



Touchdown Quattro®


GROUP 9 HERBICIDE

Product registration number: MAPP 10608; PCS No. 01956

Touchdown Quattro is an aqueous concentrate containing 360 g/l glyphosate, a surfactant and water conditioning system.

A systemic herbicide for the control of a wide range of annual and perennial weeds pre-harvest in wheat, barley, oilseed rape, mustards, linseed, combining peas and field beans, in stubbles, green cover on land not being used for crop production and natural surfaces not intended to bear vegetation, before drilling or planting any crop, post drilling and crop emergence, for destruction of grassland and for desiccation of oilseed rape and mustards.

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

**In case of toxic or transport emergency ring
+44 (0) 1484 538444 any time.**

**PROTECT FROM FROST
MIX THOROUGHLY BEFORE USE**

This container should be handled only by mechanical means.

DO NOT USE OR KEEP TOUCHDOWN QUATTRO IN GALVANISED OR UNLINED MILD STEEL SPRAY TANKS OR CONTAINERS. DO NOT LEAVE SPRAY MIXTURE IN TANK FOR LONG PERIODS AND MAKE SURE TANKS ARE WELL VENTED.



**The
Voluntary
Initiative**

This product label is compliant with the CPA Voluntary Initiative (VI) guidance.

FOR PROFESSIONAL USE ONLY

To avoid risks to human health and the environment comply with the instructions for use.


Warning

Toxic to aquatic life with long lasting effects.

Keep out of reach of children.

Do not eat, drink or smoke when using this product.

Collect spillage.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

MAPP 10608 PCS No. 01956

Approval Holder & UK Marketing Company

Syngenta UK Ltd
CPC4, Capital Park, Fulbourn, Cambridge, CB21 5XE
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Ireland Marketing Company

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L1088427 GBRI/05A PPE 4160460

20 litres

Product names marked ® or ™, the ALLIANCE FRAME logo, the SYNGENTA Logo and the PURPOSE ICON are Trademarks of a Syngenta Group Company

SAFETY PRECAUTIONS**(a) Operator Protection (COSHH applies to the UK only)**

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

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate and applying through hand held equipment.

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

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

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

(b) Environmental protection

KEEP LIVESTOCK OUT OF TREATED AREAS.
DO NOT USE ON GRASSLAND if the crop is to be used as animal feed or bedding...

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.

(c) 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.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL / HORTICULTURAL / INDUSTRIAL HERBICIDE

For use on:

Crops/situations	Maximum individual dose (litres product/ha)	Maximum total dose (litres/product/ha)	Latest time of application
Barley, wheat	4.0	4	7 days before harvest
Oilseed rape and linseed	4.0	4	14 days before harvest
Mustard	4.0	4	8 days before harvest
Wheat, barley, oilseed rape, mustard, linseed, combining peas, vining peas, field beans, bulb onions, durum wheat, leek, oats, potato, salad onions, sugar beet, swede, turnip, asparagus	1.5	1.5	Pre emergence (ensure spraying precedes ANY crop emergence)
All edible crops (before planting), all edible crops (stubble), all non-edible crops (before planting), all non-edible crops (stubble)	4.0	4	5 days before cultivation, drilling or planting of the following crop
	1.5	1.5	2 days before drilling or planting of the following crop or 24 hours before cultivating
Combining peas and field bean	3.0	3	7 days before harvest
Green cover on land not being used for crop production	6.0	6	5 days before cultivation, drilling or planting of the following crop
Grassland (destruction), hard surfaces, natural surfaces not intended to bear vegetation, permeable surfaces overlying soil	6.0	-	-

*Other specific restrictions:

Livestock must be kept out of treated areas until poisonous weeds such as ragwort have died and become unpalatable.

For use on handheld rotary atomiser, the spray droplet spectra must be a minimum Volume Median Diameter (VDM) of 200 microns.

The product must not be used on grassland if the crop is to be used as animal feed or bedding.

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.

This leaflet is part of the approved Product Label.

DIRECTIONS FOR USE

IMPORTANT: This information is authorised as part of the Product Label. All instructions within this section must be carefully read in order to obtain safe and successful use of this product.

CONDITIONS FOR OPTIMUM USE

TOUCHDOWN QUATTRO applied to foliage is translocated throughout the plant, controlling all parts including roots, rhizomes or stolons. After treatment, discolouration of the leaves is seen first on grass weeds but takes longer to appear on broad-leaved weeds. The time for complete kill of weeds depends on species and growing conditions, and may vary from a few days to a few weeks.

TOUCHDOWN QUATTRO is quickly deactivated and degraded in soil. Once a sufficient interval for translocation into the weeds has elapsed (as specified below), any crop can be safely drilled or planted. A slight growth check may occasionally be seen, particularly where herbicide traces remain in decaying trash from previously treated crops or weeds. Disperse or bury such decaying matter by thorough cultivation.

To allow TOUCHDOWN QUATTRO to translocate to maximum effect, it is important that perennial weeds are not broken up before treatment, so do not cultivate before spraying. In order to allow full translocation of TOUCHDOWN QUATTRO, do not apply other pesticides, lime, fertilizer or farmyard manure either before or within 5 days after application of this product.

Extreme care must be taken to avoid spray drift as this can severely damage neighbouring crops or non-crop plants outside the target area. Do not spray in windy weather, especially if applying a spray with smaller droplet size.

In good growing conditions TOUCHDOWN QUATTRO is rainfast within 6 hours. Where weed growth and uptake is slowed by adverse conditions, a rain-free period of up to 24 hours following spraying may be necessary. For best results, TOUCHDOWN QUATTRO should be applied to a dry target.

WEEDS CONTROLLED

OPTIMUM CONTROL OF WEEDS

For best control, apply TOUCHDOWN QUATTRO to weeds which are actively growing, with enough leaf to absorb the product. Weeds are less susceptible to this product when growth is restricted by natural senescence or by factors such as drought, waterlogging, frost or high temperature. Such conditions at, or soon after, spraying may result in reduced control.

Where a range of dose rates is given for control of Common Couch (marked #), the full rate of 4.0 litres per hectare will give the best and most reliable control. Rates may be reduced within the range indicated where weed growth is suitable and in good growing conditions. Reduced rates may give less than optimum levels of control, and should only be used where such control may be tolerated, as in the case of maintenance control of lower weed populations.

The TOUCHDOWN QUATTRO formulation has been fully optimised such that additional tank mix adjuvants are not required when applying at minimum rates recommended on this label.

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.

TIMING FOR OPTIMUM CONTROL OF WEEDS

Common Couch and other perennial grass weeds	Treat only when a full emergence of actively growing green leaf is reached. Common Couch reaches this susceptible stage of growth from the beginning of tillering and new rhizome growth, usually when plants have 4 or 5 leaves with at least 10 cm of new growth.
Perennial broad-leaved weeds	Best treated when actively growing and at or near flowering, but before senescence begins.
Annual weeds	Must be actively growing, with sufficient leaf area for uptake of the spray. Annual grasses should have at least 5 cm of leaf and annual broad-leaved weeds at least 2 expanded true leaves before spraying. Annual weeds emerging after treatment will not be controlled.

CROP SPECIFIC INFORMATION

PRE-HARVEST USE IN WHEAT, BARLEY, OILSEED RAPE, MUSTARDS, LINSEED, COMBINING PEAS AND FIELD BEANS

CROPS

All varieties of wheat, barley, oilseed rape, mustards, linseed, combining peas and field beans may be treated to control annual weeds and perennial weeds such as Common Couch in following crops. To allow direct combining of oilseed rape, mustards and linseed, TOUCHDOWN QUATTRO can be used to desiccate the crop prior to harvest. TOUCHDOWN QUATTRO may be applied to all cereals to be used for feed, to wheat crops intended for milling, to barley crops intended for malt and to oilseed rape and linseed for crushing. DO NOT treat crops grown for seed, or undersown crops. Consult your grain merchant before treating any crop being grown on a contract.

CONDITIONS FOR USE

CEREALS

Apply to wheat or barley at least 7 days before harvest. All cereal grain must be under 30% moisture content. If dull weather persists after application allow up to 14 days before harvest, particularly on broad-leaved weeds.

OILSEED RAPE AND MUSTARDS

Do not treat oilseed rape until the crop seeds have less than 30% moisture content. This is not likely to be before BBCH Growth Stage 85 (50% of pods fully ripe, seeds black and hard) has been reached across the whole field to be treated. Apply to oilseed rape 14 to 21 days before harvest and to mustards 8 to 10 days before harvest. DO NOT treat laid crops with significant levels of green growth, or crops with areas of uneven ripening due to factors such as bird damage or poor drainage.

LINSEED

Apply to linseed when crop seeds have less than 30% moisture content, at least 14 days before harvest. A delay of up to 28 days may be necessary prior to combine harvesting.

COMBINING PEAS AND FIELD BEANS

Apply to combining peas and field beans when seeds have less than 30% moisture content, at least 7 days before harvest. If dull weather persists after application allow up to 14 days before harvest - particularly on broad-leaved weeds.

Straw may be chopped and incorporated, or used for all purposes except as a horticultural mulch or growing medium. Normal cultivation may be made after straw removal. Direct drilling may be used in fields suitable for this technique. Allow at least 14 days after spraying TOUCHDOWN QUATTRO before cultivating or direct drilling.

RATES OF USE - WEED CONTROL

Weeds are controlled by TOUCHDOWN QUATTRO at rates shown. Select the lowest rate which controls all required weeds.

Weed / Use	Crop	Rate: litres per hectare	Notes On Use
Common Couch.	Cereals Oilseed rape Linseed Mustards	2.0* to 4.0#	For best control use the full rate. Rates may be reduced as shown in good growing conditions, and where weed growth stage is suitable#.
	Peas for dry harvesting Field beans	3.0#	Longer term control of common couch may be reduced#.
Other perennial grassweeds. Perennial broad-leaved weeds.	Cereals Oilseed rape Linseed Mustards	4.0	All infestation levels.
	Peas for dry harvesting Field beans	3.0#	Longer term control of perennial grass weeds and perennial broad-leaved weeds may be reduced#.
Annual broad-leaved weeds ¹ .	Cereals Oilseed rape Linseed Mustards	1.5	All infestation levels.
Annual grasses.	Peas for dry harvesting Field beans	1.5	All infestation levels.

Harvest aid. Annual grasses, Crop Stems and leaves	Cereals	1.0	At the harvest aid rate, volunteer wheat and wheat crops may require up to 14 days before harvest.
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* See 'Optimum Control Of Weeds'

† CAUTION: Volunteer Potatoes, Small Nettle, Rosebay Willowherb and *Polygonum* spp. will not be controlled at these lower application rates.

RATES OF USE - CROP DESICCATION

Crop	Rate (litres/hectare)	Notes on use
Oilseed rape Mustards	3.0	Apply to standing crops of oilseed rape and mustards when the crop seeds have less than 30% moisture content. Apply to oilseed rape 14-21 days before harvest and to mustards 8-10 days before harvest. DO NOT treat laid crops with significant levels of green growth, or crops with areas of uneven ripening due to factors such as bird damage or poor drainage.
Linseed		When applied to linseed for weed control at doses above 3 l/ha, TOUCHDOWN QUATTRO will provide a level of desiccation of the crop*

* This product may not provide adequate desiccation of linseed in all circumstances. Where users need rapid desiccation and the control of perennial weeds is not a requirement, Syngenta recommends the use of 'Reglone' (MAPP 10534/PCS No. 02453).

APPLICATION

Apply TOUCHDOWN QUATTRO pre-harvest in the following water volumes:

Wheat, barley, linseed, combining peas and field beans: 80 to 250 litres per hectare

Oilseed rape and mustards: 200 to 250 litres per hectare

200 to 250 litres per hectare is the preferred volume where crop or weeds are dense and good coverage is necessary.

WEED CONTROL IN STUBBLES, BEFORE DRILLING OR PLANTING ANY CROP OR POST DRILLING OR PLANTING ABD BEFORE CROP EMERGENCE

CONDITIONS FOR USE

For Couch control in stubbles, applications made from late September up to mid-November give the best results. In some years, performance can be reduced during this period by insufficient foliage re-growth, and/or reduction of growth activity due to onset of cold conditions e.g. frost before or soon after application.

In Spring, allow at least 3 weeks of weed growth before spraying with TOUCHDOWN QUATTRO. Re-treatment may be necessary pre-harvest or in the autumn to control any further weeds emerging after treatment.

DO NOT CULTIVATE BEFORE SPRAYING. Direct drilling may be used in fields suitable for this technique.

Where using post drilling or planting and pre crop emergence ensure application is complete before ANY crop has emerged.

RATES OF USE

Weeds are controlled by TOUCHDOWN QUATTRO at rates shown. Select the lowest rate which controls all required weeds.

Weed / Use	Rate: litres per hectare	Notes For Use	Latest time of application
Common Couch	3.0 to 4.0#	For best control use the full rate. Rates may be reduced as shown in good growing conditions, and where weed growth stage is suitable#.	5 days before cultivation, drilling or planting of the following crop
Other perennial grasses. Volunteer potatoes (autumn only).	4.0	Ensure plenty of active top growth before treatment, especially for volunteer potatoes.	
Annual broad-leaved weeds. Annual grasses. Volunteer cereals.	1.5	All infestations of all species.	2 days before drilling or planting of the following crop, or 24 hours after cultivating
# See 'Optimum Control Of Weeds'			

APPLICATION

Water volume: **80-250 litres per hectare**

200-250 litres per hectare is the preferred volume where crop or weeds are dense and good coverage is necessary.

GRASSLAND DESTRUCTION

CROPS

Do not use on grassland if the crop is to be used for animal food or bedding. Exclude stock from treated fields.

Livestock may not graze or be fed the treated forage, nor may it be used for silage or bedding. After grazing or cutting, allow a re-growth period varying from 3 to 6 weeks before spraying with TOUCHDOWN QUATTRO:

Short rotation grasses and annual broad-leaved species:

Treat at any time of year when growth is active, grass plants have at least 5 cm of new leaf growth and annual broad-leaved weeds have at least 2 true leaves.

Perennial grasses in 2-4 year old leys:

Treat when rhizome, stolon or tiller growth is active and grass plants have at least 5 leaves with 10 to 15 cm of new leaf growth. The listed perennial broad-leaved weeds will often be susceptible at times when perennial grasses are suitable for treatment.

Perennial broad-leaved weeds in long leys:

Treat when these weeds have produced a flowering stem which is up to the stage of flowering but before seeds are set. The period of treatment can range from early June to late August and is influenced by location, climate and sward management.

Well established perennial weeds in permanent pastures:

These pastures may contain many fine-leaved grasses and many broad-leaved weeds. Take care to identify the species present and spray only at their sensitive stage of growth.

CONDITIONS OF USE

Allow at least 14 days after spraying perennial grasses and weeds, after which normal cultivations for the next crop can be made as usual. Alternatively, there are two situations where grass may be direct drilled:

- a) Following a 1-2 year old ley - without mat.
It is essential to remove or destroy all surface trash once desiccation is complete. Grass and clover may be direct drilled once all trash is cleared.
- b) Following a long ley - with some surface mat.
Spray the ley in the autumn. Delay direct drilling until the following spring to give the surface mat time to decompose. Destruction of any remaining trash, followed by harrowing to break the soil surface to the depth of decaying roots and rhizomes, will aerate the soil, speed breakdown of the organic mat and reduce the risk of toxins being present when grass seeds are drilled in the spring.

RATES OF USE

Weeds are controlled by TOUCHDOWN QUATTRO at rates marked 'S'. Select the lowest rate which controls all required weeds, and will destroy all grass species present in the sward. Well established swards and permanent pasture will need higher doses.

Grass Weeds and Rushes	Rate: litres per hectare			
	3.0	4.0	5.0	6.0
Annual Meadow grass	S	S	S	S
Barren Brome	S	S	S	S
Black Bent		S	S	S
Black-grass	S	S	S	S
Cock's-foot		S	S	S
Common Bent		S	S	S
Common Couch		S	S	S
Common Reed			S	S
Creeping Bent		S	S	S
Creeping Soft-grass		S	S	S
Crested Dog's-tail		S	S	S

False Oat-grass		S	S	S
Hard Rush				S
Italian Rye-grass	S	S	S	S
Meadow Fescue		S	S	S
Meadow Foxtail			S	S
Perennial Rye grass		S	S	S
Red Fescue				S
Rough Stalked Meadow-grass	S	S	S	S
Sedges			S	S
Sheep's Fescue				S
Smooth Meadow-grass	S	S	S	S
Soft Brome		S	S	S
Soft Rush			S	S
Timothy		S	S	S
Tufted Hairgrass			S	S
Wild Oats	S	S	S	S
Yorkshire Fog		S	S	S

Broad-leaved Weeds and Bracken	Rate: litres per hectare			
	3.0	4.0	5.0	6.0
Amphibious Bistort				S
Bracken ²			S	S
Broad-leaved Dock		S	S	S
Cleavers	S	S	S	S
Colt's-foot				S
Common Chickweed	S	S	S	S
Common Mouse-ear		S	S	S
Common Nettle			S	S
Common Ragwort				S
Common Sorrel			S	S
Creeping Buttercup ¹			S	S
Creeping Cinquefoil			S	S
Creeping Thistle			S	S
Curled Dock			S	S

Dandelion		S	S	S
Dock seedlings	S	S	S	S
Ground-elder				S
Hogweeds ¹		S	S	S
Japanese Knotweed				S
Mayweed species	S	S	S	S
Meadowsweet				S
Mugwort		S	S	S
Perennial Sow- Thistle			S	S
Plantains		S	S	S
Red Clover			S	S
St John's-worts				S
Scotch Thistle				S
Sheep's Sorrel			S	S
Spear Thistle			S	S
Speedwell species	S	S	S	S
White Clover ¹				S
White Dead-nettle			S	S
Willowherbs		S	S	S
Yarrow			S	S

¹Correct stage of growth at treatment is important.

²At full frond expansion.

TEXT AREA
122x140mm

APPLICATION

Water volume: **150-250 litres per hectare**

200-250 litres per hectare is the preferred volume where crop or weeds are dense and good coverage is necessary.

GREEN COVER ON LAND TEMPORARILY REMOVED FROM PRODUCTION, AND LAND NOT INTENDED TO BEAR VEGETATION

When TOUCHDOWN QUATTRO is to be applied to land taken out of production as part of a grant aided scheme, users must ensure that use complies with the management rules of that scheme. TOUCHDOWN QUATTRO can also be used for vegetation control in a variety of other non-cropped areas, such as:

Creation of sterile strips around field margins.

Along roads, paths, fences and ditch edges.

Around buildings and in yards, storage areas and waste ground.

Root-crop storage areas - including re-growth of roots/tubers which will not be consumed.

DO NOT USE in hedgerows, or allow drift into hedgerows.

DO NOT USE in covered areas such as glass houses or under polythene.

Exclude stock from treated fields. Livestock may not graze or be fed the treated forage, nor may it be used for hay, silage or bedding.

Allow 14 days after spraying before cultivating, drilling or planting.

Application to hard surfaces: Apply this product carefully. Ensure spraying takes place only when weeds are actively growing (normally March to October) and is confined only to visible weeds including those in the 30 cm swath covering the kerb edge and road gully – do not overspray drains.

RATES OF USE

Weeds are controlled by TOUCHDOWN QUATTRO at rates shown in the previous section on Grassland Destruction. Other weed species should be treated at the rates shown below. Select the lowest rate which controls all required weeds.

Weed	Rate: litres per hectare
Perennial broad-leaved weeds	6.0
Perennial grasses ** and volunteer potatoes	4.0
Annual weeds	1.5

**A reduced dose of 3 litres product/hectare may provide adequate control of couch grass under optimum application conditions.

APPLICATION

Water volume:

80-250 litres per hectare through conventional mounted or knapsack sprayers

or

20-40 litres per hectare through rotary atomisers.

200-250 litres per hectare is the preferred volume where crop or weeds are dense and good coverage is necessary.

PACK SIZE - HECTARAGE TABLE

According to rate, this 20 litre pack will treat the following areas:

Rate of Use	Area Treated
1.5 litres per hectare	13.3 hectares
2 litres per hectare	10.0 hectares
3 litres per hectare	6.66 hectares
4 litres per hectare	5.0 hectares
5 litres per hectare	4.0 hectares
6 litres per hectare	3.33 hectares

COMPATIBILITY

TOUCHDOWN QUATTRO must NOT be tank mixed with pesticides, fertilizers or adjuvants. Such mixtures may lead to reduced weed control.

MIXING AND SPRAYING

CONVENTIONAL HYDRAULIC SPRAYERS

Apply through a well maintained conventional hydraulic sprayer as a MEDIUM or COARSE spray. Ensure that the sprayer is correctly calibrated before use. Do not leave the spray liquid in the sprayer for long periods (i.e. during meals or overnight).

Ensure that the sprayer boom is adjusted in height so that the spray pattern gives good, even cover. When applying pre-harvest, a high clearance boom may be necessary, and a narrow-wheeled tractor with crop dividers and a wide boom sprayer will minimise crop damage.

Mixing: Ensure that the sprayer is clean and correctly set to give an even application at the required volume. Half-fill the spray tank with clean water and start agitation. Shake the container, if less than 20 litre size whereas use mechanical assistance and add the required amount of Touchdown Quattro to the sprayer using a filling device (e.g. induction bowl or closed transfer unit) or by direct addition to the sprayer tank. Where applicable, unscrew and remove the cap covering the 'anti-glug plug'. Pierce with a screw driver. Wash out containers thoroughly, preferably using an integrated pressure rinsing device, or manually rinse three times. Add washings to the sprayer at the time of filling. Top-up the tank with water to the required level.

APPLICATION - SPOT TREATMENT

Knapsack applicators: TOUCHDOWN QUATTRO may be applied through knapsack sprayers. Use 200 ml TOUCHDOWN QUATTRO in 9.8 litres of CLEAN water to make 10 litres of spray liquid. This quantity will cover 500 square metres at a dose rate equivalent to 4.0 litres per hectare, or 330 square metres at a dose rate equivalent to 6.0 litres per hectare. Cover weed leaves evenly, but do not spray to the point of run-off.

If using the anti glug-plug container:

- Fill the knapsack sprayer 1/3 full of water.
- Unscrew and remove the cap covering the 'anti glug-plug'.
- * Pierce with a screw driver.
- Decant the required quantity of 'Touchdown Quattro' into an appropriate measuring container and add to the tank and replace both caps.
- Rinse the measuring device three times with water and add to the tank.
- Add the appropriate amount of adjuvant to the tank and fill to the required level with water.

CDA Applicators: These applicators may be used in non-crop areas only.

When using rotary atomisers the spray droplet spectra produced must be of a minimum Volume Median Diameter (VMD) of 200 microns. Select the correct rate of TOUCHDOWN QUATTRO and make up to desired volume with CLEAN water. Calibrate and operate according to manufacturer's instructions.

AFTER USE

It is essential to clean out thoroughly sprayer tanks, pumps and pipelines between applying this product and other pesticides.

TEXT AREA

Wash equipment thoroughly immediately after use with a commercial tank cleaner, in accordance with the manufacturer's instructions. Dispose of tank washings safely according to the Code of Practice for using plant protection products.

This product is to be used only in accordance with the recommendations and instructions given on the labels provided with this pack. Use in any other circumstances is entirely at user's risk.

TOUCHDOWN QUATTRO, 'Reglone' trade marks are the property of SYNGENTA Limited.

Syngenta UK Limited,
Fulbourn, Cambridge CB21 5XE.
Tel: 01223 883400

Section 6 of the Health and Safety at Work Act

Additional Product Safety Information

THESE PAGES CAN BE ADDED OR REMOVED AS NECESSARY
IF THE PAGE IS 2022 OR THE PAGE IS 2021

(This section does not form part of the product label under the Control of Pesticides Regulations 1995.)

The product label provides information on a specific pesticidal use of the product: do not use otherwise, unless you have assessed any potential hazard involved, the safety measures required and that the particular use has "Extension of use" approval or is otherwise permitted under the Control of Pesticides Regulations 1995.

The information on this label is based on the best available information including data from test results

SAFETY DATA SHEET - V10.1

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name: TOUCHDOWN QUATTRO

Design code: A12798QA

Product Registration number: MAPP 10608; PCS 01956

1.2 Product identifier

Use of the Substance/Mixture: Herbicide

1.3 Details of the supplier of the safety data sheet

Authorisation Holder: Syngenta UK Limited
CPC4, Capital Park, Fulbourn,
Cambridge CB21 5XE, United Kingdom

Telephone: +44 (0) 1223 883400

Telefax: +44 (0) 1223 882195

E-mail address of person responsible for the SDS: customer.services@syngenta.com

Marketing Company: Syngenta Ireland Limited
Block 6 Cleaboy Business Park, Old Kilmeaden Road,
Waterford, Ireland

Telephone: (051) 377203

Telefax: (051) 354748

E-mail address of person responsible for the SDS: cropsales.ie@syngenta.com

1.4 Emergency telephone number

Emergency telephone number: +44 1484 538444

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Hazard statements	H411	Toxic to aquatic life with long lasting effects
Supplementa Hazard statements	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.
Precautionary statements	P102 P270 P391	Keep out of reach of children. Do not eat, drink or smoke when using this product. Collect Spillage
Disposal:	P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.2 Mixtures

Hazardous components

Chemical Name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
glyphosate-diammonium	69254-40-6 015-184-00-8	Aquatic Chronic 2; H411	>= 30 - < 50
D-Glucopyranose, oligomeric, decyl octyl glycosides	68515-73-1 500-220-1500-220-1 01-2119488530-36	Eye Dam.1; H318	>= 10 - < 20

For explanation of abbreviations see section 16.

SECTION 4. FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.

If inhaled: Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or poison control centre immediately.

In case of skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

If swallowed: If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms: Nonspecific. No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment: There is no specific antidote available. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media:

Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam or Water spray

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting: As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health.

5.3 Advice for fire-fighters:

Special protective equipment for firefighters: Wear full protective clothing and self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling: No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

Further information on storage stability: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

7.3 Specific end uses

Specific use(s): For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
ammonia, anhydrous	7664-41-7	STEL	50 ppm 36 mg/m ³	2000/39/EC
Further information	Indicative			

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
	7664-41-7	TWA	20 ppm 14 mg/m ³	2000/39/EC
Further information	Indicative			
	7664-41-7	TWA	25 ppm 18 mg/m ³	GB EH40
	7664-41-7	STEL	35 ppm 25 mg/m ³	GB EH40

8.2 Exposure controls

Engineering Measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye protection: No special protective equipment required.

Hand protection

Remarks: No special protective equipment required.

Skin and body protection: No special protective equipment required.

Select skin and body protection based on the physical job requirements.

Respiratory protection: No personal respiratory protective equipment normally required. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	liquid
Colour:	light brown to dark brown
Odour:	sweetish, weak
Odour Threshold:	No data available
pH:	6.8 (25°C)
Melting point/range:	No data available
Boiling Point/Boiling Range:	No data available
Flash-Point:	Method: Pensky-Martens closed cup does not flash
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Lower explosion limit:	No data available

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Upper explosion limit:	No data available
Vapour pressure:	No data available
Relative vapour density:	No data available
Density:	1.268 g/cm ³ (20°C)
Solubility(ies)	
Solubility in other solvents:	No data available
Auto-ignition temperature:	> 650 °C
Decomposition temperature :	No data available
Viscosity	
Viscosity, dynamic:	71 mPa.s (20°C) 50 mPa.s (40°C)
Viscosity, kinematic:	No data available
Explosive Properties:	Not explosive
Oxidising properties:	The substance or mixture is not classified as oxidizing.

9.2 Other Information

Surface tension: 42.6 mN/m, 0.1 %

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid: No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid: None known.

10.6 Hazardous decomposition products

Hazardous decomposition products: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on likely routes of exposure: Ingestion, Inhalation, Skin contact, Eye contact.

Acute toxicity

Product:

Acute oral toxicity: LD50 (Rat, female): > 5,000 mg/kg

Acute inhalation toxicity: LC50 (Rat, male and female): > 5.12 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Remarks: The toxicological data has been taken from products of similar composition.

Acute dermal toxicity: LD50 (Rat, male and female): > 5,000 mg/kg

Skin corrosion/irritation

Product:

Species: Rabbit

Result: Mild skin irritation

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: No eye irritation

Components:

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Species: Rabbit

Result: Irreversible effects on the eye

Respiratory or skin sensitisation

Product:

Test Type: Buehler Test

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

glyphosate-diammonium:

Germ cell mutagenicity- Assessment: Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

glyphosate-diammonium:

Carcinogenicity - Assessment: No evidence of carcinogenicity in animal studies

Reproductive toxicity

Components:

glyphosate-diammonium:

Reproductive toxicity - Assessment: No toxicity to reproduction

Repeated dose toxicity

Components:

glyphosate-diammonium:

Remarks: No adverse effect has been observed in chronic toxicity tests.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product:

Toxicity to fish:

LC50 (Oncorhynchus mykiss (rainbow trout)): 800 mg/l

Exposure time: 96 h

Remarks: Based on test results obtained with similar product.

Toxicity to daphnia and

other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 160 mg/l
Exposure time: 48 h

Toxicity to algae:

Remarks: Based on test results obtained with similar product.
EbC50 (Desmodesmus subspicatus (green algae)): 140 mg/l
Exposure time: 72 h
Remarks: Based on test results obtained with similar product.
ErC50 (Desmodesmus subspicatus (green algae)): > 320 mg/l
Exposure time: 72 h
Remarks: Based on test results obtained with similar product.

Ecotoxicology Assessment

Acute aquatic toxicity: Toxic to aquatic life., Classification of the product is based on the summation of the concentrations of classified components.

Components:

glyphosate-diammonium:

Toxicity to fish: LC50 (Oncorhynchus mykiss (rainbow trout)): 86 mg/l
Exposure time: 96 h
The value is given in analogy to the following substances: glyphosate (ISO)

Toxicity to daphnia and

other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 780 mg/l
Exposure time: 48 h
The value is given in analogy to the following substances: glyphosate (ISO)

Toxicity to algae:

EC50 (Skeletonema costatum (marine diatom)): 1.3 mg/l
Exposure time: 4 d
The value is given in analogy to the following substances: glyphosate (ISO)
NOEC (green algae): > 1 mg/l
The value is given in analogy to the following substances: glyphosate (ISO)

Toxicity to fish

(Chronic toxicity): NOEC: > 25.7 mg/l
Species: Fish
The value is given in analogy to the following substances: glyphosate (ISO)

Toxicity to daphnia and

other aquatic invertebrates
(Chronic toxicity): NOEC: 50 mg/l
Species: Invertebrates
The value is given in analogy to the following substances: glyphosate (ISO)

D-Glucopyranose, oligomeric, decyl octyl glycosides:

Toxicity to microorganisms: EC50 (Pseudomonas putida): > 560 mg/l

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

Components:

glyphosate-diammonium:

Distribution among environmental compartments: Remarks: immobile

12.5 Results of PBT and vPvB assessment

Product:

Assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

glyphosate-diammonium:

Assessment: This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Other adverse effects

No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product: Do not contaminate ponds, waterways or ditches with chemical or used container. Do not dispose of waste into sewer. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Waste Code: uncleaned packagings. 150110, packaging containing residues of or contaminated by dangerous substances.

SECTION 14. TRANSPORT INFORMATION

14.1 UN number

Not regulated as a dangerous good

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

Not regulated as a dangerous good

14.4 Packing group

Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance or mixture

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59): Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer: Not applicable
Regulation (EC) No 850/2004 on persistent organic pollutants: Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

	Quantity 1	Quantity 2
E2 ENVIRONMENTAL HAZARDS	200 t	500 t

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Use plant protection products safely. Always read the label and product information before use.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: OTHER INFORMATION

Full text of H-Statements

H318: Causes serious eye damage.
H411: Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic: Chronic aquatic toxicity
Eye Dam.: Serious eye damage
2000/39/EC: Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
GB EH40: UK. EH40 WEL - Workplace Exposure Limits
2000/39/EC / TWA: Limit Value - eight hours
2000/39/EC / STEL: Short term exposure limit
GB EH40 / TWA: Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL: Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;
ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation;
DSL - Domestic Substances List (Cana-da); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated

with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture: **Classification procedure:**

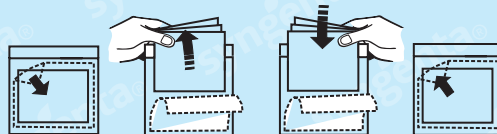
Aquatic Chronic 2 H411 On basis of test data.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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SAFETY PRECAUTIONS

(a) Operator Protection (COSHH applies to the UK only)

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

WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate and applying through hand held equipment.

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

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

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

(b) Environmental protection

KEEP LIVESTOCK OUT OF TREATED AREAS.

DO NOT USE ON GRASSLAND if the crop is to be used as animal feed or bedding.

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.

(c) 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.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL / HORTICULTURAL / INDUSTRIAL HERBICIDE

For use on:

Crops/situations	Maximum individual dose (litres product/ha)	Maximum total dose (litres/product/ha)	Latest time of application
Barley, wheat	4.0	4	7 days before harvest
Oilseed rape and linseed	4.0	4	14 days before harvest
Mustard	4.0	4	8 days before harvest
Wheat, barley, oilseed rape, mustard, linseed, combining peas, vining peas, field beans, bulb onions, durum wheat, leek, oats, potato, salad onions, sugar beet, swede, turnip, asparagus	1.5	1.5	Pre emergence (ensure spraying precedes ANY crop emergence)
All edible crops (before planting), all edible crops (stubble), all non-edible crops (before planting), all non-edible crops (stubble)	4.0	4	5 days before cultivation, drilling or planting of the following crop
	1.5	1.5	2 days before drilling or planting of the following crop or 24 hours before cultivating
Combining peas and field bean	3.0	3	7 days before harvest
Green cover on land not being used for crop production	6.0	6	5 days before cultivation, drilling or planting of the following crop
Grassland (destruction), hard surfaces, natural surfaces not intended to bear vegetation, permeable surfaces overlying soil	6.0	-	-

*Other specific restrictions:

Livestock must be kept out of treated areas until poisonous weeds such as ragwort have died and become unpalatable.

For use on handheld rotary atomiser, the spray droplet spectra must be a minimum Volume Median Diameter (VDM) of 200 microns.

The product must not be used on grassland if the crop is to be used as animal feed or bedding.

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.

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