

orion AGRISCIENCE



HARMFUL | ECOTOXIC
KEEP OUT OF REACH OF CHILDREN

CrusaderTM

HERBICIDE

A selective herbicide for the control of wild oats in WHEAT, BARLEY and RYEGRASS SEED CROPS.

Active Ingredient:

200 g/litre of flamprop-M-isopropyl in the form of an emulsifiable concentrate.



20 Litres



PLEASE READ THE LABEL COMPLETELY BEFORE USE

HAZARD CLASSIFICATIONS: 6.1E, 6.3B, 6.4A, 9.1B

WARNING: HARMFUL, ECOTOXIC

May be harmful if swallowed, inhaled or absorbed through the skin. May cause eye and mild skin irritation. Toxic to aquatic organisms.

PRECAUTIONS

APPROVED HANDLER: This product must be under the control of an approved handler during use.

STORAGE: Keep out of reach of children. Store in the original, tightly closed container, in a secure area. Storage of certain quantities of this product trigger specific storage requirements (Refer to Safety Note). When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of product that is older than this.

PERSONAL PROTECTION: Avoid contact with eyes and skin. Avoid inhalation of vapour or spray mist. When mixing or applying, wear overalls, boots, gloves and eye protection. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work.

EQUIPMENT: Apply with well maintained and calibrated spray equipment.

DISPOSAL: Dispose of this product only by using in accordance with this label, or at a suitable landfill. Triple rinse container and add rinseate to the spray tank. Dispose of container to a suitable landfill or agricultural recycling scheme. Do not burn. Do not use container for any other purpose.

ENVIRONMENTAL: Use this product carefully. Do not contaminate aquatic environments with product, spray drift or empty container. Do not allow spray drift outside the target area to occur.

First Aid

If swallowed do not induce vomiting. If splashed in eyes, wash out immediately with running water for several minutes. If skin or hair contact occurs, remove contaminated clothing and wash with soap and running water. If inhaled, immediately move to fresh air and rest. Maintain half upright position if breathing is difficult. Call the National Poisons Centre **0800 POISON (0800 764 766)** (24 hrs) or a doctor immediately for advice.

Emergency Response

In a transport emergency call **111, Police or Fire Brigade**. For specialist advice in an emergency only, call **0800 CHEMICAL (0800 243 6225)** (24 hrs).

Spillage

Exclude non-essential people from the area. Wear protective clothing and prevent material from entering waterways. Absorb spill with inert material such as soil, sand, etc, and place in a waste container. Wash area with water and detergent, and absorb with further inert material. Dispose of safely to a suitable landfill.

Safety Data Sheet

Additional information is provided in the safety data sheet. Freephone **0800 ORIONAS (0800 674 6627)** or visit www.orionagriscience.co.nz

GENERAL INFORMATION

Crusader is a selective herbicide which controls wild oats in wheat, barley and ryegrass seed crops.

DIRECTIONS FOR USE

Crusader must be applied when both the crop and wild oats are actively growing. Good control may not be achieved if wild oats are beyond the 1st node stage of development. The timing of application is critical to good results, as selectivity derives from differences in the growth stage and rate of growth between the crop and wild oats. Applied at the correct stage of crop development, Crusader will kill wild oats, or stunt them to such an extent that they do not compete with the crop. Application at the incorrect growth stage of the crop can result in crop damage.

Where crops are under stress, or are relatively open, control will be less effective, as crop competition is important in getting a good result. Crusader must **NOT** be used on any cereal crops other than wheat or barley.

APPLICATION METHODS

Crusader can be applied with conventional ground spraying equipment. Uniform coverage is essential. Apply at 200 – 400 litres/ha; use higher rates where the crop canopy is dense. Apply at a nozzle pressure of at least 275 kPa so as to produce a fine penetrating spray.

MIXING

Shake well before use. To ensure mixing pour the correct amount into the partly filled tank and add the remainder of the water while agitating. Agitate thoroughly before and during spraying and before spraying after a stoppage. If tank mixing with other products, add water dispersible formulations first, and mix thoroughly before adding Crusader.

COMPATIBILITY

Crusader can be tank mixed with most commonly used fungicides. Do **NOT** apply herbicides containing dicamba within 14 days (before or after) of applying Crusader. If applied with fertilisers, crop scorching may occur. Crusader can be tank mixed with growth regulators such as Amend™ or Cyocel® 750 in

which **ONLY**, in barley, plant growth regulators such as Align™ or Terpal® must **NOT** be tank mixed, but can be applied 5 days after Crusader.

CROP	RATE	TIMING OF APPLICATION
Wheat Vigorous, dense, well tillered crop growing under stress free conditions. Crop growing under unfavourable conditions (eg, water stress), or open crops.	4 L/ha	Apply when crop is between mid-tillering (Zadoks GS 23), and before the third node (Zadoks GS 33).
	6 L/ha	
Barley Vigorous, dense, well tillered crop growing under stress free conditions. Crop growing under unfavourable conditions (eg, water stress), or open crops.	4 L/ha	Apply when crop is between mid-tillering (Zadoks GS 23), and before the second node (Zadoks GS 32).
	6 L/ha	
Ryegrass Seed Crops Vigorous, rapidly growing crop, with extensive top growth. Wild oats not past early tillering (Zadoks GS 21). Crop growing under unfavourable conditions (eg, water stress), or open crops. Wild oats past early tillering (Zadoks GS 21).	4 L/ha	Grazed Crops: Apply after closing to stock when the ryegrass is 12 – 25 cm high and before the most advanced wild oat tillers have reached second node stage of development (Zadoks GS 32) (usually before the end of October). For rapidly growing vigorous crops with extensive top growth, apply when the ryegrass is 12 cm high. In light, open or weak crops, spray when top growth can provide sufficient competition for the wild oats. This may not occur until the ryegrass is 25 cm high. Un-Grazed Crops: Apply when wild oats are between mid tillering (Zadoks GS 23) and first node stage (Zadoks GS 31), and both the crop and wild oats are actively growing.
	6 L/ha	

RAINFALL

Do **NOT** apply if rain is expected within 3 hours of spraying.

WITHHOLDING PERIOD

It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum residue Levels for Agricultural Compounds.

Do NOT graze or cut for stockfood within 6 weeks of application.

RESISTANCE MANAGEMENT

GROUP	Z	HERBICIDE
-------	---	-----------

Crusader contains flumprop-M-isopropyl, which belongs to the arylaminopropionic acids chemical family. Some naturally occurring weeds may become resistant when excessive use of the same herbicide occurs. To prevent or delay the development of resistance, use tank mixes and/or rotate use with herbicides with a different mode of action. Consult <http://resistance.nzpps.org/index.php> for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label.

WARRANTY

This formulation is warranted to contain the specified active ingredient within accepted analytical tolerance when packed. The user bears the risk for damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.

Registered pursuant to the ACVM Act 1997, No. P8081

See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSN Act 1996, No. HSR100061 or HSR100062

See www.epa.govt.nz for approval conditions.

™TACKLE, ALIGN, AMEND, and CRUSADER are Trade Marks of Orion Agriscience Ltd.

®CYCOCEL and TERPAL are Registered Trade Marks of BASF

Registrant: Agsin Pte Ltd, Zagro Global Hub, 5 Woodlands Terrace, Singapore 738430

Distributor: Orion AgriScience Limited, Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch 8053 www.orionagriscience.co.nz



AGRISCIENCE

1230

Batch No:

Date of manufacture:

CRUSADER