

OPEN HERE

**REFINE® MAX SX®  
Herbicide**

Containing 67 g/kg metsulfuron-methyl and  
333 g/kg thifensulfuron-methyl

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

Avoid release to the environment.  
Collect spillage.

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

**WARNING****FOR PROFESSIONAL USE ONLY**

Du Pont (U.K.) Limited, Crop Protection Products  
4th Floor, Kings Court, London Road, Stevenage  
Hertfordshire - SG1 2NG Tel: 01438 734450 or enquiry.agproducts@dupont.com  
Emergency Tél : 0870 820 0418  
National Poisons Information Service Tel: 111 (England and Wales)  
and 08454 24 24 24 (Scotland)

**The Voluntary Initiative**

This label is compliant with the  
CPA Voluntary Initiative Guidance



To access the Safety Data Sheet  
for this product scan the code, visit  
[www.cropprotection.dupont.co.uk](http://www.cropprotection.dupont.co.uk)  
or alternatively contact your supplier

**READ DIRECTIONS FOR USE ON ATTACHED LEAFLET**

Manufactured in the EU



GROUP B HERBICIDE

**MAPP 15622**

A non-segregating blend of water soluble  
granules containing 67 g/kg metsulfuron-methyl  
and 333 g/kg thifensulfuron-methyl for spring  
weed control in winter wheat, spring wheat,  
winter barley, spring barley and winter oats.

The (COSHH) Control of Substances Hazardous  
to Health Regulations may apply to the use of  
this product at work.

**Contents: 225 g e**

\* Registered trademark of E. I. du Pont de Nemours and Company

**IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

**Crops:** winter wheat, spring wheat, winter barley, spring barley, and  
winter oats

**Maximum individual dose:** 75 g/ha

**Maximum number of treatments:** One per crop

**Latest time of application:**

Wheat and barley: before flag leaf sheath extending stage (GS39)

Winter oats: before second node detectable stage (GS32)

**Other specific restrictions:**

This product must only be applied from 1 February in the year of  
harvest until the specified latest time of application.

This product qualifies for inclusion within the Local Environment  
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 CRD'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.

**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**

**Batch N°:**

K-41313/31605 - UK

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**The Voluntary Initiative**

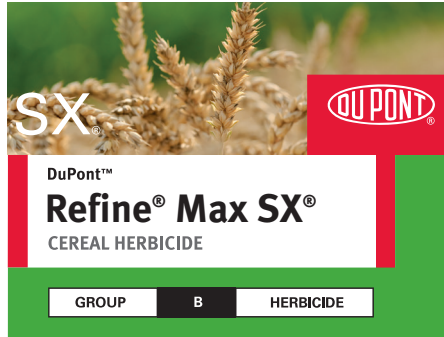
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**Contents: 225 g e**

® Registered trademark of E. I. du Pont de Nemours and Company

**IMPORTANT INFORMATION**

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

**Crops:** winter wheat, spring wheat, winter barley, spring barley, and  
winter oats

**Maximum individual dose:** 75 g/ha

**Maximum number of treatments:** One per crop

**Latest time of application:**

Wheat and barley: before flag leaf sheath extending stage (GS39)

Winter oats: before second node detectable stage (GS32)

**Other specific restrictions:**

This product must only be applied from 1 February in the year of  
harvest until the specified latest time of application.

This product qualifies for inclusion within the Local Environment  
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PROTECTION PRODUCTS**



K-41313/31605 - UK

# DuPont™ Refine® Max sx®

## CEREAL HERBICIDE

### MAPP 15622

A non-segregating blend of water soluble granules containing 67 g/kg metsulfuron-methyl and 333 g/kg thifensulfuron-methyl for spring weed control in winter wheat, spring wheat, winter barley, spring barley and winter oats.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work.

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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.

### Restrictions

- REFINE® MAX SX® must not be applied to any crop suffering from stress as a result of drought, water-logging, low temperature, pest or disease attack, nutrient deficiency, soil compaction or other factors reducing plant growth.
- Do not use REFINE® MAX SX® on crops undersown with grasses, clover or other legumes or any other broad-leaved crop.
- Because some non-target crops are highly sensitive to REFINE® MAX SX®, avoid damage by drift onto broad-leaved plants outside the target area, or onto ponds, waterways or ditches. Thorough cleansing of equipment is also very important - see separate section.
- Crop failure: In the event of crop failure for any reason, sow only winter wheat within three months of application of REFINE® MAX SX®. Prior to sowing, soil should be ploughed and cultivated to a depth of at least 15-cm.
- Do not apply within 7 days of rolling the crop.
- Contract agents should be consulted before using on crops grown for seed.
- Refer to 'Compatibility' for details on use of REFINE® MAX SX® with other 'ALS inhibiting' herbicides

### Weed Control

REFINE® MAX SX® contains two highly active herbicidal ingredients and has both foliar and root activity against a wide range of broad-leaved weeds. Metsulfuron-methyl and thifensulfuron-methyl are sulfonylurea herbicides. REFINE® MAX SX® is most effective when applied to small, actively growing weeds. As larger weeds usually become less susceptible, it is important to note the size of each weed species at the time of application. Susceptible

weeds cease growth almost immediately after post-emergence application and symptoms can be seen about two weeks after application. Good spray cover of the weeds must be obtained. Weed control may be reduced when soil conditions are very dry.

#### Weed Resistance

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered resistant to a herbicide if it survives a correctly-applied treatment at the recommended dose. Development of resistance within a weed species can be avoided or delayed by sequencing or tank-mixing with suitable products having a different mode of action. A strategy for preventing and managing resistance should be adopted. The Weed Resistance Action Groups have produced guidelines and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer.

#### Susceptible Weeds

The susceptibility ratings of weeds in the following table refer to good spray cover and good growing conditions.

Weed species	Plants up to 2 expanded true leaves	Plants up to 6 expanded true leaves
Common Chickweed	S	S
Common Field-speedwell	S	S
Common-hemp nettle	S	S
Common Poppy	S	S
Field Forget-me-not	S	MS
Field pansy	S	S
Groundsel	S	S
Ivy-leaved speedwell	MS	MS
Knotgrass	S	S
Mayweeds sp.	S	S
Red Dead-nettle	S	S
Fool's parsley	S	S

S = Susceptible MS = Moderately Susceptible

#### Soil

REFINE® MAX SX® can be used on all soil types. Weed control may be reduced when conditions are very dry.

#### Volume and application

BEFORE USING REFINE® MAX SX®, SPRAYING EQUIPMENT MUST BE CLEAN AND FREE FROM CONTAMINATION WITH OTHER PESTICIDES.

Application should be made in 200 litres of water per hectare using suitable ground equipment to give good spray cover of the weeds. In thick crops or dense weeds use higher volumes of water (up to 400 litres of water/ha) to ensure good spray cover of the weeds. Use a conventional field crop sprayer at a pressure of 2 - 3 bars and apply as a MEDIUM spray (as defined by BCPC). Care should be taken not to overlap spray swaths.

**Mixing**

Quarter fill the spray tank with clean water, start the agitation and add the required quantity of REFINE® MAX SX® directly to the tank without prior creaming. Continue agitation while topping up the tank and while spraying.

**Compatibility**

To widen the spectrum of activity and improve the control of some weeds, REFINE® MAX SX® may be applied with other herbicides, provided each product can be applied within the label recommendations for its use. Always add REFINE® MAX SX® to the spray tank first when using in tank-mix.

The following 'joint application' with other sulfonylurea and 'ALS inhibiting' herbicides may be applied to a crop. Requirements and restrictions on other product labels must be adhered to. 'Joint application' is the use of REFINE® MAX SX® in tank mixture or sequence with one of the products listed below.

Absolute	Galaxy	Oriel 50SX
Atlantis WG	GF-184	Othello
Barton WG	GF-2070\$	Pacifica
Boxer	Hatra	Pursuit*
Bullion	Hiker	Slalom
Broadway Sunrise	Horus	Spitfire
Broadway Star	Hunter	Spitfire Solo
Dakota	Klaxon (max 50g/ha)*	Staka SX
Ductis SX	Klaxon OD (max 25ml/ha)*	Starane Gold
Eagle*	Lexus Class	Starane Vantage
Excalibur	Lexus SX	Starane XL
Exceed SX	Oklar SX	Unite\$

\* only cereals as following crop

\$ Use only in sequence with Refine® Max SX®

**Additional recommendations may be approved since label printing. Please consult your DuPont distributor for latest details on compatibilities.**

**Crops**

REFINE® MAX SX® can be used on all varieties of winter wheat, spring wheat, winter barley, spring barley and winter oats between the growth stages given below.

**Dose**

Apply REFINE® MAX SX® at 75 grams/hectare.

**Timing**

Wheat and barley: REFINE® MAX SX® must only be applied from 1 February, from the three leaf stage up to before flag-leaf sheath extending stage (GS39)

Winter Oats: REFINE® MAX SX® must only be applied from 1 February, from the three leaf stage up to before second node detectable (GS32)

**Following crops**

Only cereals, oilseed rape, field beans or grass may be sown in the same calendar year as harvest of a cereal crop treated with REFINE® MAX SX®. In case of crop failure for any reason, sow only winter wheat within three months of application of REFINE® MAX SX®. Before sowing, soil should be ploughed and cultivated to a depth of at least 15-cm.

**WARNINGS**

**EXTREME CARE SHOULD BE TAKEN TO AVOID DAMAGE BY DRIFT ONTO BROAD-LEAVED PLANTS OUTSIDE THE TARGET AREA OR ONTO SURFACE WATERS OR DITCHES OR LAND INTENDED FOR CROPPING.** SPRAYING EQUIPMENT SHOULD NOT BE DRAINED OR FLUSHED ONTO LAND PLANTED WITH OR INTENDED FOR PLANTING WITH TREES OR CROPS OTHER THAN CEREALS. POOR CLEANOUT PRACTICES AND INSUFFICIENT WATER VOLUMES USED FOR THE RINSE PROCEDURE MAY RESULT IN INADEQUATE REMOVAL OF PRODUCT DEPOSITS. SUBSEQUENT USE OF APPLICATION EQUIPMENT IN THESE CIRCUMSTANCES MAY RESULT IN DAMAGE TO NON-CEREAL CROPS.

## SPRAY TANK CLEAN-OUT

TO AVOID SUBSEQUENT DAMAGE TO CROPS OTHER THAN CEREALS, IMMEDIATELY AFTER SPRAYING REFINE MAX SX THOROUGHLY CLEAN ALL SPRAY EQUIPMENT, INCLUDING INSIDE AND OUTSIDE OF LID, USING THE FOLLOWING PROCEDURE:

Always start with a clean tank and spray system. Clean spray equipment thoroughly immediately after use.

1. Thoroughly and completely rinse all interior tank surfaces (including lid) with water (use at least 10% of the tank capacity), taking care to remove any visible deposits. Flush pump, filters and boom after removing in-line strainers, nozzle tips and screens (clean these parts separately). Drain the remainder of the rinsate from the tank.
2. Repeat the rinse, flush and drain.
3. For disposal of washings, follow the 'Code of Practice for Using Plant Protection Products' (DEFRA Publications 2006). Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

### Note:

Consult label tank cleanup procedures for all tank mix partners and be sure to use the most rigorous procedure recommended.

## NOTICE TO BUYER

All goods supplied by us are of a high grade and we believe them to be suitable for any purpose for which we expressly supply them, but as we cannot exercise control over their mixing or use, 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.

## SAFETY PRECAUTIONS

### Operator protection

WASH CONCENTRATE from skin or eyes immediately

DO NOT BREATHE SPRAY

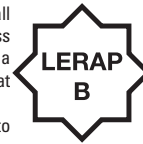
WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.

### Environmental Protection

Do not contaminate water with the product or its chemical and used container. Do not clean application equipment near surface water. Avoid contamination via drains from farmyards and roads

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m of the top of the bank of a static or flowing water body, unless a Local Environment Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1 m of the top of a ditch which is dry at the time of application. Aim spray away from water.

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirement,



### Storage and Disposal

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

THIS MATERIAL AND ITS CONTAINER must be disposed of in a safe way

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