unconscious or has vomited. Do not apply direct mouth-to-mouth respiration. **Seek medical attention.**

No specific antidote known. Treat symptomatically and supportively. For further information on the treatment of poisoning refer to the product Safety Data Sheet provided.

## RESISTANCE MANAGEMENT WARNING STATEMENT

For resistance management, **JEWEL** is a group code 2 herbicide. Some naturally occurring weed biotypes resistant to the product and other Group 2 herbicides may exist through normal genetic

variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group 2 herbicides. To prevent, or at least minimise, the risk of resistant weeds occurring, use **JEWEL** in tank mixes (if appropriate) and/or rotations with herbicides having different modes of action effective on the same weed species. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be taken to prevent seed set of these survivors.

#### **To delay herbicide resistance:**

- Avoid the exclusive repeated use of herbicides from the same herbicide group code. Alternate or tank mix with registered products from different herbicide group codes. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be taken to prevent seed set of these survivors.
- Refer to the Herbicide Resistance Action Committee for information regarding any applicable resistance management of group 2 herbicides at <https://hracglobal.com/> for more information.
- Integrate other control methods (chemical, cultural, biological) into weed control programmes.
- Avoid distribution of the resistant species to adjacent fields by implements during the cultivation period.

As the occurrence of resistance cannot be forecast, users are advised to keep all treated crops under close observation. If the treatment is not effective following the use of **JEWEL** as recommended, a resistant strain may be present. If a resistant strain is positively identified, consideration should be given to the prompt use of a herbicide with a different mode of action against which no record of resistance exists.

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

The presence of resistant weeds is difficult to detect prior to use and therefore neither the Registration Holder nor the Distributor can accept responsibility for any losses as a result of **JEWEL** not controlling resistant weeds. Do not apply **JEWEL** alone in situations where weed resistance has been confirmed. Sub-standard application of **JEWEL** or other ALS inhibitor herbicides will lead to inferior weed control and may assist in development of herbicide resistance. If a plant species is resistant to one sulfonylurea herbicide, it can be expected to be resistant to all sulfonylurea herbicides. It is of the utmost importance to inspect treated areas at regular intervals in order to identify the occurrence of herbicide-resistant weeds timeously.

#### **MODE OF ACTION**

Metsulfuron-methyl is a selective systemic herbicide absorbed through the roots and foliage and translocated to the apex of the plants where it Affects sensitive weeds through inhibition of the enzyme acetolactate synthase (ALS). Inhibition of ALS leads to the rapid cessation of cell division and subsequent growth processes in plants. Symptoms appear within days, with death within 2–4 weeks.

#### **DIRECTIONS FOR USE - Use only as directed.**

**NOTICE TO USER:** This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under Act No. 36 of 1947 to use this agricultural remedy for any purpose or in any manner contrary to the directions on the label.

## COMPATIBILITY

The compatibility of **JEWEL** 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. **JEWEL** tank mixtures are compatible with wetter type adjuvants, MCPA, 2,4-D ester, glyphosate 360 SL, H&R Crop Oil (L6802) and Methos (L11114). All **WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE** on the product labels must be fully adhered to. Consult the relevant labels for full details.

**JEWEL** should not be mixed with products other than those specifically listed in this label.

## USE RESTRICTIONS

- **JEWEL** is highly active, and can cause serious damage to seedlings, desirable trees/shrubs and fruit vines during the budding and early growth stages if applied incorrectly.
- Mark areas to be treated to avoid overlapping of the spray mixture onto already treated areas.
- **JEWEL** is slow-acting and green leaves may, therefore, still be present for several weeks following application.  
**DO NOT** replant any desirable broadleaf plants within 12 months following application.
- **DO NOT** apply over the top of newly planted broadleaf plants or on top of leaves or any other part of desirable broadleaf plants.
- Prepare only sufficient spray mixture for immediate use. Unused spray mixture may not be kept overnight.
- Rain within 1 hour (or before the spray deposit has dried) of **JEWEL** application may result in reduced efficacy.
- Do not apply **JEWEL** unless the night-time is above 5 °C for at least 5 consecutive nights.
- Do not apply **JEWEL** to any crop or situation not mentioned in this instruction leaflet.
- Only apply **JEWEL** using an accurate and safe application technique.
- If **JEWEL** is used in a tank mix with other recommended remedies, consideration should be given to the restrictions of those respective products.
- The following withholding periods are recommended after a **JEWEL** application:
  - i. *Pinus* and *Eucalyptus* species: 8 weeks after a coppice/cut stump application
  - ii. Other seedling species: 12 months.
- Do not use in combination with any products containing heavy metals such as Calcium, Zinc, Manganese or Copper.
- Do not spray near fruit trees or any other desirable crop/plant within 50 m in any wind direction.
- Do not apply **JEWEL** to any crop or situation not mentioned in this instruction leaflet.
- Only apply **JEWEL** using an accurate and safe application technique.
- If **JEWEL** is used in a tank mix with other recommended products, consideration should be given to the restrictions of those respective products.
- Do not apply this product in combination or tank mixture with any other product or agricultural remedy which is not specifically listed on this label. Agritech Bioscience (Pty) Ltd t/a Carabiner accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless a Carabiner representative was consulted beforehand.
- By buying this product, the buyer undertakes that the user is fully aware of and suitably trained on the hazards associated with the preparation and use of this product. By selecting this product voluntarily, the user assumes responsibility for his or her own personal protection whilst storing, mixing, and applying the product in the approved manner according to the instructions for use. The user also confirms to have consulted the SDS of this product and he/she is aware of the potential health hazards which could arise out of use and misuse of this product. Users are encouraged to keep records of all procedures followed and which personal protection equipment was used at all times. All personal protection equipment used must be kept clean and in good working order.

according to the manufacturer's specifications. Agritech Bioscience (Pty) Ltd t/a Carabiner accepts no responsibility for any adverse effects experienced if the instructions on this label are not adhered to or resulting from improper use of this product or the use of unsuitable personal protection equipment. The user has selected to use this product at his/her own free will and risk.

#### **Factors affecting weed control:**

**Variable weed control or regrowth may occur should one or more of the following conditions occur:**

- Do not apply to crops and weeds stressed by abnormal weather or growing conditions, drought, waterlogged soil, hail or wind damage, cold conditions, insect damage, nematode infections, diseases, or nutritional deficiencies.
- Should application of **JEWEL** not take place according to the instructions on this leaflet.
- Do not apply **JEWEL** within 24 hours of a predicted cold front or if a cold front is present. Continue application only after normal day/night temperatures have set in.
- In situations of high weed/foilage density, ensure adequate coverage of all weeds with the spray mixture.

#### **MIXING INSTRUCTIONS**

**JEWEL** is a dry flowable formulation to be mixed with water and applied as a spray. Partially fill the spray tank with water. Using the measuring cone provided measure the amount of product required for the volume to be sprayed. Add the correct amount of product to the spray tank with the agitation system engaged. Top up to the correct volume with water. **(THE MATERIAL MUST BE KEPT IN SUSPENSION AT ALL TIMES BY CONTINUOUS AGITATION)**. When prepared spray solutions have been allowed to stand, thoroughly re-agitate before using. In tank mixes **JEWEL** must be in suspension before adding the companion herbicide or surfactant. Before spraying calibrate equipment to determine the quantity of water necessary to uniformly cover the measured area to be treated.

When tank mixing with glyphosate, DO NOT mix in a galvanized steel or unlined steel containers. Such tanks can react with glyphosate to produce hydrogen gas; this can form a combustible gas mixture, which may explode when ignited.

Pre-mix the **JEWEL** as follows:

- Count the number of sachets required according to the number of hectares to be treated and the spray tank capacity.
- Add the contents of the counted sachets into a bucket with water and mix, ensuring complete disintegration of the bags and complete dispersion of the contents.

Half-fill the spray tank with suitable water. Only use water suitable for irrigation and avoid using water with high levels of chlorine. Adjust the water's pH to between 6,7 and 7,5 if necessary. Avoid using spray water with resistance lower than 300 ohms and electrical conductivity higher than 1,0 mS/cm. Pre-mix the required quantity of **JEWEL** in at least 10 litres of spray water as indicated above. Then add the pre-mixture to the water through a sieve while agitating. Rinse the pre-mixing bucket with water into the spray tank followed by the addition of the recommended quantity of surfactant. Finally, add the partner remedy as appropriate. Fill the spray tank to the desired volume. Should tank mixtures with other agrochemicals be made, follow the respective manufacturers' label recommendations. Ensure that spray premixes and/or final spray mixtures are kept out of reach of children, uninformed persons, untrained personnel, unauthorised personnel and animals.

**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 as

described above.

### Use of a Surfactant/ Wetting Agent

#### **ALWAYS ADD A SURFACTANT/WETTING AGENT.**

Instructions specific for brush and herbaceous weed control.

If a specific surfactant/wetting agent is not listed in the Directions for Use table, or when mixing with glyphosate use a non-ionic surfactant (1000 g/L).

### APPLICATION INSTRUCTIONS

Ensure that the equipment is correctly calibrated and is checked regularly during application to ensure even and accurate application.

### GROUND APPLICATION

Tractor mounted boom sprayers may be used. A spray volume of approximately 200 l/ha should be used for ground application and can be applied via solid- or hollow cone nozzles. **Constant agitation throughout the spray operation is essential.** Only clean water should be used. Prevent overdosing by avoiding overlapping of swaths and closing the nozzles while starting, slow movement, turning and stopping.

### AERIAL APPLICATION

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate adjacent areas or water. Please refer to the SANS Code of Practice for the aerial application of agricultural chemicals.

Aerial application of **JEWEL** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Remedies). 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 litres 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: 30 to 40 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 280 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:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - b) 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.

## APPLICATION RATES

**TABLE 1: WEED CONTROL IN NON-CROP SITUATIONS**

| TARGET                                                                                     | DOSAGE RATE            | REMARK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>American Bramble</b><br><i>(Rubus cuneifolius)</i>                                      | 25 g /100 ℓ water      | <p>Timing: A single application made during the active growing period (October to April) and preferably during the late summer (January to end April) but before the onset of winter.</p> <p>Target: Apply to the foliage of actively growing weeds.</p> <p>Ground application: Ensure thorough coverage of the foliage, avoid run-off.</p> <p>Apply in 200 – 400 ℓ per ha depending on the height, growth habit of the plants and the density of the infestation.</p> <p>Surfactant: Add a surfactant at the recommended rate.</p> <p>Re-growth: A follow-up spot treatment may be necessary during the third season after application. Refer to NOTES below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Bankrupt Bush</b><br><i>(Serphium plumosum)</i><br><br>Knapsack and tractor application | 25 – 50 g /100 ℓ water | <p>Timing: A single application made during the active growing period (October to April) and preferably during the late summer (January to end April) but before the onset of winter.</p> <p>Target: Apply to the foliage of actively growing weeds.</p> <p>Removing the dead foliage of <i>Stoebe vulgaris</i> by means of slashing or burning before application will improve the uptake of the <b>JEWEL</b>, resulting in better control. However, slashing may result in the release of ample seed, which will have to be controlled in the following season.</p> <p>Plant height: Use 25 g / 100 ℓ when treating plants of up to 0.75 m in height that have adequate green foliage for uptake. Use 50 g / 100 ℓ when the plants are &gt; 0.75 m in height or have many dead branches that may intercept the spray mixture and thereby limit the coverage and / or absorption of the active ingredient.</p> <p>Ground application: Ensure thorough coverage of the foliage, avoid run-off.</p> <p>Apply in 250 – 400 ℓ per ha depending on the height, growth habit of the plants and the density of the infestation.</p> <p>Surfactant: Add a surfactant at the recommended rate</p> <p>Re-growth: Spot-spraying must be done in the following year if re-growth occurs. Refer to NOTES below.</p> |

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| <p><b>Gum coppice</b><br/>(<i>E. grandis</i>)</p> <p>Knapsack application</p>                                                                                          | <p>80 g /100 ℓ water</p>                                                                                                                  | <p>Timing: Application may be made all year round. Avoid spraying under very cold conditions in the winter.</p> <p>Plant Height: Apply to active growing coppice between 0,5 and 2 m high.</p> <p>Surfactant: Add a suitable wetter at 500 ml per 100 ℓ spray mix.</p> <p>Application: Apply to thoroughly wet all foliage but avoid run-off.</p> <p>Important: Avoid run-off onto the soil.</p> <p>Regrowth: If regrowth occurs, follow-up treatments on a spot spray basis may be necessary.</p> <p>Also refer to NOTES below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Gum coppice</b><br/>(<i>E. grandis</i>)</p> <p>Aerial Application</p> <p>a. Mature coppice from 2nd rotation onwards</p> <p>b. Regenerated or seedling trees</p> | <p>200 g<br/><b>JEWEL</b><br/>+ 3 ℓ glyphosate<br/>360 SL per ha</p> <p>150 g<br/><b>JEWEL</b> + 3 ℓ<br/>glyphosate 360<br/>SL per ha</p> | <p><b>COPPICE REQUIREMENTS:</b></p> <p>Timing: Application may be made all year round. Avoid spraying under very dry or cold conditions as efficacy may be reduced.</p> <p>Plant Height: Coppice and/or seedlings must be between 1,5 and 1,8 m high.</p> <p>Ensure all viable buds have sprouted.</p> <p>Regrowth: Manual spot-spraying may be necessary where regrowth occurs, at the following rate: <b>JEWEL</b> at 80 g/100 ℓ water plus wetter.</p> <p><b>AERIAL APPLICATION REQUIREMENTS:</b></p> <p>Conditions: Only spray under conditions ideal for aerial application. Even a slight breeze will cause shading due to drift.</p> <p>Application Volume: A MINIMUM water volume of 100 ℓ/ha must be used. Higher water volumes will improve efficacy.</p> <p>Swath Direction: Approaching the target from both directions will improve coverage and reduce shading.</p> <p>Surfactant: Not necessary.</p> <p>See “Aerial Application” under APPLICATION INSTRUCTIONS above for detailed requirements. Also refer to NOTES below.</p> |
| <p><b>Gum</b><br/>(<i>E. grandis</i>)</p> <p>Cut stump</p>                                                                                                             | <p>180 g /100 ℓ water</p>                                                                                                                 | <p>Timing: Application should be directed at the cambium layer of the stump within two hours of felling. Preferably apply immediately after felling.</p> <p>Volume: Apply 15-20 ml of spray mixture per 10 cm stump diameter (measured at ground level). A minimum of 15 ml of spray mixture must be applied to each 10 cm stem in the case of multi-stem trees.</p> <p>Method: Use a low-pressure knapsack sprayer, a hand-held applicator or dosing gun.</p> <p>Surfactant: Addition of suitable wetter at 500 ml per 100 ℓ spray mix will improve efficacy. Important: Avoid run-off onto the soil.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                     |

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|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   |                                                                                                                                            | Application later than two hours after felling will result in reduced efficacy.<br>Also refer to NOTES below.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Mopane</b><br>( <i>Colophospermum mopane</i> ) | 200 g <b>JEWEL</b><br>/100 l water<br><br>+<br><br>500 ml H&R Crop Oil/ 100 l water<br><br><b>OR</b><br><br>+<br><br>500 ml Methos / 100 l | <b>Foliar application:</b><br>Apply as a full cover spray to the point of run-off. Treat at least 90% of all the green foliage.<br>Do not apply to dusty foliage, wait for rain to clear the dust before applying <b>JEWEL</b> .<br>Target plants which are actively growing between 0.5 to 2 in height with fully developed foliage<br>The target plants should be free of any environmental stressors such as drought and/or extreme temperatures or insect attacks.<br>Apply by means of a suitable knapsack, fitted with a TG1 or TG2 spray tip or equivalent. Ensure thorough coverage of the foliage but avoid run-off.<br>Regrowth: Apply to actively growing plants as a full cover spray once the coppice reaches a minimum height of 0.5 – 1.0m. |

#### NOTES:

**JEWEL** will control desirable broadleaf plants/trees if accidentally treated during application.

Only apply **JEWEL** as directed applications on the target species in the vicinity of desirable broadleaf trees or plants.

**JEWEL** will not kill grasses and sedges accidentally treated during application.

No broadleaf plants can be planted in areas where the above - mentioned target species have been controlled with **JEWEL** for a minimum period of 12 months.

#### ACKNOWLEDGEMENT OF TRADEMARKS

H&R Crop oil (L6802)  
Methos (L11114)

H&R South Africa (Pty) Ltd  
Agritech Bioscience (Pty) Ltd t/a Carabiner