Product Name: Frequency Herbicide
APVMA Approval No: 86267/145930

RLP
APPROVED

Label Name:	Frequency Herbicide
Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	60 g/L TOPRAMEZONE 60 g/L CLOQUINTOCET-MEXYL 200 g/L LIQUID HYDROCARBON
Mode of Action:	GROUP 27 HERBICIDE
Statement of Claims:	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.
Net Contents:	1 L - 1000 L
Restraints:	This section contains file attachment.
Directions for Use:	This section contains file attachment.
Other Limitations:	
Withholding Periods:	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

Trade Advice:	EXPORT SLAUGHTER INTERVAL (ESI) Livestock that has grazed on or been fed treated crops should be placed on clean feed for 14 days prior to slaughter.

General Instructions:	This section contains file attachment.

Resistance Warning:	HERBICIDE RESISTANCE WARNING FREQUENCY® Herbicide is a member of the benzoylpyrazole group of herbicides and acts by inhibiting 4-hydroxyphynlpyruvate 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 27 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.

Precautions:	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.

Protections:	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 and Disposal:	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 Instructions:	If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126; New Zealand 0800 764 766.

First Aid Warnings:	

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.

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

DIRECTIONS FOR USE

CROP	WEEDS	WEED STAGE	RATE	CRITICAL COMMENTS
Wheat Barley Durum	Bifora (*Bifora testiculata*), Bindweed/buckwheat (*Fallopia convolvulus*), Capeweed (*Arctotheca calendula*), Charlock (*Sinapsis arvensis),* Deadnettle (*Lamium amplexicaule*), Fleabane (*Conyza* spp.), Fumitory (*Fumaria* spp.), Pimpernel (*Anagallis arvensis*), Shepherd's purse (*Capsella bursa-pastoris*), Sow thistle/milk thistle (*Sonchus oleraceus*), Stinging nettle (*Urtica dioica*), Subterranean Clover (*Trifolium subterraneum*), Tares/vetch (*Vicia sativa*), Turnip weed (*Rapistrum rugosum*), Wild radish (*Raphanus raphanistrum*) Wireweed (*Polygonum aviculare*)	Up to the 6- leaf stage	200 mL/ha + 180-240 g ai/ha bromoxynil + 1% high quality 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. **Apply to crops from the 2-leaf stage (Z12) but prior to the 2-node stage (Z32).** 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 may be observed.
	Suppression of seed set in wild oats in northern NSW and Qld cropping zones where *Avena sterilis* is dominant in targeted population	From 2 leaf to 2 tillers (GS 12- 22)		FREQUENCY® Herbicide will provide useful suppression of seed set in wild oats. Apply to actively growing weeds, free from stress. **Apply to crops from the 2-leaf stage (Z12) but prior to the 2-node stage (Z32).** 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 *Avena fatua* is dominant have has been greatly reduced compared to fields in the northern cropping area where *Avena sterilis* 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 may be observed

CROP	WEEDS	WEED STAGE	RATE	CRITICAL COMMENTS
Wheat Barley Durum	Deadnettle (*Lamium amplexicaule*), Fumitory (*Fumaria* spp.), Shepherd's purse (*Capsella bursa-pastoris*), Sow thistle/milkthistle (*Sonchus oleraceus*), Stinging nettle (*Urtica urens*), Turnip weed (*Rapistrum rugosum*), Wild radish (*Raphanus raphanistrum*), Wireweed (*Polygonum aviculare*)	Up to the 6-leaf stage	200 mL/ha + 250 – 345 g ai / ha of MCPA LVE + 1% high quality 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. **Apply to crops from the 3-leaf stage (Z13) but prior to the 2-node stage (Z32).** 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

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 a 1% high quality MSO adjuvant 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 the following products in a three-way tank-mix (maintain constant agitation throughout):

Product Use	Mix Partner Product	Comments
FREQUENCY Herbicide + 180 – 240 g ai / ha of Bromoxynil + 1% high quality MSO adjuvant	MCPA L.V.E. herbicides containing MCPA as 2-ethyl hexyl ester as the only active ingredient	Observe use restrictions and plant back comments on mix partner labels. Mixtures with picolinofen or diflufenican may cause increased foliar burn, however crop yield will not be adversely affected. 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.
	Ally*, Associate* 600g/kg Metsulfuron	
	Tigrex* 250g/L MCPA as 2-ethylhexyl ester + 25g/L diflufenican	
	Sencor* 480 480g/L metribuzin	
	Topik* 240 240g/L clodinafop-propargyl + 60g/L cloquintocet	
	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
FREQUENCY Herbicide + 250 – 345 g ai / ha of MCPA LVE + 1% high quality MSO adjuvant	Bromoxynil herbicides containing bromoxynil as the N-octanoyl ester as the only active ingredient	Observe use restrictions and plant back comments on mix partner labels. Mixtures with picolinofen or diflufenican may cause increased foliar burn, however crop yield will not be adversely affected. 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.
	Ally, Associate 600g/kg Metsulfuron	
	Jaguar* 25g/L diflufenican + 250g/L Bromoxynil present as the octanoate	
	Sencor 480 480g/L metribuzin	
	Topik 240 240g/L clodinafop-propargyl + 60g/L cloquintocet	
	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 formulations of other manufacturer's products are beyond the control of BASF, and the quality of water may vary with location, all mixtures should be tested prior to mixing commercial quantities. Physical compatibility of products does not necessarily guarantee biological compatibility. When determining physical compatibility of a product not listed above, or in mixes with FREQUENCY Herbicide more than a three-way mix, conduct a jar test 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.