


CLAYTON ENIGMA

A systemic foliar applied herbicide for the post-emergence control of annual and perennial grass weeds in oilseed rape, swedes, turnips, linseed, combining peas, field beans, potatoes, sugar beet, fodder beet, carrots and bulb onions.

An emulsifiable concentrate containing 100 g/l (9.7% w/w) propaquizafop. Also contains propylene carbonate and hydrocarbons, C10-C13, aromatics, <1% naphthalene. MAPP 17391

	<p>Danger Contains propaquizafop May be fatal if swallowed and enters airways. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. Repeated exposure may cause skin dryness or cracking.. May produce an allergic reaction.</p> <p>Keep out of reach of children. Avoid breathing vapours/spray. Wear protective gloves/protective clothing/eye protection/face protection. IF SWALLOWED: immediately call a poison centre or doctor/physician. IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do NOT induce vomiting. 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.</p> <p>To avoid risks to human health and the environment, comply with the instructions for use.</p>
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<p>Approval Holder :- Clayton Plant Protection Ltd., Bracetown Business Park Clonee, Dublin 15. Ireland. Tel: (00 353) 1 8210127 Email: info@cpp.ag www.cpp.ag</p>	<p>Pack size :- e</p> <p>Batch no * see footnote</p>
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Conditions of Supply

All goods supplied by us are of high grade and we believe them to be suitable but as we cannot exercise control over their storage handling mixing or use or of the weather conditions before during and after application which may affect the performance of the goods 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 or resellers for any failure in performance damage or injury whatsoever arising from their storage handling application or use; these conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

* Clayton batch numbers have complete traceability back to the original manufacturer's batch numbers and are available to CRD on request. Clayton Enigma with MAPP numbers 17391 & 17435 have been confirmed by CRD to be identical to the reference product MAPP No: 16459.

SAFETY PRECAUTIONS

Operator Protection

Engineering control of operator exposure must be used where reasonably practicable, in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES, RUBBER BOOTS AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying by hand-held equipment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.

TAKE OFF IMMEDIATELY all contaminated clothing.

WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.

WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

WHEN USING, DO NOT EAT, DRINK OR SMOKE.

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.

To protect aquatic organisms respect an unsprayed buffer zone distance to surface water bodies in line with LERAP requirements. DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5m of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk Assessment for Pesticides permits a narrower buffer zone, or within 1m of the top of a ditch which is dry at the time of application.

DO NOT ALLOW DIRECT SPRAY from hand-held sprayers to fall within 1m of the top of the bank of a static or flowing waterbody. Aim spray away from water. This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with HSE's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for three years.

Storage and Disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely.

DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL AND HORTICULTURAL HERBICIDE

Crops	Maximum individual dose	Max number of applications	Latest time of application	Aquatic buffer zone distance
Oilseed rape (winter)	1.5 L/ha	One per crop	Before flower buds visible stage and 90 days before harvest	5 metres
Oilseed rape (spring)	1.5 L/ha	One per crop	Before eight fully expanded leaves stage and 90 days before harvest	
Field Beans	1.5L/ha	One per crop	Before flower buds visible stage and 7 weeks before harvest	
Linseed	1.5 L/ha	One per crop	Before flower buds visible stage and 16 weeks before harvest	
Sugar beet, fodder beet	1.5 L/ha	One per crop	60 days before harvest	
Swede, turnip Potato (early and maincrop), Carrot, Bulb onion	1.5 L/ha	One per crop	30 days before harvest	
Combining peas	1.5 L/ha	One per crop	7 weeks before harvest	

* See Restrictions section for qualified minor use.

Other specific restrictions: To avoid the build-up of resistance do not apply products containing an ACCase inhibitor herbicide more than twice to any crop. In addition, do not use this product in mixture or sequence with any other product containing propaquizafop.

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.

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. Clayton Enigma is a systemic foliar applied herbicide for the post-emergence control of annual and perennial grass weeds in oilseed rape, swedes, turnips, linseed, combining peas, field beans, potatoes, sugar beet, fodder beet, carrots and bulb onions. Weeds must be emerged at the time of application.

RESTRICTIONS OR WARNINGS

CLAYTON ENIGMA is foliar acting hence the dose is independent of soil type. Avoid overlaps and spray drift onto neighbouring crops, especially cereal crops.

Peas and beans : If CLAYTON ENIGMA is applied during periods of high temperatures and/or low soil moisture content chlorotic spotting of the crop may result, particularly on combining peas and field beans. There is no adverse effect on subsequent growth or yield of combining peas.

Carrots and onions : Crop effects may occur if the couch dose rate is applied at early growth stages in carrots and onions.

Potatoes : Do not apply CLAYTON ENIGMA to seed crops. Crops suffering from frost damage should not be treated.

Resistance warning : This product contains propaquizafop which is an ACCase inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group A'. Use only as part of a resistance management strategy that includes cultural methods of control and does not use ACCase inhibitors as the sole chemical method of grass weed control. Applying a second product containing an ACCase inhibitor to a crop will increase the risk of resistance development. Only use a second ACCase inhibitor to control different weeds at a different timing. Strains of some annual grasses (e.g. wild oats and Italian ryegrass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop advisor or product manufacturer.

Specifically: To reduce the risk of developing resistance applications should be made to young, actively growing weeds. Use crop rotation and other cultural control measures to prevent and manage herbicide resistant grass weeds. Always follow WRAG guidelines for preventing and managing herbicide resistant grass weeds. Do not use CLAYTON ENIGMA or any other ACCase inhibitor as the sole means of grass weed control in successive crops. Use grass weed herbicides with different modes of action throughout the cropping rotation. Use tank/product mixes or sequences of herbicides with different modes of action within individual crops, or successive crops.

Monitor weed control effectiveness and investigate any odd patches of poor grass weed control. If unexplained, contact your agronomist who may consider a resistance test appropriate.

WEED CONTROL

Speed of kill will be more rapid when weeds are growing actively under warm conditions with adequate moisture. Treatment under cool conditions will give slower activity. In poor conditions use the higher dose. Weeds germinating after application will not be controlled. Broad-leaved weeds will not be controlled. The following weeds are controlled up to growth stages indicated at the dose indicated.

Weed	Weed growth stage Optimum timing	Latest timing	Dose L/ha (note 1)
Volunteer barley	2 leaves unfolded to end of tillering	Stem erect	0.5 – 1.0
Volunteer wheat and rye	2 leaves unfolded to end of tillering	Stem erect	0.7 – 1.0
Wild oats	2 leaves unfolded to early tillering	Stem erect	0.7 – 1.0
Barley cover crops (note 2)	2 leaves unfolded to stem erect	2nd node detectable	1.0 – 1.2
Ryegrass (from seed)	2 leaves unfolded to early tillering	Before stem erect	1.2 – 1.5
Common couch	3 leaves unfolded (when majority of shoots have emerged and are approximately 15 cm tall)		1.5
Sterile brome (<i>Bromus sterilis</i>)	2 expanded leaves to fully tillered		0.7 – 1.0

Notes: (1) Use highest dose specified if weeds are beyond optimum growth stage or under poor growing conditions eg cool temperatures, dry soil or are over-wintered or are severe weed infestations in non-competitive crops.

(2) Barley cover crops: spray when risk of wind blow has passed and before there is serious competition with the crop.

Annual Meadow grass will be checked at doses of 0.7 – 1.0 L/ha and severely checked at 1.5 L/ha. These effects will be reduced if annual meadow grass is beyond 3 leaves unfolded stage at spraying.

Blackgrass. CLAYTON ENIGMA can contribute to the control of blackgrass as part of a herbicide resistance management strategy, involving mixtures or sequences with herbicides of alternative modes of action. If resistant biotypes are present CLAYTON ENIGMA will give poor control.

CROP SPECIFIC INFORMATION

CLAYTON ENIGMA may be applied to the following crops as indicated:

Crop	Crop growth stage for optimum timing	Crop latest application timing (PHI = Pre-Harvest Interval)
Oilseed rape, winter	Expanded cotyledons*	Before flower buds visible stage (PHI = 90 days)
Oilseed rape, spring	Expanded cotyledons*	Before 8 fully expanded leaves stage (PHI = 90 days)
Swedes, turnips	2 pairs of leaves	Before weeds are covered by the crop (PHI = 30 days)
Linseed	3 leaves	Before flower buds visible stage (PHI = 16 weeks)
Peas, combining	2 pairs of leaves (3rd node)	At flower buds visible stage (PHI = 7 weeks)
Field beans, winter and spring	2 pairs of leaves	Before flower bud visible stage (PHI = 7 weeks)
Potatoes (not seed crops)	15-20 cm high	Before weeds are covered by the crop (PHI = 30 days)
Sugar beet, fodder beet	2 true leaves	Before weeds are covered by the crop (PHI = 60 days)
Carrots	1 true leaf	PHI = 30 days
Onions, bulb	Immediately post crook	PHI = 30 days

*1.5 L/ha (the common couch dose) must not be applied to crops of winter or spring oilseed rape before the 5 leaf stage of the crop.

FOLLOWING CROPS : Minimum interval before replanting any of the following crops:

Winter wheat, winter barley	2 weeks
Peas, field beans, maize and winter oilseed rape	4 weeks
Ryegrass	8 weeks
Winter oats	16 weeks

MIXING AND SPRAYING

CLAYTON ENIGMA should be applied as a FINE or MEDIUM spray (as defined by BCPC) in 100-200 litres water per hectare. Good spray cover is essential for good results. Use the higher spray volume in dense crop or weed situations.

Half fill the spray tank with clean water and begin agitation. Add required quantity of CLAYTON ENIGMA to the tank and complete the filling. Continue agitation until spraying is completed. Spray immediately after mixing.

RINSE EMPTY CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling. Dispose of container safely. Sprayers should be thoroughly cleaned before use and filters and nozzles checked for damage and blockage.

For knapsack sprayers: Half fill the sprayer tank with clean water. Add the measured amount of product to the sprayer tank and fit the tank lid. Gently shake the sprayer to ensure thorough mixing. Top up with water to the correct level. Refit the tank lid and again gently shake the sprayer to ensure thorough mixing. At a walking speed of 1 m/sec, apply a swath of 1 m width.