

# Terpal®

For use on winter and spring wheat, winter and spring barley and triticale

A soluble concentrate containing 305 g/litre (28% w/w) mepiquat chloride and 155 g/litre (14.2% w/w) 2-chloroethylphosphonic acid.

Mepiquat chloride is a quaternary ammonium plant growth regulator. 2-chloroethylphosphonic acid is an ethylene generating plant growth regulator.

#### Risk and Safety Information

##### 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 triple rinsed empty containers which can be disposed of as non-hazardous waste.

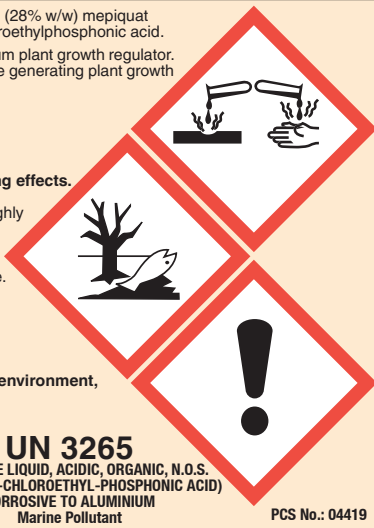
To avoid risks to human health and the environment, comply with the instructions for use.

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## UN 3265

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(CONTAINS 2-CHLOROETHYL-PHOSPHONIC ACID)  
CORROSIVE TO ALUMINIUM  
Marine Pollutant

PCS No.: 04419



Supplied by:  
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Crop Protection Products  
Wedgwood Way  
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Herts SG1 4QN  
Tel: 0044 1438 734450 or  
enquiry.agproducts@gbr.dupont.com  
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Authorization holder:  
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We create chemistry

® = Registered trademark of BASF

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## READ ALL PRECAUTIONS BEFORE USE

### PRECAUTIONS

WEAR PROTECTIVE GLOVES AND FACESHIELD when handling the concentrate.  
WHEN USING DO NOT EAT, DRINK OR SMOKE.  
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.  
WASH HANDS AND EXPOSED SKIN before meals and after work.  
KEEP OUT OF REACH OF CHILDREN.  
HARMFUL TO AQUATIC ORGANISMS, may cause long term adverse effects in the aquatic environment.  
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).  
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.  
RINSE OUT CONTAINER THOROUGHLY, by using an integrated pressure rinsing device or manually rinsing three times. Add washings into spray tank and dispose of safely.  
DO NOT RE-USE CONTAINER.

FOR PROFESSIONAL USE ONLY

### STORAGE

Keep dry and frostproof in a suitable pesticide store.

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

<u>Crops</u>	<u>Maximum individual dose</u>	<u>Maximum total dose</u>	<u>Latest time of application</u>
Winter wheat, Winter barley, Triticale	2.0 Litres product per hectare	2.0 Litres product per hectare	Up to and including flag leaf ligule just visible stage (BBCH 39)
Spring wheat, Spring barley	1.5 Litres product per hectare	1.5 Litres product per hectare	Up to and including flag leaf ligule just visible stage (BBCH 39)

Applications to winter barley can be made up to and including first awns visible stage (BBCH 49) at a reduced rate of 1.5 Litres of product per hectare.

**READ ALL PRECAUTIONS BEFORE USE**

**PCS No. 04419**





Terpal is a growth regulator which shortens and stiffens the straw of barley, wheat and triticale, 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. Partial lodging may occur at later stages, though this leaning effect may be desirable to prevent ear loss from stiff strawed crops.

Lodging control and yield increase may be enhanced by using a programme of CeCeCe 750 followed by Terpal.

## 1. DIRECTIONS FOR USE

Apply as a **MEDIUM** spray, as defined by BCPC.

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.

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.

Terpal has been safely applied and has given benefits on all winter and spring barley and winter wheat and triticale varieties with or without previous CeCeCe 750 growth regulator application.

Addition of a non-ionic adjuvant can enhance the efficacy of Terpal. When using Terpal an authorised non-ionic adjuvant may be added to the spray tank at the rate of 40 ml per 100 litres spray solution.

## 2. APPLICATION

### Time of Application

Timing of application is particularly critical. Terpal may be applied from when the second node becomes detectable on the majority of tillers (BBCH 32) up to and including when the ligule of the flag leaf is just visible on the majority of tillers (BBCH 39).

### Optimum time

For the best results Terpal should be applied when the flag leaf is just visible but still rolled up (BBCH 37). Early applications (BBCH 32) are only recommended to dense and vigorously growing crops which are prone to early lodging.





### Rate of application

Crop	Application rate of Terpal Litres per ha
Winter barley*	2.0
Spring barley	1.5
Spring wheat	1.5
Winter wheat, weak straw varieties	2.0
Winter wheat, stiff straw varieties	1.5
Wheat, after previous application of CeCeCe 750 growth regulator	0.75–1.5
Triticale	2.0

\* If it has proven impractical to apply Terpal at the optimum timing, applications at the later stage up to first awn emergence should be made in winter barley with only 1.5 litres/ha of Terpal. The level of lodging control attained however may be reduced under these circumstances.

Application should be made in not less than 200 litres of water per hectare (but see Qualified Approval below)

#### 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.

### 3. MIXING

Half fill the spray tank with clean water and start the agitation. Pour in the required amount of Terpal and, separately, the correct amount of authorised non-ionic wetter. Add the remainder of the water and continue agitation until spraying is completed.

When tank mixes are to be used, each product should be added separately to the spray tank taking due note of any instructions given as to the order of mixing.

### 4. MIXTURES WITH OTHER SPRAY CHEMICALS

#### 4.1 Compatible Mixtures

Provided that all product recommendations are followed, Terpal is fully compatible in two-way mix with Corbel®<sup>1</sup>. Add the Terpal to the spray tank after these products. **ALL TANK MIXES SHOULD BE USED IMMEDIATELY AFTER MIXING.**

Terpal may also be used in sequence after CeCeCe 750 in winter barley, triticale and winter rye.

#### NOTES

An alternative authorised non-ionic wetter may be added when using Terpal in tank mix.





## 5. IMPORTANT NOTES

- 5.1 **Terpal should not be used on cereal crops whose straw is to be composted for the production of mushrooms.**
- 5.2 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 CeCeCe 750 may help to reduce this problem in Terpal treated crops.
- 5.3 Do not apply Terpal to any crop suffering from herbicide damage or physical stress caused by water-logging, drought or other conditions. Crops with a substantial moisture deficit should not be treated.
- 5.4 Avoid spray drift on to neighbouring crops.
- 5.5 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.
- 5.6 Do not apply Terpal to winter varieties sown in the spring.
- 5.7 Do not apply Terpal to crops on soils of low fertility unless these crops regularly receive adequate dressings of basic and nitrogen fertilisers.
- 5.8 Do not apply Terpal to crops grown on organic soils.
- 5.9 Do not apply Terpal at temperatures above 21°C. In these conditions it is best to apply Terpal in the evening.
- 5.10 Do not use straw from Terpal treated cereals as a horticultural growth medium or as a mulch.
- 5.11 Terpal may be applied to crops undersown with grasses and clovers.
- 5.12 Some delay in ear emergence may be noticed due to the shortening effect on the higher internodes.
- 5.13 Partial lodging may occur at later stages, though this leaning effect may be desirable to prevent ear loss from stiff strawed crops.
- 5.14 Wash equipment thoroughly after use.

## 6. TRADEMARK ACKNOWLEDGEMENTS

®<sup>1</sup> = registered trademark of Maag, Dielsdorf, Switzerland.





**The following does not form part of the product label under S.I. No. 159 of 2012.**

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.

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 S.I. No. 159 of 2012.

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

# Safety data sheet

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



[http://www.agricentre.basf.ie/go/terpal\\_sds](http://www.agricentre.basf.ie/go/terpal_sds)

Alternatively, contact your supplier.



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Tel: 0044 1438 734450 or  
enquiry.agproducts@gbr.dupont.com  
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