

# CAUTION

KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



# Torpedo™

## Herbicide

ACTIVE CONSTITUENTS: 300 g/L CLOPYRALID present as the monoethanolamine salt  
50 g/L FLORASULAM

**GROUP IB HERBICIDE**

A suspension concentrate formulation for post-emergent control or suppression of broadleaf weeds in barley, oats, triticale and wheat as specified in the Directions for Use.

Dow AgroSciences Australia Limited ABN 24 003 771 659

20 Rodborough Road FRENCHS FOREST NSW 2086

[www.dowagrosciences.com.au](http://www.dowagrosciences.com.au)

**CUSTOMER SERVICE TOLL FREE 1-800 700 096**

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## DIRECTIONS FOR USE

For Application to Barley, Oats, Triticale and Wheat only; from 3 leaf up to 1st node of the crop.

### RESTRAINTS

**DO NOT** apply to crops or weeds which may be stressed due to prolonged periods of extreme cold, moisture stress (water-logging or drought) or previous herbicide treatment, as crop damage or reduced levels of control may result (see CROP SAFETY for additional comments on barley and oats).

**DO NOT** sow susceptible crops into paddocks treated the previous season with Torpedo until after the required plantback period has elapsed - see under label heading "**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**" below.

**DO NOT** spray if rain is likely to occur within three hours or if heavy rain is likely to occur within 48 hours.

**DO NOT** apply later than the 1st node stage of the crops.

**DO NOT** apply by air, and

**DO NOT** apply this product by mister within a Chemical Control Area in Victoria without a valid permit.

**DO NOT** double overlap spray to avoid injury to following susceptible crops.

<b>Adjuvant:</b> Always use Uptake™ Spraying Oil at 500 mL/100 L (except when tank mixing with metsulfuron). For specific recommendations see COMPATIBILITY – Adjuvants section. <b>Torpedo in tank mix:</b> Apply tank mixes from the 3 leaf crop stage onwards.			
WEED	WEED STAGE	RATE (mL Torpedo/ha)	CRITICAL COMMENTS
Bedstraw ( <i>Galium</i> spp.)	Up to 6 whorl &/or 10 cm high	<b>100 mL (alone) or 75 mL +</b> either 500 mL MCPA LVE* or 350 to 500 mL Bromoxynil-MCPA*	Always use a higher rate for larger weeds or high weed density.
Capeweed ( <i>Arctotheca calendula</i> )	Up to 4 leaf &/or 8 cm diameter	<b>WA only: 75 mL +</b> either 500 mL MCPA LVE or 350 to 500 mL Bromoxynil-MCPA	Note: Large weeds at treatment time may not be completely controlled.
	Up to 6 leaf &/or 12 cm diameter	<b>100 mL +</b> either 500 mL MCPA LVE or 350 to 500 mL Bromoxynil-MCPA	
Doublegee/Spiny emex ( <i>Emex australis</i> )	Up to 4 leaf &/or 10 cm diameter	<b>75 mL + 5 g</b> Metsulfuron (600g/kg)	<b>Do not use this mix on oat crops.</b> Apply with BS1000® surfactant at 100 mL/100 L.
Indian hedge mustard ( <i>Sisymbrium orientale</i> )	Up to 6 leaf &/or 15 cm diameter	<b>75 to 100 mL + 500 mL</b> MCPA LVE	Where a range of rates is labelled, use the higher rates of Torpedo and/or its tank mix partner when weeds are large, at high density, crop is non-competitive or any of these situations in combination.
Snail medic ( <i>Medicago scutellata</i> )	Up to 5 leaf &/or 6 cm diameter	<b>75 to 100 mL +</b> either 500 mL MCPA LVE or 350 to 500 mL Bromoxynil-MCPA	
Turnip weed ( <i>Rapistrum rugosum</i> )	Up to 8 leaf &/or 15 cm diameter	<b>100 mL (alone) or 75 mL +</b> 500 mL MCPA LVE	
Vetches ( <i>Vicia</i> spp.)	Up to 6 leaf &/or 15 cm high	<b>100 mL (alone) or 75 mL +</b> either 500 mL MCPA LVE or 500 mL Bromoxynil-MCPA	
Volunteer legumes, (including Chickpea, Faba bean, Field pea, Lentil & Lupin)	Up to 6 leaf or node &/or 15 cm high	<b>75 to 100 mL</b>	

**Adjuvant:** Always use Uptake™ Spraying Oil at 500 mL/100 L (except when tank mixing with metsulfuron). For specific recommendations see COMPATIBILITY – Adjuvants section.

**Torpedo in tank mix:** Apply tank mixes from the 3 leaf crop stage onwards.

WEED	WEED STAGE	RATE (mL Torpedo/ha)	CRITICAL COMMENTS
Wild radish ( <i>Raphanus raphanistrum</i> )	Up to 6 leaf &/or 15 cm diameter	<b>75 to 100 mL</b> + 500 mL MCPA LVE	Always apply in tank mix with MCPA. Use the higher Torpedo rate if weeds are large (> 4 leaf stage) and/or high density (> 50 /m <sup>2</sup> ).

\*MCPA LVE refers to any product composed of 500 g/L of MCPA present as the ethyl hexyl ester.

Bromoxynil-MCPA refers to any product composed of 200 g/L bromoxynil present as the n-octanoyl ester + 200 g/L MCPA present as the ethyl hexyl ester

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.**

### HARVEST WITHHOLDING PERIOD:

**BARLEY, OATS, TRITICALE and WHEAT: NOT REQUIRED WHEN USED AS DIRECTED.**

When using Torpedo in a tank mix with another product, observe the Harvest Withholding Period of the other product.

### STOCKFOOD WITHHOLDING PERIOD:

**DO NOT GRAZE OR CUT TREATED CROPS FOR STOCK FEED FOR 7 DAYS AFTER APPLICATION** of Torpedo.

When using Torpedo in a tank mix with another product, observe whichever Stockfood Withholding Period is the longer.

### CROP SAFETY

**Barley and oats** – Under certain conditions which result in crop stress, Torpedo or tank mixes may result in transient crop effects (height reduction and yellowing). Grain yield is normally unaffected.

### GENERAL INSTRUCTIONS

**MIXING:** Torpedo is a suspension concentrate which may show some separation on storage. Roll, shake or invert the container several times to ensure that Torpedo has completely resuspended before measuring to mix.

Torpedo should be added to the spray tank with simultaneous agitation. If agitation is limited, pre-mix the Torpedo in a bucket before adding to the main tank.

Once diluted correctly, Torpedo remains in suspension. **If tank mixing with other products, the following order should be followed:**

1. Quarter fill the spray tank, maintaining agitation, then:
2. Add Torpedo (as described above).
3. Add water to half fill the spray tank.
4. Add wettable powders, water dispersible granules or other suspension concentrates.
5. Add emulsifiable concentrates.
6. Add Uptake Spraying Oil when spray tank is half full.
7. Add water to bring to the final spray volume.

### COMPATIBILITY

Torpedo has not been tested in all tank mix combinations over all cereal varieties. All mixtures should be tested prior to mixing commercial quantities.

#### Broadleaf Herbicides

Torpedo is **biologically** compatible for **broadleaf weed** control with Ester 800, Esteron™ LV, Amine 625 Herbicide, bromoxynil, bromoxynil-MCPA, MCPA amine, MCPA LVE, metsulfuron, Lontrel™ 750SG, Lontrel™ Herbicide, Starane™ Advanced or Tordon™ 242. Tank mixes must be applied at the appropriate labelled cereal growth stage for the partner herbicide and rate. **For best control of wild radish, Indian hedge mustard or turnip weed, always tank mix Torpedo with MCPA.**

#### Grass Herbicides

For **wild oat control**, Axial® Herbicide, Wildcat® 110EC and Topik® 240EC are biologically compatible with Torpedo. Some reduction in **wild oat control** may occur with Topik 240EC or Wildcat® 110EC tank mixes under good growing conditions. The grass herbicide must be applied under excellent growing conditions and at the highest label rate for wild oat growth stage, size and density. Torpedo + MCPA LVE at up to 500 mL/ha may be tank mixed with Axial with some reduction in **wild oat control** under good growing conditions.

#### Adjuvants

For **broadleaf weeds** always use Uptake Spraying Oil at 500 mL/100 L, except when using metsulfuron in a tank mix. Use BS1000® at 100 mL/100 L with metsulfuron tank mixes. For **wild oat control** with Axial and Torpedo mixes, always use either Uptake Spraying Oil or Adigor® at 500 mL/100 L. For **wild oat control** with Axial and Torpedo tank mixes, use either Uptake Spraying Oil or Adigor at 500 mL/100 L. For **wild oat control** with Topik 240EC and Torpedo tank mixes, use Uptake Spraying Oil at 500 mL/100 L. For **wild oat control** with Wildcat 110EC and Torpedo tank mixes, use BS1000 at 250 mL/100 L.

## APPLICATION

**Boom Spraying:** Apply Torpedo in sufficient spray volume to obtain good coverage. It should be applied by an accurately calibrated ground rig using a water volume of 50 – 100 L/ha. Sprayers should aim to apply medium quality spray based on BCPC specifications and in accordance with ASAE standard S-572.

## CLEANING SPRAY EQUIPMENT:

After using Torpedo, empty the tank completely and drain the whole system. Thoroughly wash inside the tank using a pressure hose, drain the tank and clean any tank, pump, line and nozzle filters.

**Partial Cleaning (Rinse only** - before using rig to spray barley, oats, triticale and wheat): After cleaning the tank as above, quarter fill the tank with clean water and circulate through the pump, line, hoses and nozzles. Drain and repeat procedure twice.

**Complete Cleaning (Decontamination** - before using rig to spray crops that are susceptible to Torpedo): After cleaning the tank as above, quarter fill the tank with clean water and add a liquid alkali detergent (e.g. Surf®, Omo®, Drive®) at 500 mL/100 L water and circulate throughout the system for at least 15 minutes. Drain the whole system. Then remove filters and nozzles and clean separately. Finally rinse inside the tank thoroughly using a pressure hose and flush system with clean water and allow to drain.

**Note:** If using a concentrated laundry detergent use 250 g (or mL)/100 L water. Do not use chlorine based cleaners.

**Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto unused land away from desirable plants and their roots and watercourses.**

## RESISTANT WEEDS WARNING

### GROUP B HERBICIDE

Torpedo contains members of the pyridine and triazolopyrimidine sulfonanilide group of herbicides. The product has the disrupters of plant cell growth and acetolactate synthase (ALS) inhibitor modes of action. For weed resistance management, the product is a Group I + Group B herbicide. Some naturally occurring weed biotypes resistant to the product and other Group I and/or B 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 I or Group B herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Dow AgroSciences accepts no liability for any losses that may result from the failure of the product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant or local Department of Agriculture.

*Torpedo is a broadleaf herbicide with no grass weed activity and exerts no selection pressure on annual ryegrass.*

## PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

**DO NOT** apply under weather conditions or from spraying equipment that may cause spray drift onto nearby susceptible plants/crops, cropping lands or pastures.

### Composts and Mulches

Compost, mulch or mushroom substrate made from plant material treated with Torpedo may cause damage to susceptible crops or plants. **DO NOT** apply Torpedo to crops or pastures that will be used for the production of compost, mulches or mushroom substrate.

### Stubble from Treated Crops

Ensure that harvesters effectively spread crop straw and do not leave a heavy 'header trail' after harvest. Burn (if legal in the area) or bale and remove, slash or incorporate stubble as soon as practical after harvest and for as long as possible before planting next year to allow microbial breakdown of any residues in straw. Heavy stubble loads may carry more residue into the following season. Where heavy stubble burdens and/or non-wetting soils exist and less than the recommended amount of rain has fallen from application to planting the susceptible crop (see below), only plant a winter or summer cereal.

**Susceptible crops and plants include, but are not limited to, canola, chickpeas, cotton, faba beans, field peas, fruit trees, lentils, lupins, lucerne, medic, ornamentals, potatoes, safflower, sub-clover, tomatoes, vegetables, vetches, vines (grape and kiwi fruit), wattles and white clover. Field peas, faba beans, lentils and vetches are particularly susceptible.**

**Where Torpedo residue carryover is suspected and susceptible crops are to be planted, test the treated area as follows:**

**Field bioassay** – where rain allows, plant a small area of the susceptible crop 4 to 6 weeks before desired planting date and take note of any symptoms of injury. If any herbicide symptoms are observed, only plant a cereal crop (see recommendations for northern and southern Australia below).

**Pot bioassay** – where not practical to do field bioassay, plant a small number of seeds of the susceptible crop into pots containing soil from the treated field. Do this test 4 to 6 weeks before desired planting date. If any herbicide symptoms are observed, only plant a cereal crop (see recommendations for northern and southern Australia below).

### Planting Crops Following Use of Torpedo in Previous Cereal Crop

Planting crops 'dry' without appropriate rain (see below) in the fallow prior to planting increases the risk of injury to susceptible crops. This practice should be avoided or only plant a cereal crop. In severely dry conditions, where less than 30% of average annual rainfall and/or less than the minimum rain has fallen between application and planting the next year (see below), only plant a cereal crop.

### Soil type

On deep soils (with no impermeable sub-horizon), susceptible crops may be planted as shown in the table below after Torpedo application.

On shallow, duplex, low organic matter soils with an impermeable sub-horizon within the root zone (30 cm deep or less), susceptible crops should not be planted for at least 9 months after application in northern Australia and 12 months after application in southern Australia.

### Plantback Periods for Deep Soils

Area/State	Minimum Rain/Water requirements before sowing crops following use of Torpedo	Crops to be planted	Plantback Interval
Sth NSW, Vic, SA, WA, Tas (Winter dominant rainfall areas)	At least 25 mm of rain or irrigation in the summer to autumn period, with a subsequent extended period of soil wetting (at least 1 week)	Canola, clover, chickpea, faba bean, field pea, lentils, lucerne, lupins, medics, vetch	9 months
		Barley, oats, triticale, wheat,	2 weeks
Nth NSW and Qld (Summer dominant rainfall areas) (Vertosol soils)	<b>For susceptible summer crops;</b> at least 100 mm rain or irrigation. <b>For susceptible winter crops;</b> at least 150 mm rain or irrigation. This rain or irrigation should wet the soil for an extended period of 1 week or more.	Canola, chickpea, cotton, lucerne, soybean, sunflower	6 months
		Barley, maize, oats, sorghum, triticale, wheat	2 weeks
<b>For all situations, sufficient rainfall to enable soil wetting for at least 1 week or more is essential to enable residue breakdown before planting susceptible crops.</b>			

### PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Torpedo has low toxicity to fish, birds, honey bees, livestock, earthworms and aquatic organisms.

Overspray or drift to sensitive habitats should be avoided. For ground application, a buffer zone of 15 metres is required between the downwind edge of the boom and the closest edge of non-target vegetation and a buffer zone of 5 metres is required between the downwind edge of the boom and the closest edge of waterbodies.

Florasulam is very highly toxic to algae and aquatic plants. **DO NOT** contaminate streams, rivers or waterways with chemical or used containers.

### STORAGE AND DISPOSAL

Store in the tightly closed original container in a securely locked place, out of direct sunlight.

DO NOT store near food, feedstuffs, fertilisers or seed.

Rinse container before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. Dispose of at a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

This container can be recycled if it is clean, dry, free of visible residues and has the **drumMUSTER** logo visible. Triple or pressure rinse containers for disposal. Dispose of rinsate by adding it to the spray tank. Do not dispose of undiluted chemicals on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with the cap removed. It will then be acceptable for recycling at any **drumMUSTER** collection or similar container management program site. The cap should not be replaced but may be taken separately.

If not recycling, break, crush or puncture and bury empty packaging in a local authority landfill. If no landfill is available, bury the packaging below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty packaging and product should not be burnt.

### SMALL SPILL MANAGEMENT

Wear appropriate clothing whilst cleaning up small spills (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material and contain in a refuse vessel for disposal. Disposal of the contaminated material must be done in accordance with STATE and/or LOCAL regulations.

## SAFETY DIRECTIONS

May irritate the eyes & skin.

Avoid contact with eyes & skin.

When opening the container and preparing spray wear elbow-length PVC gloves and goggles.

Wash hands after use. After each day's use, wash gloves and goggles.

## FIRST AID

If poisoning occurs contact a doctor or Poisons Information Centre. Phone: *Australia* 13 11 26.

## MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet for **TORPEDO HERBICIDE** which is available from Dow AgroSciences on request. Call Customer Service Toll Free on 1-800 700 096 or visit [www.dowagrosciences.com.au](http://www.dowagrosciences.com.au)

## NOTICE

Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. No warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of the product contrary to label instructions, or under off-label permits not endorsed by Dow AgroSciences, or under abnormal conditions.

APVMA Approval No. 59789/0209

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