

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

# FREQUENCY<sup>®</sup> HERBICIDE

**ACTIVE CONSTITUENT: 60 g/L TOPRAMEZONE  
60 g/L CLOQUINTOCET-MEXYL  
SOLVENT: 200 g/L LIQUID HYDROCARBONS**

GROUP **27** HERBICIDE

For the control of certain broadleaved weeds including wild radish and suppression of wild oats in winter cereals as indicated in the Directions for Use table.

**IMPORTANT: READ THE ATTACHED LEAFLET BEFORE USE**

CONTENTS: 1L-1000L

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APVMA Approval No.: 86267/131170

## DIRECTIONS FOR USE

### RESTRAINTS

**DO NOT** apply by aircraft

**DO NOT** apply after the 2-node stage (Z32)

**DO NOT** apply to crops that are stressed through disease, insect damage, frost, nutrient deficiencies, other herbicide use, excessively moist or dry conditions, or inappropriate soil type

**DO NOT** apply if rain is expected within 2 hours

**DO NOT** apply more than 1 application per season

**DO NOT** apply if heavy rains or storms are forecast within 3 days.

**DO NOT** irrigate to the point of runoff for at least 3 days after application.

### SPRAY DRIFT RESTRAINTS

Specific definitions for terms used in this section of the label can be found at [apvma.gov.au/spraydrift](http://apvma.gov.au/spraydrift).

**DO NOT** allow bystanders to come into contact with the spray cloud.

**DO NOT** apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the buffer zone table below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

**DO NOT** apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

**DO NOT** apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.

**DO NOT** apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a MEDIUM spray droplet size category
- minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.

### BUFFER ZONES FOR BOOM SPRAYERS

Application rate	Tank mix	Mandatory buffer zones		
		Bystander areas	Vegetation areas	Livestock areas
Up to maximum label rate	Tank mix with bromoxynil	0 metres	10 metres	120 metres
	Tank mix with MCPA	0 metres	20 metres	120 metres

CROP	WEEDS	WEED STAGE	RATE	CRITICAL COMMENTS
Wheat Barley Durum	Bifora ( <i>Bifora testiculata</i> ), Bindweed/buckwheat ( <i>Fallopia convolvulus</i> ), Capeweed ( <i>Arctotheca calendula</i> ), Charlock ( <i>Sinapsis arvensis</i> ), Deadnettle ( <i>Lamium amplexicaule</i> ), Fleabane ( <i>Conyza</i> spp.), Fumitory ( <i>Fumaria</i> spp.), Pimpernel ( <i>Anagallis arvensis</i> ), Shepherd's purse ( <i>Capsella bursa-pastoris</i> ), Sow thistle/milk thistle ( <i>Sonchus oleraceus</i> ), Stinging nettle ( <i>Urtica dioica</i> ), Subterranean Clover ( <i>Trifolium subterraneum</i> ), Tares/vetch ( <i>Vicia sativa</i> ), Turnip weed ( <i>Rapistrum rugosum</i> ), Wild radish ( <i>Raphanus raphanistrum</i> ) Wireweed ( <i>Polygonum aviculare</i> )	Up to the 6- leaf stage	200 mL/ha + 900 mL/ha to 1.2 L/ha Bromicide®* 200 Selective Herbicide (200 g/L bromoxynil product) + 1% Hasten or similar MSO adjuvant	Apply to actively growing weeds, free from stress.  Use the higher rate of bromoxynil under high populations and where conditions are less than ideal such as climatic stress or plant shading.  <b>Apply to crops from the 2-leaf            stage (Z12) but prior to the 2-node            stage (Z32).</b>  Transient bleaching of the crop may occur, particularly under cold or frosty conditions and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. Trial data has shown that under these conditions final yield will not be impacted Some varietal differences maybe observed.

CROP	WEEDS	WEED STAGE	RATE	CRITICAL COMMENTS
Wheat Barley Durum	Deadnettle ( <i>Lamium amplexicaule</i> ), Fumitory ( <i>Fumaria</i> spp.), Shepherd's purse ( <i>Capsella bursa-pastoris</i> ), Sow thistle/milkthistle ( <i>Sonchus oleraceus</i> ), Stinging nettle ( <i>Urtica urens</i> ), Turnip weed ( <i>Rapistrum rugosum</i> ), Wild radish ( <i>Raphanus raphanistrum</i> ), Wireweed ( <i>Polygonum aviculare</i> )	Up to the 6-leaf stage	200 mL/ha + 440 mL to 600 mL/ha Polo®* 570 LVE Herbicide (570 g/L L.V.E MCPA product) + 1% Hasten or similar MSO adjuvant	Apply to actively growing weeds, free from stress.  Use the higher rate of MCPA LVE under high populations and where conditions are less than ideal such as climatic stress or plant shading.  <b>Apply to crops from the 3-leaf stage (Z13) but prior to the 2-node stage (Z32).</b>  Transient bleaching of the crop may occur, particularly under cold or frosty conditions and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. Trial data has shown that under these conditions final yield will not be impacted
Wheat Barley Durum	Suppression of seed set in wild oats in northern NSW and Qld cropping zones where <i>Avena sterilis</i> is dominant in targeted population	From 2 leaf to 2 tillers (GS 12- 22)	200 mL/ha + 900 mL/ha to 1.2 L/ha Bromicide®* 200 Selective Herbicide (200 g/L bromoxynil product) + 1% Hasten or similar MSO adjuvant	FREQUENCY® Herbicide will provide useful suppression of seed set in wild oats. Apply to actively growing weeds, free from stress.  <b>Apply to crops from the 2-leaf stage (Z12) but prior to the 2-node stage (Z32).</b>  Significant bleaching and reduction of growth of wild oats will occur, resulting in death of some plants and a significant reduction in flowering and seed set of surviving plants, however complete control of wild oats may not be seen.  Trials have shown that consistency of seed set reduction on wild oats in southern regions where <i>Avena fatua</i> is dominant have has been greatly reduced compared to fields in the northern cropping area where <i>Avena sterilis</i> is dominant. Where wild oats are a major target either a split application or tank mix with a compatible wild oat control product is recommended.  Transient bleaching of the crop may occur, particularly under cold or frosty conditions and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. Trial data has shown that under these conditions final yield will not be impacted. Some varietal differences maybe observed

**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 FOOD FOR 6 WEEKS AFTER APPLICATION. WHEN APPLYING WITH A TANK MIX PRODUCT, OBSERVE THE GRAZING WITHHOLDING PERIOD FOR THE TANK MIX PRODUCT IF THIS IS LONGER THAN 6 WEEKS

### **EXPORT SLAUGHTER INTERVAL (ESI) 14 DAYS**

Livestock that has grazed on or been fed treated crops should be placed on clean feed for 14 days prior to slaughter.

### **GENERAL INSTRUCTIONS**

FREQUENCY® Herbicide is a post-emergence, contact foliar-absorbed herbicide and will not control weeds which emerge after application. FREQUENCY® Herbicide will provide rapid bleaching of the target weeds. When mixed with bromoxynil according to the label, this additional activity will lead to rapid burning of target weeds. Both FREQUENCY® Herbicide and bromoxynil are light activated herbicides. Faster and more complete activity will be seen in higher light conditions. Due to the contact nature of FREQUENCY® Herbicide applications early in the season where better coverage is possible will result in better control. In some instances, complete control of weeds may not be seen, however a significant reduction in biomass will be observed and weeds will likely be uncompetitive with the crop.

To ensure thorough weed coverage, FREQUENCY® Herbicide should be applied in a minimum of 80L/ha water. Refer below to APPLICATION section for further details.

### **MIXING**

Invert drums and shake well prior to commencing mixing. Half fill the spray tank with clean water. Commence agitation and add the required amount of product to the tank. Maintain agitation whilst filling the tank and throughout the spraying operation.

FREQUENCY® Herbicide is a suspo-emulsion formulation. When using in a tank mix with other herbicides the following mix order should be observed;

1. half fill the spray tank;
2. add any granule (WG) formulated products first and allow dispersion, followed by any suspension concentrates (SC/flowable);
3. add any water-soluble salts;
4. add FREQUENCY® Herbicide and any EC formulations;
5. add any adjuvants as recommended.

### **Adjuvants**

FREQUENCY® Herbicide requires the use of an MSO type adjuvant such as Hasten to allow better uptake into the target weed for full efficacy. Use of non-ionic surfactants and mineral oil based adjuvants will likely result in reduced efficacy.

### **APPLICATION**

**Ground application:** Apply in 80-150 L of water per hectare using a nozzle that will deliver a MEDIUM spray quality. The use of flat fan, air induction nozzles is recommended. In advanced or dense weed infestations, or dense crop canopies and if tank mixing more than 2 listed products, increase the water volume to ensure

adequate coverage.

### COMPATIBILITY

FREQUENCY® Herbicide is **physically compatible** with Axial®, Bromoxynil (including Bromicide® 200 Selective Herbicide, Bronco® 200 Herbicide, Genfarm Bromo 200 Herbicide, Titan Bromoxynil 200 Selective Herbicide), MCPA L.V.E (including Polo® 570 LVE Herbicide, Nufarm LVE Agritone® Selective Herbicide, Genfarm MCPA LV 570 Herbicide, Titan LVE MCPA 570 Herbicide, Adama MCPA LVE 570 EC Herbicide), Metsulfuron (Ally®, Associate®), Jaguar®, Sencor® 480 SC, Tigrex® and Topik® 240 EC.

FREQUENCY® Herbicide is not compatible with Bromoxynil-MCPA Herbicide coformulations (Brom MA). Use may cause exacerbated transient bleaching in treated crops.

Product Use	Mix Partner Product	Comments
FREQUENCY® Herbicide	Ally®, Associate® 600g/kg Metsulfuron	Observe use restrictions and plant back comments on mix partner labels.
+ Bromoxynil (200g/L bromoxynil as N-octanoyl ester)	Tigrex® 250g/L MCPA as 2-ethylhexyl ester + 25g/L diflufenican	Mixtures with picolinofen or diflufenican may cause increased foliar burn, however crop yield will not be adversely affected.
+ Hasten Adjuvant	Sencor® 480 480g/L metribuzin	
	Topik® 240 240g/L clodinafop-propargyl + 60g/L cloquintocet	Transient bleaching of the crop may occur, particularly under cold or frosty conditions and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. Trial data has shown that under these conditions final yield will not be impacted.
	Axial® 100g/L pinoxaden + 25g/L cloquintocet	
	Opera® Fungicide 85g/L pyraclostrobin + 62.5g/L epoxiconazole	
	Opus® 125 Fungicide 125g/L epoxiconazole	
	PropiMax® Fungicide 435g/L propiconazole	
	Versys® Insecticide 100g/L Afidopyropen	
	Liquid urea ammonium nitrate fertilizer (UAN) (Easy N®)	Increased crop leaf burning may occur, however yields will not be negatively impacted. Consult BASF staff for full compatibility details when utilising Easy N® in mixes with herbicide combinations.

Product Use	Mix Partner Product	Comments
<b>FREQUENCY®</b> Herbicide  + MCPA (L.V.E) - (570g/L MCPA as 2-ethylhexyl ester)  + Hasten Adjuvant	Ally®*, Associate®* 600g/kg Metsulfuron	Observe use restrictions and plant back comments on mix partner labels.
	Jaguar®* 25g/L diflufenican + 250g/L Bromoxynil present as the octanoate	Mixtures with picolinofen or diflufenican may cause increased foliar burn, however crop yield will not be adversely affected.
	Sencor®* 480 480g/L metribuzin	
	Topik®* 240 240g/L clodinafop-propargyl + 60g/L cloquintocet	Transient bleaching of the crop may occur, particularly under cold or frosty conditions and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. Trial data has shown that under these conditions final yield will not be impacted.
	Axial®* 100g/L pinoxaden + 25g/L cloquintocet	
	Opera® Fungicide 85g/L pyraclostrobin + 62.5g/L epoxiconazole	
	Opus® 125 Fungicide 125g/L epoxiconazole	
	PropiMax®* Fungicide 435g/L propiconazole	
	Versys® Insecticide 100g/L Afidopyropen	
	Liquid urea ammonium nitrate fertilizer (UAN) (Easy N®*)	Increased crop leaf burning may occur, however yields will not be negatively impacted. Consult BASF staff for full compatibility details when utilising Easy N® in mixes with herbicide combinations.

As water quality can influence compatibility, it is recommended that mixtures should be bottle-tested in the water intended for spraying, prior to mixing commercial quantities.

### CROP SAFETY

DO NOT apply to crops undersown with legumes and other broadleaf fodder.

Following application, some transient bleaching (white spotting and/or mottling) of cereal foliage may occur especially with high light activity on young crops and can be exacerbated in northern areas where frost/cold starts followed by warm bright sunlight days follow. This bleaching is confined to leaves present at application. The development of the crop and subsequent new growth is unaffected in crops growing free of stress. Symptoms will be more pronounced and persistent in crops that are growing under stress, particularly under frost conditions (see Restraints). Trial data has shown final yield will not be impacted.

### SPRAYER CLEANUP

Following use, the sprayer should be cleaned before spraying sensitive broadleaf crops. Empty the tank completely and drain the whole system. Quarter fill the tank with clean water directing stream onto inside of tank. Circulate through the pump, the hoses and nozzles then drain. Repeat if necessary. Finally remove and clean all filters (tank, in-line and nozzle) separately. This will provide an effective cleaning technique for FREQUENCY® Herbicide. A boom cleaner may be used as part of the procedure.

### CROP PLANT BACK & ROTATION RECOMMENDATIONS

FREQUENCY® Herbicide does not provide long-term residual activity; however, certain crops show sensitivity to soil residues. Refer to the following table for application-to-sow intervals applicable to the maximum label rate.

Plant Back Interval	6 weeks after FREQUENCY® Herbicide application	4 months after FREQUENCY® Herbicide application	9 months after FREQUENCY® Herbicide application
Crop	Wheat (including durum) Barley Maize	Canola Chickpeas Faba beans Field peas Lentils Lupins Mungbeans Safflower Sorghum Sunflower Cotton	All other crops

Check the label of any product mixed with FREQUENCY® Herbicide , to determine any plant back periods or restrictions on use.

#### HERBICIDE RESISTANCE WARNING

<b>GROUP</b>	<b>27</b>	<b>HERBICIDE</b>
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FREQUENCY® Herbicide is a member of the benzoylpyrazole group of herbicides and acts by inhibiting 4-hydroxyphenylpyruvate dioxygenase (4-HPPD). For weed resistance management FREQUENCY® Herbicide is a Group 27 herbicide. Some naturally occurring weed biotypes resistant to this product and other Group 27 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 27 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, BASF Australia Limited accepts no liability for any losses that may result from the failure of this product to control resistant weeds.

#### Resistance Management

Management of weed resistance to Group H herbicides is important to maintain this critical mode of action for broadleaf weed control and particularly for wild radish control. Where possible, FREQUENCY® Herbicide should be used as a part of an integrated weed management program which includes herbicides from other modes of action and non-chemical methods. CropLife resistance management strategies are available from BASF sales representatives and from CropLife at [www.croplife.com.au](http://www.croplife.com.au).

#### RE-ENTRY PERIOD

Do not allow entry into treated areas until spray has dried. If prior entry is necessary wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

#### PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT

Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.

#### STORAGE

Store in the closed, original container in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight.



## **DISPOSAL**

Triple-rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

## **110L and above**

Empty container by pumping through the dry break Micro Matic connection system. DO NOT attempt to unscrew the Micro Matic valve or breach the locked filing point. DO NOT contaminate the container with water or other foreign material. Ensure that the Micro Matic coupler, pump, meter and hoses are disconnected, triple rinsed with clean water and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. DO NOT dispose of undiluted chemicals on-site.

## **SAFETY DIRECTIONS**

Warning-aspiration hazard. This product contains ingredients that may be fatal if swallowed. Harmful if inhaled. Will irritate the eyes and skin. Repeated exposure may cause allergic disorders. Avoid contact with eyes and skin. Do not inhale vapour. If product on skin immediately wash area with soap and water. If product in eyes, wash it out immediately with water. When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length chemical resistant gloves and face shield or goggles. If applying by boom spray equipment (open cab) wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Wash hands after use. After each day use, wash gloves, face shield or goggles and contaminated clothing.

## **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. *Phone Australia 131126; New Zealand 0800 764 766.* If swallowed, do NOT induce vomiting.

## **SAFETY DATA SHEET**

Additional information is listed in the Safety Data Sheet available from your supplier.

## **ADDITIONAL STATEMENTS (required by WHS REGULATIONS 2011)**

HAZARD STATEMENTS: May damage the unborn child. Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENT: If medical advice is needed, have product container or label at hand.

PRECAUTIONARY STATEMENT (Prevention): Store locked up.

PRECAUTIONARY STATEMENTS (Response): IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. If skin irritation occurs: Get medical advice/attention.

## **CONDITIONS OF SALE**

All conditions and warranties rights and remedies implied by law or arising in contract or tort whether due to the negligence of BASF Australia Ltd or otherwise are hereby expressly excluded so far as the same may legally be done provided however that any rights of the Buyer pursuant to non-excludable conditions or warranties of the Competition and Consumer Act 2010 or any relevant legislation of any State are expressly preserved but the liability of BASF Australia Ltd or any intermediate Seller pursuant thereto shall be limited if so permitted by the said legislation to the replacement of the goods sold or the supply of equivalent goods and all liability for indirect or consequential loss or damage of whatsoever nature is expressly excluded. This product must be used or

applied strictly in accordance with the instructions appearing hereon. This product is solely sold for use in Australia and must not be exported without the prior written consent of BASF Australia Ltd.

Batch No:

Date of Manufacture:

APVMA Approval No.: 86267/131170

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