

Herbicide

# Betanal<sup>®</sup> FLOW

*Betanal Flow is a selective herbicide for post-emergence use on many annual broad-leaved weeds in beet crops.*

**A suspo-emulsion formulation containing 160 g/L (15.8% w/w) phenmedipham.**

**For Professional use only.**

**For 24 hour emergency information contact Bayer CropScience Limited**

**+44 330 678 3382** (24 hr)  
(charged as a standard international call to the UK)

**National Poisons Information Centre  
Dublin: 01 809 2166**

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Safety information

## BETANAL FLOW

UFI: Y6D0-10SE-4009-SCTJ

Contains 160 g/L (15.8% w/w) phenmedipham.



### Warning

**Causes serious eye irritation.**

**Very toxic to aquatic life with long lasting effects.**

Wear protective gloves/protective clothing/eye protection/face protection.

Collect Spillage.

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.**

**PCS No. 06664**

IE87264033c rA2

GROUP 5 HERBICIDE



# Betanal<sup>®</sup>

## FLOW

IE87340767c 1A2

### SAFETY PRECAUTIONS

#### Operator Protection

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

However engineering control may replace personal protective equipment if an assessment shows they provide an equal or higher standard of protection.

WASH HANDS AND EXPOSED SKIN before eating, drinking or smoking 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).

Extreme care must be taken to avoid spray drift onto non-crop plants outside the target area.

#### 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 safely.

**READ ALL INSTRUCTIONS  
CAREFULLY BEFORE USE**



To access the **Safety Data Sheet** for this product scan the code or use the link below:

[www.bayercropscience.ie/sds/betanalflow.pdf](http://www.bayercropscience.ie/sds/betanalflow.pdf)

or alternatively contact your supplier

**Authorisation holder:** Bayer CropScience Ltd., PO Box 1582, Cambridge, CB1 0FE, UK

**Marketing company:** Bayer CropScience Ltd, Bayer Ltd, 1st Floor, The Grange Offices, The Grange, Brewery Road, Stillorgan, Co. Dublin A94 H2K7 Freephone: 1800 818534

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## 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.

## INTRODUCTION

Betanal Flow is a selective herbicide for post-emergence use on beet crops.

As Betanal Flow is a contact material, its activity is not affected by soil type and it may be used on all soils, including fen peats.

<b>Crop:</b>	Sugar beet, fodder beet, red beet and mangels
<b>Maximum single dose (per crop):</b>	2.5 L/ha
<b>Maximum number of applications at maximum single dose:</b>	-
<b>Maximum total dose (per crop):</b>	6.0 L/ha
<b>Latest time of application:</b>	Before 8 leaves unfolded (GS 18)
<b>Other Specific Restrictions:</b>	A maximum of 960 g of phenmedipham can be applied in any 12 month period.

## WEEDS CONTROLLED

Correctly timed applications of Betanal Flow in a repeat low dose programme will control the following weeds, up to and including the cotyledon stage.

### Weeds Controlled (depending on correct dose and timing)

Black-bindweed	Common Hemp-nettle	Pale Persicaria
Bugloss	Common Orache	Red Dead-nettle
Charlock	Common Poppy	Scarlet Pimpernel
Common Chickweed	Fat-Hen	Shepherd's purse
Common Fumitory	Field Pansy	Small Nettle
Common Field Speedwell	Groundsel	Wild Radish

### **Moderately Susceptible** (depending on correct dose and timing)

Corn Marigold	Forget-me-not	Redshank
Corn Spurrey	Ivy-Leaved Speedwell	
Field Pennygrass	Knotgrass	

### **Moderately Resistant** (depending on correct dose and timing)

Black Nightshade	Cleavers	Scentless Mayweed
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Betanal Flow will not control annual or perennial grasses or perennial broad-leaved weeds.

## **CROP SPECIFIC INFORMATION**

Sugar beet, fodder beet, red beet and mangels

All varieties, including crops grown for seed, may be treated at any stage of growth from **cotyledons fully expanded**, providing the crop is not under stress.

Betanal Flow acts by contact with the weeds and should be used in a repeat low dose programme of sprays starting when the weeds reach the cotyledon stage.

### **Factors Affecting Crop Tolerance**

When used as recommended, Betanal Flow exhibits good safety to beet. Several factors may affect crop tolerance and individually may appear to have little effect, but may be important when two or more occur at the same time. (see COMPANY ADVISORY INFORMATION)

### **Drift**

Avoid drift to areas outside those being sprayed, having due regard to the prevailing weather conditions and spray quality being used. The risk of drift is greater when a FINE quality spray, as recommended for this product, is used.

## **APPLICATION**

### **Repeat Low Dose Programme**

**Dose:** 2.5 L/ha (Total dose not to exceed 6.0 L/ha per crop).

**Volume:** 80–100 litres of water per hectare.

## Spray operations and Spray Quality

### IMPORTANT – SHAKE THE CAN WELL BEFORE USE

1. Wash out the sprayer, spraybars and nozzles to ensure that no trace remains of previous products. This is most important after hormone and sulfonyl urea weedkillers. Contaminated hoses should be replaced by new hoses.

NB All hose connections must be secured with hose clips.

2. Check that nozzle tips are clean, undamaged, of the correct type to give a FINE quality spray, and are all of the same size, giving equal spray outputs and distribution.
3. Half fill the spray tank with clean water and start agitating. Check the agitation is operating correctly. Add the required quantity of Betanal Flow, mixing well by agitation, and complete filling to the final volume. Mix only sufficient chemical for immediate use and continue agitation until the tank load is used.

(See COMPATIBILITY AND SEQUENCES for any special instructions for preparing tank mixes.)

4. Ensure that the spray nozzles are set at the correct height to give even spray cover. Commence spraying, being careful to maintain correct pressure and tractor speed. Avoid overdosing or drift onto neighbouring crops.
5. After each day's work, drain the sprayer, wash thoroughly with water and liquid detergent and spray out completely. Ensure that all liquid is removed from the sprayer tank, pump and hoses. Remove nozzles, open tank and drain pump to allow free access of air to all parts of the system.

Betanal Flow should be applied overall as a FINE quality spray (for details see "Boom Sprayers Handbook" published by BCPC).

Even cover with a FINE quality spray is essential for good results. Take care to avoid overlapping.

Betanal Flow may be used in sequence with a pre- or post-emergence residual herbicide to extend weed control and improve the spectrum of control.

Do not apply Betanal Flow to any crop which shows signs of stress, particularly those grown on light soils in a wet season.

## **Tank mixing with other beet herbicides**

Betanal Flow may be tank-mixed with Nortron® 50 SC (PCS 05803) or metamitron. Application timing and dose rates should be according to the manufacturers' recommendations for tank-mixes with phenmedipham:

Where spraying has been unavoidably delayed and weeds are beyond the cotyledon stage, mixtures of Betanal Flow + Nortron 50 SC will give improved weed control as part of a low dose programme.

**Mixture with Nortron 50 SC – Crops:** All varieties of sugar beet, fodder beet, red beet and mangels.

Apply Betanal Flow 1.75 L/ha + Nortron 50 SC 0.6 L/ha from crop growth stage 2 true leaves expanded. Up to 2 applications may be made.

Where Betanal Flow is used in tank mixes the other components should be diluted first in half the final volume of water before adding the Betanal Flow and the remainder of the water.

## **COMPATIBILITY**

BETANAL FLOW may be applied as a tank-mix with a range of other products. Contact Bayer CropScience for compatibility information on specific tank-mixes. Full manufacturer's instructions must be followed for each tank-mix component.

## **COMPANY ADVISORY INFORMATION**

### **Crop Tolerance**

When used as recommended, Betanal Flow exhibits good safety to beet. Several factors may affect crop tolerance and individually may appear to have little effect, but may be important when two or more occur at the same time. Application of Betanal Flow or Betanal Flow mixtures is not recommended when the crop is suffering from stress. Betanal Flow should not be used where crops are under stress from previous herbicide applications, insect attack, nutrient deficiency or where frost, low or high temperatures or wind damage may predispose the crop to a check, or where rolling or harrowing has been carried out within 7 days.

## High Temperatures

When the temperature is, or is likely to be, above 21°C (70°F) on the day of spraying, application of Betanal Flow should be made after 5 pm otherwise crop check may occur.

If crops are subjected to substantial day to night temperature changes shortly before or after spraying, a check may occur from which the crop may not fully recover.

## High Light Intensity

Where the crop is already under stress, and Betanal Flow is sprayed in conditions of high light intensity, the crop may suffer a check from which it may not fully recover.

Under high light intensity or high temperatures the full rate of Betanal Flow should not be used and mixtures with oil should **not** be used under these conditions.

Do not apply Betanal Flow when rain is imminent.

## Factors relating to product/crop agronomy

Certain weeds may develop resistance to Bayer CropScience Ltd. products. Since such circumstances are beyond our control, Bayer will be under no liability for any resulting loss or damage whatsoever.

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