

**POISON**  
**KEEP OUT OF REACH OF CHILDREN**  
**READ SAFETY DIRECTIONS BEFORE OPENING OR USING**

**Viper<sup>®</sup>**

**HERBICIDE**

**Active Constituents:** 120 g/L BENZOFENAP  
 48 g/L CLOMAZONE  
**Solvents:** 164 g/L LIQUID HYDROCARBONS  
 160 g/L N-METHYL-2-PYRROLIDONE

**GROUP F HERBICIDE**

**For the control of certain broadleaf and grass weeds in rice**

## GENERAL INSTRUCTIONS

### Resistant Weeds Warning

Viper is a member of the Pyrazole and Isoxazolidinone groups of herbicides and acts by inhibiting carotenoid biosynthesis. For weed resistance management, Viper is a Group F herbicide. Some naturally occurring weed biotypes resistant to Viper and other Group F 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 Viper or other Group F herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Viper to control resistant weeds.

A follow-up application of MCPA is recommended, where appropriate, to provide a secondary mode of action for broadleaf aquatic weeds. To reduce the likelihood of resistant weeds developing it is recommended that products containing benzofenap (ie. Taipan<sup>®</sup>, Viper) are not used in consecutive rice crops.

### Mixing

#### *Ground / helicopter application*

Viper may be applied undiluted, or diluted with sufficient water to achieve a total application volume of at least 10 L/ha, for application by ground or helicopter using the SCWIIRT method.

#### *Fixed wing aircraft (Bickley boom) application*

For application by fixed wing aircraft Viper must be applied through a Bickley boom. If applied by this method Viper **must** be diluted with water to achieve a minimum total application volume of 20 L/ha.

To ensure even mixing, half fill the spray tank with clean water and add the required amount of product while agitating. Then add the remainder of the water. Maintain agitation at all times until spraying is completed. Reseal part-used product container immediately after use.

If the product is diluted ensure that any mixing is done away from desirable plants such as roses, ornamentals and vines.

**Warning:** Exposure to the solvents contained in Viper and some other agricultural chemicals may adversely affect spray equipment. To reduce this risk when using Viper it is recommended to;

- Wash spray equipment down in a suitably designated area, away from sensitive vegetation, if affected by product splashes or spillage whilst filling spray tanks. Failure to wash down equipment may result in tarnishing or corrosion.
- Only prepare sufficient spray solution for the current day's application requirements. Avoid leaving unused spray solution in the spray tank overnight. At the end of each day's spraying, flush equipment through with clean water. Clean equipment thoroughly prior to extended periods of storage.
- Ensure pump diaphragms and seals are constructed from Viton<sup>®</sup> or similar material with equivalent chemical resistance. Santoprene<sup>®</sup> is not a recommended material due to excessive shrinkage when exposed to Viper for extended periods.

### Application

Inappropriate application techniques can result in visible damage to sensitive off-target species. Viper must only be applied direct to the water surface of permanently flooded bays by SCWIIRT application via a properly equipped ground sprayer, helicopter or by fixed wing aircraft through a Bickley boom.

**Ground / helicopter application**

Product may be applied undiluted, or diluted with sufficient water to achieve an application volume of at least 10 L/ha. SCWIIRT equipment should be set up so that nozzles are positioned no more than 50 cm from the water surface and pressure is maintained at or below 200 kPa (30 PSI or 2 bar). A maximum distance of 30 m is recommended between runs.

**Fixed wing aircraft (Bickley boom) application**

For application by fixed wing aircraft, Viper must only be applied through a Bickley boom with the following setup:

- Two nozzles mounted on droppers, one either side with droppers positioned just outside the first boom hanger (28 – 35% of wingspan)
- Dropper length approximately 40-60 cm or lower below the trailing edge of the wing
- Solid stream nozzles with bore sufficient to apply desired volume at a pressure of 240 to 310 kPa (35 to 45 psi)
- Nozzles orientated rearwards and parallel to the airstream.
- Check valves (Spraying Systems diaphragm type 12328, 3/4 inch) located behind nozzle to eliminate “trailing” after shut off.

Spray at a maximum wheel height of 2 m above the water surface and at a maximum swath width of 25 m. Ensure a minimum water depth of 10 cm on the high side of bays prior to treatment.

A minimum application volume of 20 L/ha is recommended. Dilute the required amount of Viper in clean water to achieve a spray volume of 20 L/ha. Add 41-A<sup>®</sup> drift retardant at the rate of 60 g per 100 L of spray mixture.

Before applying Viper to contoured bays evaluate the layout of the bays to be treated and select the optimum flight pattern to ensure all bays receive the recommended rate of Viper.

**Compatibility**

Viper is compatible with the insecticide chlorpyrifos and with the herbicide Magister<sup>®</sup> (maximum application rate 100 mL/ha). The products should be mixed undiluted, or diluted with sufficient water to achieve an application volume of 10 L/ha, except for application by Bickley boom where a total application volume of 20 L/ha is necessary.

**Water Management**

Ensure bays are locked-up for at least 5 days after application. Water depth at application should be sufficient to maintain water coverage during the lock-up period. A minimum water depth of 10 cm is recommended when applying Viper by Bickley boom.

After the lock-up period bays may be topped up as necessary for normal water management. Poor water management leading to exposed mud may result in reduced weed control.

Do NOT drain rice water into regional drains within 28 days after Viper application or as defined by the local irrigation authority, whichever is the greater time period.

**Crop Tolerance**

Viper is safe on the major commercial varieties of rice. However, transient bleaching of rice seedlings may occur in some circumstance, particularly if rice foliage is directly contacted by the concentrated emulsion, or where plants are under stress eg due to slime, salinity, cold weather or deep water. These symptoms are usually temporary and rapid crop recovery can be expected. The variety Illabong is especially susceptible to bleaching.

**Crop Rotation**

Treated areas may be replanted to wheat, barley, sub-clover or canola six months after application of Viper.

There is no minimum recropping interval required for subsequent rice crops. However, if rice is replanted in the same season as a failed rice crop, do not retreat the area with Viper or other herbicides containing benzofenap or clomazone.

**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray drift onto nearby susceptible plants/crops, cropping lands or pastures.

**Off Target Whitening**

Viper can cause whitening of certain species of trees, shrubs, ornamental, agronomic crops, vines and fruits and vegetables either by spray drift or by volatilisation following product dilution. The effects may last a few weeks and plants usually grow out of it with no long term effect. This phenomenon is unlikely to occur following application into permanent water in rice. However, drift could occur following aerial application through the Bickley boom. The following steps should be taken to minimise the likelihood of this whitening occurring:

1. Ensure that the product is not diluted in the vicinity of sensitive plants such as roses, ornamentals and vines.
2. DO NOT empty or clean application equipment near homes or sensitive plants.
3. Remove contaminated clothing before entering areas where sensitive plants exist, e.g. homes, nurseries or greenhouses.
4. DO NOT store empty, unsealed containers near sensitive plants.
5. Apply only with calibrated equipment.
6. DO NOT apply by conventional boom spray.
7. Refer to **Application** and **Mixing** sections for specific details and instructions.
8. Ensure nozzles are completely shut off before leaving the treatment area.

**Additional precaution for applications by Bickley boom**

Do not treat within 300 m upwind or 50 m downwind of susceptible crops or properties or environmentally sensitive areas.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Water from treated bays should be retained on site for 28 days after application or for a period as defined by the local irrigation authority, whichever is the greater, ie. DO NOT drain rice water into regional drains until after the required period.

**STORAGE AND DISPOSAL**

Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Observe general directions as specified under "Off Target Whitening". If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**SAFETY DIRECTIONS**

Harmful if swallowed. Will damage the eyes. Will irritate the nose, throat and skin. Avoid contact with eyes and skin. Do not inhale vapour or spray mist. When opening the container and preparing the product for use, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves, goggles and disposable mist mask. If product or spray in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

**FIRST AID**

If poisoning occurs contact a doctor or Poisons Information Centre (telephone 13 11 26). If swallowed do not induce vomiting; give a glass of water. If in eyes, wash out immediately with water.

**MATERIAL SAFETY DATA SHEET**

Additional information is listed in the Material Safety Data Sheet available from Bayer CropScience Pty Ltd including from our website, [www.bayercropscience.com.au](http://www.bayercropscience.com.au).

**EXCLUSION OF LIABILITY**

This product as supplied is of a high grade and suitable for the purpose for which it is expressly intended and must be used in accordance with the directions. The user must monitor the performance of any product as climatic, geographical or biological variables and/or developed resistance may affect the results obtained. No responsibility is accepted in respect of this product, save for those non-excludable conditions implied by the Trade Practices Act or any State or Federal legislation.

NRA Approval No.: 54944/0702

Taipan<sup>®</sup> and Viper<sup>®</sup> are Registered Trademarks of Bayer  
41-A<sup>®</sup> is a Registered Trademark of Sanitek Products Inc.  
Magister<sup>®</sup> is a Registered Trademark of FMC Corporation  
Viton<sup>®</sup> is a Registered Trademark of DuPont Dow Elastomers.  
Santoprene<sup>®</sup> is a Registered Trademark

<p>IN A TRANSPORT EMERGENCY <b>DIAL 000</b> POLICE OR FIRE BRIGADE</p>
<p>FOR 24 HOUR SPECIALIST ADVICE IN EMERGENCY ONLY PHONE 1800 033 111</p>

**DIRECTIONS FOR USE (For use in NSW, Vic only)****Restrains**

DO NOT apply by fixed wing aircraft other than through a Bickley boom

DO NOT apply by herbigation

DO NOT apply by conventional spray boom

CROP	WEEDS	RATE	CRITICAL COMMENTS
Rice  Aerial sown or Dry broadcast sown (followed by permanent water)	<b>Weeds controlled:</b> Alisma*, arrowhead, starfruit, water plantain*, barnyard grass (up to 3 leaf)	5.0 L/ha	To achieve optimum control ensure seedbed is free of germinated weeds prior to flooding.  Apply to permanent water within 10 days of commencement of flooding. For best results rapid fill of bays is recommended. Apply 12 hours after water movement has ceased. Water depth at application should be sufficient to maintain water coverage for a minimum lock-up period of 5 days. Ensure water inlets are closed securely to prevent water movement. Bays may be topped up for normal water management after the 5 day lock-up.
	<b>Weeds suppressed:</b> Dirty dora, silver top grass# (up to 1 leaf)		Water coverage should be maintained to ensure satisfactory weed control. Reduced weed control may occur where soil is exposed. Cold and/or muddy water at application may also reduce efficacy.
	<b>Weeds controlled:</b> Alisma*, arrowhead, starfruit, water plantain*, barnyard grass (up to 4 leaf)	5.0 L/ha + 100 mL/ha Magister® Herbicide	Residual control of starfruit can be expected for up to 28 days. A follow-up treatment of MCPA is recommended, where necessary, as a second mode of action for herbicide resistance management. Follow instructions on MCPA label.
	<b>Weeds suppressed:</b> Dirty dora, silver top grass (up to 2 leaf)		Viper may be dripped directly into the bay by SCWIIRT (Soluble Chemical Water Injection In Rice Technique) equipment fitted to ground driven vehicles (tractor or 4-wheel motorbike) or helicopter. Viper may also be applied by fixed wing aircraft through a Bickley boom. See under <b>Mixing</b> and <b>Application</b> in GENERAL INSTRUCTIONS for complete details.  # Where high silver top grass populations are expected, apply the Viper and Magister mixture as recommended.  * seedlings only – plants vegetatively propagated from previous plant residues will <u>not</u> be controlled.

**NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION**

**WITHHOLDING PERIOD**Harvest: **NOT REQUIRED WHEN USED AS DIRECTED.**Grazing: **DO NOT GRAZE OR CUT FOR STOCK FEED FOR 3 MONTHS AFTER APPLICATION.**