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Terpal®

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MAPP 16463
A soluble concentrate containing 305 g/litre (28% w/w) mepiquat chloride plus 155 g/litre (14.2% w/w) 2-chloroethylphosphonic acid. A plant growth regulator for use in winter wheat, winter and spring barley, triticale and winter rye.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

SAFETY PRECAUTIONS

Operator protection

2-chloroethylphosphonic acid is an anticholinesterase organophosphorus compound. DO NOT USE if under medical advice NOT to work with such compounds.
Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:
WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate or handling contaminated surfaces.
However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.
WASH HANDS AND EXPOSED SKIN before meals and after work.

Environmental protection

Do not contaminate water with the product or its container.
Do not clean application equipment near surface water.
Avoid contamination via drains from farmyards and roads.

Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times.
Add washings to sprayer at time of filling and dispose of container safely.
Keep dry and frostproof in a suitable pesticide store.

MEDICAL ADVICE

Medical advice can be obtained from the National Poisons Information Service (NPIS). Telephone number 0870 600 6266.

This label is compliant with the CPA Voluntary Initiative Guidance

Supplied by:
BASF plc, 4th and 5th Floors, 2 Stockport Exchange, Railway Road, Stockport, SK1 3GG
Telephone: 0161 475 3000

Emergency Information (24 hours freephone): 0049 180 227 3112
Technical Enquiries: 0845 602 2553 (office hours)

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The Voluntary Initiative

7/10/2024

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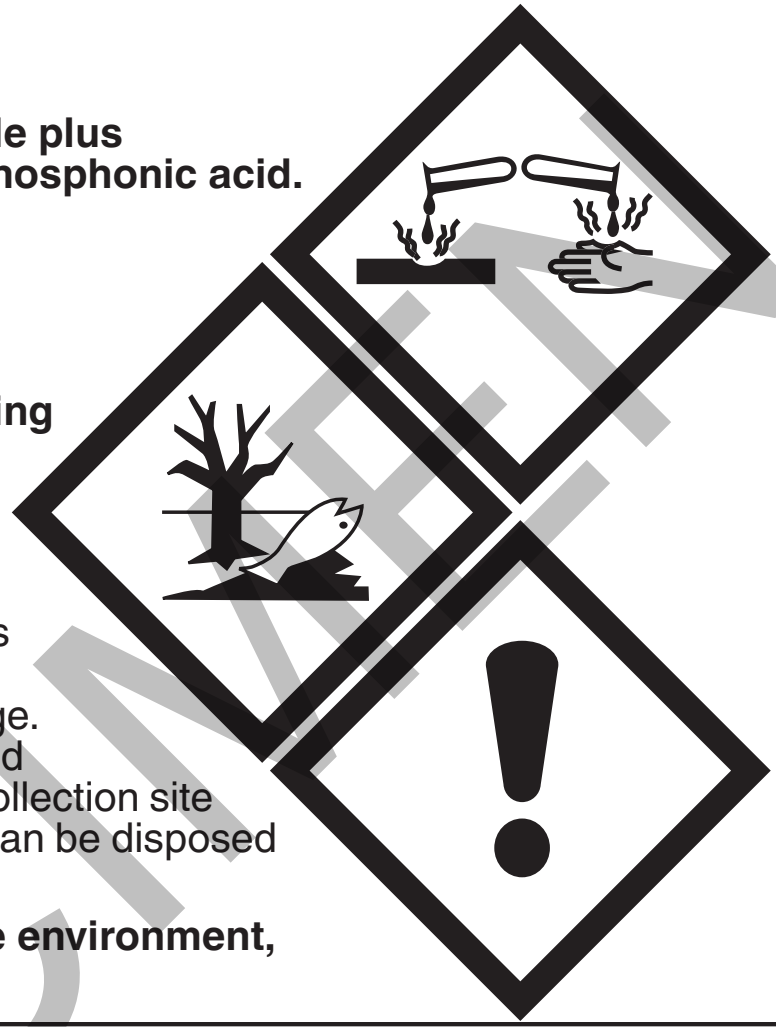
305 g/litre (28% w/w) mepiquat chloride plus
155 g/litre (14.2% w/w) 2-chloroethylphosphonic acid.



Warning

May be corrosive to metals.
Harmful if swallowed.
Very toxic to aquatic life with long lasting effects.

Keep only in original container
Wash with plenty of water and soap thoroughly after handling.
Do not eat, drink or smoke when using this product.
Absorb spillage to prevent material damage.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

To avoid risks to human health and the environment, comply with the instructions for use.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL PLANT GROWTH REGULATOR, as directed below:

Crops	Max. Individual Dose Per Hectare	Max. Number of Treatments	Latest Time of Application
Winter wheat and Winter barley: single application	2.0 litres product **or** 1.5 litres product	One per crop One per crop	Before flag leaf ligule just visible stage (before GS 39). Before ear emergence (before GS51).
Winter wheat: split dose applications	1.0 to 1.5 litres product Plus 0.5 to 1.0 litre product	One per crop* One per crop*	Before flag leaf ligule just visible stage (before GS 39). Before flag leaf sheath opening stage (before GS 47).
Winter barley: split dose applications	1.0 to 1.5 litres product Plus 0.5 to 1.0 litre product	One per crop* One per crop*	Before flag leaf ligule just visible stage (before GS 39). Before ear emergence (before GS51).
Triticale	2.0 litres product **or** 1.5 litres product	One per crop One per crop	Before flag leaf ligule just visible stage (before GS 39). Before ear emergence (before GS51).
Spring barley	1.5 litres product **or** 1.0 litre product	One per crop One per crop	Before flag leaf ligule just visible stage (before GS 39). Before ear emergence (before GS51).
Winter rye	2.0 litres product	One per crop	Before flag leaf ligule just visible stage (before GS 39).

Other Specific Restrictions:
* Maximum total dose must not exceed 2.0 litres product per hectare when applying split dose applications to winter wheat and winter barley – see 'Directions for Use' for details.

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

UFI: SV28-30M2-D008-QC3G

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

Terpal is a growth regulator which shortens and stiffens the straw of barley, winter wheat, triticale, and winter rye by reducing the length of internodes. Terpal will prevent or suppress early lodging during the vital crop heading stage and thus allow optimum fertiliser use for production of maximum yields in intensive growing systems. Lodging control and yield increase may be enhanced by using a programme of approved chlormequat chloride-based plant growth regulator followed by Terpal. This programme cannot be used on spring barley.

In winter barley and winter wheat, where Terpal is applied for the prevention of lodging, yield increases will often result when only a low level of lodging occurs, provided conditions are suitable for Terpal application at and after treatment. In winter barley this is particularly when used in a programme with an approved chlormequat chloride-based plant growth regulator.

The optimum effect of Terpal may be expected in a vigorous, actively growing crop, having a good plant population with an adequate nutrient and moisture supply. The greatest response will be seen in crops sprayed at the correct timing and when good growing conditions prevail at and after application.

Restrictions/Warnings

Terpal is recommended for use as a component of an intensive growing system where provision of optimum basic and nitrogen fertilisation has been made together with appropriate disease control measures. The nitrogen fertiliser rates should not, however, be increased without careful consideration of all the factors affecting the condition and the growth of the crop.

Application should be carried out with a field sprayer operating according to the manufacturer's instructions. Ensure that the boom height is correctly adjusted.
Verification of node stages and emergence of the flag leaf is best done by splitting the stem.

Late secondary tillering can occur naturally in crops grown on soils subject to moisture stress and Terpal may accentuate this. This effect will be of more importance in barley varieties being grown for malting, where the presence of green heads may result in rejection of the crop for malting purposes. The prior use of an approved chlormequat chloride-based plant growth regulator (winter barley only) may help to reduce this problem in Terpal treated crops.

Do not apply Terpal to any crop suffering from herbicide damage or physical stress caused by waterlogging, drought or other conditions. Crops with a substantial moisture deficit should not be treated.
Avoid spray drift on to neighbouring crops.
Do not apply Terpal if rain or frost is expected, nor if the crop is wet, or if significant foot disease problems are expected, particularly with Take all.
Do not apply Terpal to winter varieties sown in the spring.
Do not apply Terpal to crops on soils of low fertility unless these crops regularly receive adequate dressings of basic and nitrogen fertilisers.
Do not apply Terpal to barley, triticale, or winter rye grown on soils containing more than 10 per cent organic matter. Winter wheat grown on organic soils may be treated.
Do not apply Terpal at temperatures above 21°C. In these conditions it is best to apply Terpal in the evening.
Do not use straw from Terpal treated cereals as a horticultural growth medium or as a mulch.
Terpal may be applied to crops undersown with grasses and clovers.
Some delay in ear emergence may be noticed due to the shortening effect on the higher internodes.
Partial lodging may occur at later stages, though this leaning effect may be desirable to prevent ear loss from stiff strawed crops.
Do not apply Terpal when the leaf sheaths have split and the ears are visible.
Wash equipment thoroughly after use.
Addition of a non-ionic adjuvant can enhance the efficacy of Terpal. When using Terpal, an approved non-ionic adjuvant such as Activator 90 may be added to the spray tank at the rate of 40 ml per 100 litres spray solution.

Crop Specific Information

Winter Barley and Winter Wheat

Time of Application
Terpal may be applied to winter barley or winter wheat either as a single or split dose treatment. The preferred application method is to apply Terpal using the split dose.

Split Dose Treatment
The first dose should be applied from the second node detectable stage on the majority of tillers (BBCH GS 32) up to and including when the flag leaf is just visible on the majority of tillers (BBCH GS 37). Where an approved chlormequat chloride-based plant growth regulator has been applied previously to the crop, the preferred application will be towards the later end of this timing.

The second dose should be applied after the flag leaf is just visible (BBCH GS 37) up to and including first awns visible stage in winter barley (BBCH GS 49), or boots swollen in winter wheat (BBCH GS 45).
Do not apply Terpal when the leaf sheaths have split and the ears are visible.
If growing malting barley varieties, pay particular attention to Section 1, Restrictions/ Warnings.

Single Dose Treatment
The optimum application timing is from the second node detectable stage on the majority of tillers (BBCH GS 32) up to and including when the flag leaf is just visible on the majority of tillers (BBCH GS 37). Where an approved chlormequat chloride-based plant growth regulator has been applied previously to the crop, the preferred application will be towards the later end of this timing.

If it has proven impractical to apply Terpal at the optimum timing, application at a reduced rate (see below) can still be made after the flag leaf is just visible up to and including first awns visible in winter barley (BBCH GS 49), or boots swollen in winter wheat (BBCH GS 45), but control of lodging may not be as good as with the earlier timings.
Do not apply Terpal when the leaf sheaths have split and the ears are visible.
If growing malting barley varieties, pay particular attention to Section 1, Restrictions/ Warnings.

Spring Barley

Time of Application
The optimum application timing is from the second node detectable stage on the majority of tillers (BBCH GS 32), up to and including when the flag leaf is just visible on the majority of tillers (BBCH GS 37).

If it has proven impractical to apply Terpal at the optimum timing, an application can still be made up to and including first awns visible (BBCH GS 49), but lodging control may not be as good as with the earlier timings. Also, crops treated at the later timing are more likely to be subject to moisture stress; therefore particular attention should be paid to growing conditions when applying Terpal at this later timing.
Do not apply Terpal when the leaf sheaths have split and the ears are visible.
If growing malting barley varieties, pay particular attention to Section 1, Restrictions/ Warnings.

Triticale

Time of Application

The optimum application timing is from the second node detectable stage on the majority of tillers (BBCH GS 32) up to and including when the flag leaf is just visible on the majority of tillers (BBCH GS 37). Where an approved chlormequat chloride-based plant growth regulator has been applied previously to the crop, the preferred application will be towards the later end of this timing.

If it has proven impractical to apply Terpal at the optimum timing, application at a reduced rate (see below) can still be made after the flag leaf is just visible up to and including the boots swollen stage (BBCH GS 45), but control of lodging may not be as good as with the earlier timings.

Do not apply Terpal when the leaf sheaths have split and the ears are visible.

Winter Rye

Time of Application

Apply Terpal from the second node detectable stage on the majority of tillers (BBCH GS 32) up to and including when the flag leaf is just visible on the majority of tillers (BBCH GS 37). Where an approved chlormequat chloride-based plant growth regulator has been applied previously to the crop, the preferred application will be towards the later end of this timing.

Rates of Application

Apply Terpal as outlined below in a minimum of 220 litres of water per hectare. When using Terpal, an authorised non-ionic wetter must be added to the spray tank at the rate of 40 ml per 100 litres spray solution.

CROP	RATE OF TERPAL litres per hectare			
	Second node detectable to flag leaf just visible		After the flag leaf just visible to boots swollen (winter wheat and triticale) or awns just visible (winter and spring barley	
Winter wheat				
Where an approved chlormequat chloride based plant growth regulator has not been applied or in a programme following such an application where there is a high risk of severe lodging	Split dose	1.0–1.5	Followed by	0.5–1.0[1]
	Single dose	2.0	or	1.5
In a programme following an approved chlormequat chloride based plant growth regulator:Other lodging situations	Single dose	1.5	or	1.0
Winter barley	Split dose	1.0–1.5	Followed by	0.5–1.0[1]
	Single dose	2.0	or	1.5
Spring barley	1.0 or 1.5[2]		or	1.0
Triticale	2.0		or	1.5
Winter rye	2.0		Not recommended	

[1]Do not exceed a total of 2.0 litres Terpal per hectare.
[2]Use the higher rate where there is a high risk of early lodging.
DO NOT apply this rate after the flag leaf just visible stage.

Qualified Approval
Terpal may be applied at up to 2.0 l/ha in 100 litres of water per hectare although efficacy at this reduced volume has not been evaluated. Application of this product at reduced-volume is at user's risk with regard to biological efficacy and crop safety.

Mixing and Application

Mixing

Never prepare more spray solution than is required.
Three quarters fill the tank with clean water and start the agitation.
To ensure thorough mixing of the product, invert the container several times before opening.
Add the required quantity of Terpal to the spray tank while re-circulating, and separately, the required amount of approved non-ionic adjuvant such as Activator 90.
Add the remainder of the water and continue agitation until spraying is complete.
When tank mixes are to be used, take due note of any instructions given as to the order of mixing.
Each product should be added separately to the spray tank and fully dispersed before the addition of any further product(s).
All tank mixes should be used immediately after mixing.
NOTE: Always add an approved non-ionic adjuvant such as Activator 90 when using Terpal in tank mix.
Rinse empty containers thoroughly, using an integrated pressure rinsing device or by manually rinsing three times.
Add washings to tank at time of filling and dispose of container safely.

Application

Apply as a MEDIUM spray, as defined by BCPC.

Compatibility

For details of compatibilities contact your local BASF representative or the BASF Technical Services Hotline: 0845 602 2553 or visit our website www.agricentre.basf.co.uk.

The following does not form part of the authorised label text.

With many products there is a general risk of resistance developing to the active ingredients. For this reason a change in activity cannot be ruled out. It is generally impossible to predict with certainty how resistance may develop because there are so many crop and use connected ways of influencing this. We therefore have to exclude liability for damage or loss attributable to any such resistance that may develop. To help minimise any loss in activity the BASF recommended rate should in all events be adhered to.

Numerous, particularly regional or regionally attributable, factors can influence the activity of the product. Examples include weather and soil conditions, crop plant varieties, crop rotation, treatment times, application amounts, admixture with other products, appearance of organisms resistant to active ingredients and spraying techniques. Under particular conditions a change in activity or damage to plants cannot be ruled out. The manufacturer or supplier is therefore unable to accept any liability in such circumstances. All goods supplied by us are of high grade and we believe them to be suitable, but as we cannot exercise control over their mixing or use or the weather conditions during and after application, which may affect the performance of the material, all conditions and warranties, statutory or otherwise, as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use; but nothing should be deemed to exclude or restrict any liability upon us which cannot be excluded or restricted under the provisions of the Unfair Contract Terms Act 1977 or any similar applicable law.

Section 6 of the Health and Safety at Work Act

Additional Product Safety Information

The product label provides information on a specific pesticidal use of the product; do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has “off-label” approval or is otherwise permitted under the Plant Protection Product Regulations (EC) No 1107/2009.

The information on this label is based on the best available information including data from test results.

Great Britain Safety Data Sheet

To access the Safety Data Sheet for this product scan the QR code or use the weblink below:

agricentre.basf.co.uk/Terpal/MSDS

Alternatively, contact your supplier.

Northern Irleand Safety Data Sheet

To access the Safety Data Sheet for this product scan the QR code or use the weblink below:

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WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate or handling contaminated surfaces.
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WASH HANDS AND EXPOSED SKIN before meals and after work.

Environmental protection

Do not contaminate water with the product or its container.
Do not clean application equipment near surface water.
Avoid contamination via drains from farmyards and roads.

Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times.
Add washings to sprayer at time of filling and dispose of container safely.
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