



SULTAN 50SC

MAPP 10418

A residual herbicide for the pre- and post-emergence control of various weeds in brassicas, including oilseed rape

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 AND FACE PROTECTION (FACESHIELD) when handling the concentration.

WEAR SUITABLE PROTECTIVE GLOVES when handling the spray boom or adjusting nozzles.

PROTECTIVE GLOVES AND RUBBER BOOTS when applying through a knapsack sprayer.

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

WASH CONCENTRATE FROM skin or eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED

SKIN before meals and after work.

IF YOU FEEL UNWELL, seek medical advice (show label where possible).

Environmental Protection

KEEP LIVESTOCK out of treated areas until poisonous weeds, such as ragwort, have died and become unpalatable.

KEEP LIVESTOCK out of areas of swede and turnip for at least 5 weeks following treatment.

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

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.

DO NOT RE-USE CONTAINER for any purpose.

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

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PROTECT FROM FROST

Shake well before use

Batch No.



5 Litres



This label is compliant with the CPA Voluntary Initiative Guidance

S1957A/04

Sultan 50SC
A suspension concentrate formulation containing 500 g/l (44.3% w/w) metazachlor

This leaflet/booklet is part of the approved product label

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL/HORTICULTURAL HERBICIDE

Crops	Maximum dose	Maximum number of treatments	Latest timing
Winter oilseed rape	1.5 L product/ha	1 (see other specific restrictions)	End of January in year of harvest
Spring oilseed rape	1.5 L product/ha	1 (see other specific restrictions)	Before 10 true leaves
Cabbage, Brussels sprouts, cauliflower, broccoli and calabrese	1.5 L product/ha	1 (see other specific restrictions)	6 weeks before harvest
Swedes and turnips	1.5 L product/ha	1 (see other specific restrictions)	Pre-emergence

Other specific restrictions: Make only one application every three years on the same field. KEEP LIVESTOCK out of treated areas until poisonous weeds such as ragwort have died and become unpalatable. KEEP LIVESTOCK out of treated areas of swede and turnip for at least 5 weeks following treatment. DO NOT RE-USE CONTAINER for any purpose.

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.

SULTAN 50SC (MAPP 10418)

A suspension concentrate formulation containing 500 g/l (44.3% w/w) metazachlor



HARMFUL

**HARMFUL IF SWALLOWED
MAY CAUSE SENSITISATION BY
SKIN CONTACT**



**DANGEROUS FOR
THE ENVIRONMENT**

**VERY TOXIC TO AQUATIC
ORGANISMS, MAY CAUSE
LONG-TERM ADVERSE
EFFECTS IN THE AQUATIC
ENVIRONMENT**

WEAR SUITABLE PROTECTIVE CLOTHING AND GLOVES

AVOID CONTACT WITH SKIN AND EYES

WHEN USING, DO NOT EAT, DRINK OR SMOKE

KEEP OUT OF REACH OF CHILDREN

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS

THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF AS HAZARDOUS WASTE

AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/ SAFETY DATA SHEETS TO AVOID RISKS TO MAN AND THE ENVIRONMENT, COMPLY WITH THE INSTRUCTIONS FOR USE

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 GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

WEAR SUITABLE PROTECTIVE GLOVES when handling the spray boom or adjusting nozzles.

WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS when applying through a knapsack sprayer.

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

WASH CONCENTRATE FROM skin or eyes immediately.

DO NOT BREATHE SPRAY.

WASH HANDS AND EXPOSED SKIN before meals and after work.

IF YOU FEEL UNWELL seek medical advice (show label where possible).

Environmental Protection

KEEP LIVESTOCK out of treated areas until poisonous weeds, such as ragwort, have died and become unpalatable.

KEEP LIVESTOCK out of areas of swede and turnip for at least 5 weeks following treatment.

DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.

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.

DO NOT RE-USE CONTAINER for any purpose.

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.

SULTAN 50SC is a suspension concentrate formulation containing metazachlor for use as a residual herbicide in all varieties of winter and spring oilseed rape, swedes, turnips, cauliflower, cabbage, Brussels sprouts, broccoli and calabrese.

SULTAN 50SC is recommended as a pre- and post-emergence herbicide. Where it is to be used pre-emergence it is important to ensure the herbicide does not come into contact with the crop seed by drilling the seed to a depth of 15mm and ensuring it is well covered by soil before spraying. Do not use pre-emergence on broadcast crops.

Post-emergence application is advised where it is not possible to make pre-emergence applications due to light or stony soils, those with organic matter content higher than 10%, adverse weather conditions, poor seed bed preparation or missed timing of crop.

1. RESTRICTIONS

Do not overlap spray swaths.

Do not treat crops which are suffering from stress.

Avoid drift onto neighbouring crops.

Do not apply SULTAN 50SC to crops grown in a poor seedbed.

Do not apply under adverse weather conditions. Weed control will be improved if soil is moist at time of application.

Some damage may occur, especially on brashy or stony soils. This will normally be outgrown.

Consult processors before applying to crops to be processed.

Do not apply to crops with a compaction layer or to poorly drained soils since damage can occur under waterlogged conditions.

Do not use filters finer than 50 mesh.

Winter Oilseed Rape

Do not use on light or stony soils .

Spring Oilseed Rape

After drilling, apply to a firm, clod-free seedbed. For best results apply when soil is moist.

Do not treat when heavy rain is expected.

Ensure transplanted brassica roots are well covered by soil.

Block raised transplants may be particularly sensitive and should be treated with care. Ensure plants are fully hardened off and established before treatment. Irrigate if necessary to establish plants and raise soil moisture.

Resistance Warning

Strains of some annual grasses (e.g. black-grass, wild-oats and Italian rye-grass) 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.

2. WEED CONTROL

Winter Oilseed Rape and when SULTAN 50SC applied alone. The recommended timing of application is pre-emergence of the weeds.

Weeds Controlled

Weed

Annual meadow-grass
Blackgrass
Common chickweed
Common poppy
Field forget-me-not
Groundsel
Mayweed spp
Parsley-piert
Red dead-nettle
Shepherd's-purse
Speedwell spp

Susceptibility pre-emergence

S
S
S
MS
S
S
S
S
S
S
S

S - Susceptible

MS - Moderately Susceptible

Resistant

Common fumitory
Field penny-cress
Knotgrass

Direct Drilled Brassicas**Weeds controlled**

The following table lists susceptibility of weeds treated with a programme of a suitable alternative pre-emergence herbicide and SULTAN 50SC.

Susceptible

Annual meadow-grass
Black bind-weed
Blackgrass
Common chickweed
Common hemp-nettle
Corn spurrey
Fat-hen
Groundsel
Henbit dead-nettle

Knotgrass
Mayweed spp
Pale persicaria
Red dead-nettle
Redshank
Scarlet pimpernel
Shepherd's purse
Speedwell spp

Moderately susceptible

Black nightshade
Common fumitory
Common poppy

Small nettle
Wild oat

Moderately resistant

Charlock

Field pansy

3. CROP SPECIFIC INFORMATION**Winter Oilseed Rape**

All varieties of winter oilseed rape can be safely treated either pre- or post-emergence.

Rate of use:

1.5 l/ha

Water volume:

apply in a minimum of 100 l/ha water when applied pre-emergence or 220-450 l/ha when applied post-emergence.

Timing:

make a pre-emergence application up until the crop seed starts to chit.

If applying post-emergence of the crop, apply when the majority of the crop has reached the fully expanded cotyledon stage, the first true leaf should be partly emerged. Weed control will be best achieved if soils are moist at the time of application or rainfall is expected shortly after application.

Spring oilseed rape, swedes, turnips and transplanted brassicas

Application of SULTAN 50SC to spring oilseed rape, swede, turnips and transplanted brassica should be made following a pre-sowing/drilling application of a suitable alternative herbicide.

SULTAN 50SC - one application of 1.5 l/ha.

Water volume: 220 - 450 l/ha water.

Timing

Spring oilseed rape - apply once crop has two fully expanded cotyledons but before 10 true leaves. Best weed control is achieved if application is made before weed emergence.

Swedes and turnips - apply before emergence of the crop.

Transplanted brassica - apply when transplants are adequately hardened - off and established.

Direct Drilled brassica

Rate of use: 1.5 l/ha

Water volume: 220 - 450 l/ha water

Timing: apply SULTAN 50SC post-emergence following a pre-emergence application of a suitable alternative pre-emergence herbicide as directed on those labels. Best weed control is achieved if application of SULTAN 50SC is made before weed emergence.

Succeeding Crops

After normal harvest any crop can be drilled.

Where the crop fails in the autumn or winter, only winter wheat (excluding durum) and winter barley can be redrilled the same autumn following ploughing to 15cm.

Where the crop fails, land must be ploughed to a depth of 15 cm. The following crops only can be sown the following spring.

Brassica	Peas
Field beans	Potatoes
Linseed	
Maize	
Oilseed rape	

When used in sequence with a suitable alternative pre-emergence herbicide such as Alpha Propachlor 50 SC, follow the advice on those labels in conjunction with this advice.

4. MIXING AND APPLICATION

Quarter fill the spray tank with clean water and begin agitation. Add the required quantity of SULTAN 50SC to the tank and complete filling. Continue agitation until spraying is completed.

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 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 of fitness for any purpose of our goods are excluded, and no responsibility will be accepted by us or re-sellers 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.

MATERIAL SAFETY DATA SHEET SULTAN 50SC MAPP 10418

**This Safety Data Sheet does not form part of the label approved
under the Plant Protection Product Regulation 1995**

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product name : SULTAN 50SC
Chemical name of active ingredients : 2-chloro-N-(pyrazol-1-ylmethyl)acet-2',6'-xylidide (IUPAC)
Manufacturer : Agan Chemical Manufacturers Ltd. Northern Industrial Zone, P.O.Box 262, Ashdod, Israel.
Supplier : Makhteshim-Agan (UK) Ltd. Unit 16, Thatcham Business Village, Colthrop Way, Thatcham, Berkshire RG19 4LW, U.K.
Emergency telephone number : National Chemical Emergency Centre, Tel: 01865 407333.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation : Preparation

Information on hazardous ingredients*

Common name	CAS No.	%	EC Number	Symbol	R-Phrases
Metazachlor	67129-08-2	41-45	266-583-0	-	-

* Occupational Exposure Limit(s), if available, are listed in section 8

3. HAZARDS IDENTIFICATION

Most important hazards : Harmful if swallowed. May cause sensitization by skin contact.
 Very toxic to aquatic organisms.

4. FIRST-AID MEASURES**Effects and symptoms****First-aid measures****Inhalation**

- : Remove victim from area of exposure. Wash off remaining material with plenty of water.
- : Remove victim to fresh air. If breathing is difficult: artificial respiration. Get Medical attention.

Ingestion

- : Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person.

Skin contact

- : Remove contaminated clothing. Wash away remainder with water and soap.

Eye contact

- : Wash out with plenty of water with the eyelid held wide open for at least 15 minutes. Get medical attention.

Notes to a physician

- : There is no specific antidote. Treat symptomatically and give supportive therapy.

Protection of first-aiders

- : Use appropriate protection (see section 8).

5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable**

- : Dry chemical, water spray, foam, carbon dioxide.

Hazardous thermal

- : Chloride compound and nitrogen oxides.

(de)composition products

- Protection of fire-fighters** : Self-contained breathing apparatus and total protection required in enclosed areas.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

- : Wear suitable protective clothing.

Environmental precautions

- : Do not discharge into drains or the environment.

Methods for cleaning up

- : Absorb remainder in sand or other inert material. Dispose of in an authorized waste collecting point.

7. HANDLING AND STORAGE**Handling**

- : Ventilation required.

Storage

- : Keep only in the original container. Keep in a cool, dry, well ventilated place away from direct sunlight.

Packaging materials suitable: High density polyethylene extrusion blow containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering measures**

- : Ventilation required.

Hygiene measures

- : When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Occupational Exposure Limits

Common name

Metazachlor

Not established

Personal protective equipment**Respiratory system**

- : Respiratory protection is not required if good ventilation is maintained.

Skin and body

- : Wear suitable protective clothing. Chemical resistant boots.

Hands

- : Chemical resistant gloves.

Eyes

- : Safety goggles or face shield.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: Liquid
Solubility in water	: Miscible
Colour	: Grey - Beige
Octanol/water	: log = 2.13
Odour	: Faint odour (aromatic)
Partition coefficient	: (Metazachlor)
Boiling point	: 100°C (water)
Flammability	: Not flammable
Density	: 1.14 g/mL @ 20°C
Explosion properties	: Not explosive
Vapour pressure	: 0.93 mPa @ 20°C (Metazachlor)
Oxidation properties	: Not oxidizing

10. STABILITY AND REACTIVITY

Stability	: Not subject to polymerization.
Hazardous reactions	: None.
Hazardous decomposition products	: Chloride compound and nitrogen oxides.
Materials to avoid	: Oxidizing agents, acids and alkali.

11. TOXICOLOGICAL INFORMATION

Acute toxicity - Oral	: LD ₅₀ (rat-female) = 1,234 mg/kg
Acute toxicity - Dermal	: LD ₅₀ (rat) > 4,000 mg/kg
Acute toxicity - Inhalation	: LC ₅₀ (rabbit) > 3.99 mg/L (4 hours) (maximum attainable concentrate)
Skin irritation	: Not Irritating (rabbit)
Eye irritation	: Minimal Irritating (rabbit)
Sensitization	: Sensitizer (guinea pig)
Common Name	: Metazachlor
Chronic toxicity	: NOEL (rat) = 3.6 mg/kg. NOEL (mice) = 19 mg/kg

12. ECOLOGICAL INFORMATION

Preparation - common name:	Metazachlor
Mobility	: Soil - Not mobile
Persistence/degradability	: Soil - Degradation is primarily via: microorganisms. Half-life time (t _{1/2}): 3-9 days.
Ecotoxicity	: Fish - LC ₅₀ (96 hours) rainbow trout (oncorhynchus mykiss) = 7.34 mg/L Daphnia magna - EC ₅₀ (48 hours) = 67.8 mg/L Algae (desmodesmus subspicatus) - EC ₅₀ (72 hours) = 0.0437 mg/L Fish - LC ₅₀ (96 hours) rainbow trout (oncorhynchus mykiss) = 4 mg/L, carp (cyprinus caprio) = 15 mg/L Daphnia - EC ₅₀ (48 hours) = 22 mg/L Algae - Chlorella fusca EC ₅₀ (96 hours) = 1.63 mg/L Birds - Bobwhite quail (colinus virginianus) LD ₅₀ > 2,000 mg/kg, LC ₅₀ > 5,620 mg/kg. Mallard duck (anas platyrhynchos) LC ₅₀ > 5,620 mg/kg Bees - Not toxic. Harmful to aquatic organisms. Birds and bees: Non toxic.

13. DISPOSAL CONSIDERATIONS

Methods of disposal : Dispose of in a pesticide approved landfill, or in a chemical incinerator equipped with scrubbers, in accordance with national and regional regulations.

14. TRANSPORT INFORMATION

Not classified

National transport regulations : No additional national transport regulations are known to the supplier

15. REGULATORY INFORMATION

Classification : This product is provisionally labelled by the supplier in accordance with the suppliers understanding of the EU regulations (Directives 67/548/EEC, 1999/45/EC).

Hazard symbol(s) : Xn, N



HARMFUL



DA NGEROUS FOR THE ENVIRONMENT

Risk phrases : R22: Harmful if swallowed.
R43: May cause sensitization by skin contact.
R50: Very toxic to aquatic organisms.

Safety phrases : S02: Keep out of the reach of children.
S13: Keep away from food, drink and animal feedingstuffs.
S20/21: When using, do not eat, drink or smoke.
S24/25: Avoid contact with skin and eyes.
S36/37: Wear suitable protective clothing and gloves.
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S60: This material and its container must be disposed of as hazardous waste.
S61: Avoid release to the environment. Refer to special instructions/Safety data sheets.

16. OTHER INFORMATION

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

HISTORY

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The version-number is made up of three parts; part 1 is a general information code, part 2 a country-specific code and part 3 a language-specific code

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