

RETURN LEAFLET TO
POCKET AFTER USE



NOMIX CONQUEROR

A FOLIAR HERBICIDE FOR USE IN PARKS, HIGHWAYS, PAVED AREAS, INDUSTRIAL AND FACTORY SITES, IN HORTICULTURE AND FORESTRY AND AQUATIC SITUATIONS FOR THE CONTROL OF ANNUAL WEEDS AND PERENNIAL GRASSES.

An ultra low volume liquid containing 194g/l (17.9% w/w) isopropylamine salt of glyphosate (equivalent to 144 g/l glyphosate acid)

MAPP 12370

IMPORTANT INFORMATION

FOR USE AS A HORTICULTURAL /INDUSTRIAL/AMENITY/FORESTRY/AQUATIC HERBICIDE

Apple, pear, damson, cherry, plum, natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces, amenity vegetation, enclosed waters, open waters, land immediately adjacent to aquatic area, ornamental plant production, forest, managed amenity turf (pre-establishment only).

Situation: Natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces, amenity vegetation, ornamental plant production, forest, managed amenity turf (pre-establishment only).

Maximum individual dose: 10.0 litres of product per hectare.

Maximum number of treatments: not applicable

Latest time of application: not applicable

Crop: Apple, pear, damson, cherry, plum

Maximum individual dose: 10.0 litres of product per hectare.

Maximum number of treatments: not applicable

Latest time of application: Apple, pear: after harvest (post leaf fall) but before green cluster stage. Damson, cherry, plum: after harvest (post leaf fall) but before white bud stage.

Situation: Enclosed waters, open waters, land immediately adjacent to aquatic area

Maximum individual dose: 15.0 litres of product per hectare.

Maximum number of treatments: not applicable

Latest time of application: not applicable

Other specific restrictions: The spray droplet spectra produced must be of a minimum Volume Mean Diameter (VMD) of 200 microns

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

To avoid risk to man and the environment, comply with the instruction for use



Contents: 5 LITRES_e

Formulated for use with Nomix equipment

READY FOR USE – NO MIXING
SHAKE WELL BEFORE USE

PROTECT FROM FROST

616501-20/06/05

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 (COVERALLS), SUITABLE PROTECTIVE GLOVES AND RUBBER BOOTS during application. WHEN USING DO NOT EAT, DRINK OR SMOKE.

WASH HANDS AND EXPOSED SKIN before meals and after work.

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

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).

*Except when used as directed

Users must consult the appropriate water regulatory body (Environment Agency/Scottish Environment Protection Agency) before using the product near water and must obtain agreement before using this product to control aquatic weeds.

Storage and Disposal

KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place, KEEP AWAY FROM FOOD DRINK AND ANIMAL FEEDING STUFFS KEEP OUT OF REACH OF CHILDREN

EMPTY CONTAINER COMPLETELY and dispose of safely.

Avoid storage for prolonged periods at temperatures above 30°C.

WARNING

BEFORE USE REFER TO THE NOMIX APPLICATOR INSTRUCTION AND OPERATION MANUAL

DO NOT DECANT. CONNECT DIRECTLY TO NOMIX APPLICATOR DO NOT ALLOW SPRAY TO CONTACT DESIRED PLANTS OR CROPS. In case of emergency day or night telephone CARECHEM 24: 01865 407333

GENERAL INFORMATION

NOMIX CONQUEROR herbicide is an ultra low volume liquid containing 144 gms a.e. glyphosate per litre as a ready for use formulation. It is absorbed by the foliage of plants and translocated to their root systems. The product is recommended for the control of annual and perennial grasses and annual and perennial broad-leaved weeds in amenity and industrial areas, parks, highways, paved areas and factory sites. It is also recommended for clearing weeds prior to planting ornamental species, as a directed application in shrubs and rose beds, ornamentals and in forestry areas. It may also be used as an aquatic herbicide to control emergent and floating weeds.

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.

Connection of the ready for use pack

Shake the pack very thoroughly and connect to the Nomix lance according to the directions in the Instruction and Operation manual.

Application rate

For the control of annual grasses NOMIX CONQUEROR should be applied at 7.5 l/ha. For the control of perennial grasses and annual and perennial broad-leaved weeds NOMIX CONQUEROR should be applied at 10.0 l/ha. In aquatic situations, for emergent weeds eg reed, grasses, water cress, apply at 12.5 l/ha. For floating weeds such as water lilies apply at 15 l/ha.

LANCE CALIBRATION INSTRUCTIONS

Choose a comfortable forward speed and appropriate spray width.

Using the calibration chart, read the required flow rate for your chosen forward speed and spray width.

Adjust the head setting to achieve the required flow rate, which should be measured using the calibration cup provided with the lance.

The flow rate should always be checked before spraying.

CALIBRATION CHART

THE GUIDE HEAD SETTINGS ARE FOR GUIDANCE ONLY AND ARE NO SUBSTITUTE FOR THE CORRECT CALIBRATION PROCEDURE.

Walking Speed	metres/sec mph (kph)	0.7		0.9		1.1		1.3	
		1.5	(2.4)	2.0	(3.2)	2.5	(4.0)	3.0	(4.8)
Disc Type	Spray width cm (in)	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings
Spiral	15 6 30 12	2 5	A-B B	3 6	A-B B	4 8	A-B B	5 9	A-B B
Square	45 18 60 24	7 9	B B-C	9 12	B B-C	11 15	B B-C	14 18	B B-C
Serrated	75 30 90 36	11 13	B-C B-C	15 18	B-C B-C	19 22	B-C C	23 27	B-C B-C

Walking Speed	metres/sec mph (kph)	0.7		0.9		1.1		1.3	
		1.5	(2.4)	2.0	(3.2)	2.5	(4.0)	3.0	(4.8)
Disc Type	Spray width cm (in)	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings
Spiral	15 6 30 12	3 6	A-B B	4 8	A-B B	5 10	B B	6 12	B B-C
Square	45 18 60 24	9 12	B B-C	12 16	B-C B-C	15 20	B-C B-C	18 24	B-C C
Serrated	75 30 90 36	15 18	B-C B-C	20 24	B-C C	25 30	B-C C	30 36	C C-D

Walking Speed	metres/sec mph (kph)	0.7		0.9		1.1		1.3	
		1.5	(2.4)	2.0	(3.2)	2.5	(4.0)	3.0	(4.8)
Disc Type	Spray width cm (in)	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings	Mls/30 secs	Guide Head Settings
Spiral	30 12	9	B	12	B-C	15	B-C	15	B-C
Square	45 18 60 24	14 18	B-C B-C	18 24	B-C B-C	23 30	B-C C	23 30	C C
Serrated	75 30 90 36	23 27	C C	30 36	C C	38 45	C C-D	38 45	C-D C-D

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		1.5	(2.4)	2.0	(3.2)	2.5	(4.0)	3.0	(4.8)
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Spiral	30 12	9	B	12	B-C	15	B-C	18	B-C
Square	45 18 60 24	14 18	B-C B-C	18 24	B-C C	23 30	C C	27 36	C C-D
Serrated	75 30 90 36	23 27	C C	30 36	C C-D	38 45	C C-D	45 54	C-D D

Disc selection

The spiral disc should be used where the spray width required is less than 30cm. The square disc should be used where the spray width required is between 60cm and 30cm.

The narrow swath is appropriate for application to pavement edges, obstacles (e.g. around trees, fence lines, gravestones) or for spot treatment of paved areas where accuracy is required.

The large serrated disc should be used where wide swaths are required e.g. extensive paved areas, and prior to planting shrubs.

When using the spiral and square discs at narrow settings of less than 60cm, care should be taken that the spray quality is adequate to ensure small weeds receive the spray. The disc should be held low over the foliage, so that the rotation speed must be increased to achieve the desired swath width. This results in better atomisation and cover of foliage. Use of swath widths of less than 30cm may result in a reduced level of control.

Equipment hygiene

It is essential to thoroughly clean out the Nomix applicator using Nomix Cleaner, especially between applying this product and other pesticides, to avoid contamination from such products.

Timing of application

Cultivation should not be carried out prior to application.

Annual grasses and broad-leaved weeds should have at least 5 cm of leaf, or 2 expanded true leaves respectively at the time of application. Common couch reaches the susceptible stage of growth when tillering and new rhizome growth commence, which usually occurs when plants have 4-5 leaves. Perennial broad-leaved weeds are most susceptible around the time of flowering. It is important that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Applications of lime, fertiliser, organic manure and pesticides should be delayed until 5 days after application of NOMIX CONQUEROR.

Weeds controlled

NOMIX CONQUEROR controls annual grasses when applied at 7.5 l/ha and perennial grasses and annual and perennial broad-leaved weeds when applied at 10.0 l/ha.

This product will not give acceptable control of Horsetails (equisetum arvense) – repeat treatment will be necessary. The effects of treatment on the long-term control of perennial broad-leaved weeds has not been investigated.

In aquatic situations 'NOMIX CONQUEROR' controls emergent weeds at 12.5 l/ha and floating weeds at 15 l/ha

Caution: AVOID SPRAY CONTACT WITH ALL DESIRED VEGETATION Symptoms on weeds

Leaf symptoms on treated weeds appear between 7 to 10 days in warm conditions, however in cold conditions this can take up to 20 days or more. Leaf symptoms, a reddening followed by yellowing of the foliage, usually appear first on grasses then later on broad-leaved weeds; nettles are extremely slow to show symptoms.

Effect of weather

At least 6 hours and preferably 24 hours rain-free must follow spraying. If rainfall occurs soon after treatment final weed control may be reduced and re-treatment may be necessary.

Do not spray this product onto weeds suffering drought stress, waterlogging, heat or frost which prevent active regrowth and lead to weed die-back, otherwise the level of control will be reduced.

Do not spray in windy conditions as drift onto desired crops or vegetation can severely damage or destroy them.

Subsequent land use

For maximum weed control, the sprayed area should remain undisturbed for 7 days after application to enable the product to be fully translocated throughout the weeds. In cold conditions, await leaf symptoms before starting any cultivation or planting. NOMIX CONQUEROR is not residual in the soil. Planting of trees, shrubs etc. may take place 7 days after application. Grass may be sown 14 days after treatment.

Weed Resistance Strategy

Strains of some annual weeds (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. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer.

There is a low risk for the development of weed resistance to Nomix Conqueror. Users are encouraged to implement a weed resistance strategy based on good agricultural practices and good Plant protection Practices by:

Following label recommendations

- The adoption of complimentary weed control practices
- Minimising the risk of spreading weed infestations
- The implementation of good spraying practice to maintain effective weed control
- Application only under appropriate weather conditions
- Monitoring performance and reporting any unexpected results to Nomix Enviro.

SPECIAL AREAS OF USE

Horticulture - ornamentals, top-fruit trees:

NOMIX CONQUEROR can be used as directed spray around the base of trees and bushes. Avoid contact of the spray with trees and bushes - using the spiral disc will allow accurate placement of the spray and minimise drift potential.

Do not use under polythene or glass.

Forestry

NOMIX CONQUEROR can be used to control grasses and broad-leaved weeds before planting trees or as a directed spray to treat around the base of trees. Other weeds, such as woody weeds, will be controlled provided they have not become too tall to be easily treated using the Nomix lance. Woody weeds should be treated between June and August, before the leaves change colour.

Care should be taken to avoid contact with tree foliage or the stem of young trees. A droplet size should be chosen which is visible and can be directed precisely or a shield can be fitted to the Nomix lance when spraying close to a tree.

A weed free spot around the base of the tree will improve the establishment and growth rate.

Amenity Woodland & Plantings

- *Trees planted on roadsides, in streets, in parks and landscaped area, and in amenity woodland.* NOMIX CONQUEROR can be used to control weeds growing amongst trees or shrubs in amenity plantings. Avoid contact of the spray with foliage or stem of the tree by carefully directing the spray and using a spray shield.
- *Mature trees in parks and streets.* NOMIX CONQUEROR can also be used around mature trees. Provided the bark is not damaged (e.g. by pruning etc.) and there are no suckers or shoots, the base of the tree need not be protected from the spray.

Hedges

- *Before planting.* Vegetation should be cleared before pruning hedges by applying NOMIX CONQUEROR in suitable conditions during the autumn before planting
- *After planting to aid establishment and in Established Ornamental hedges.* Hedge plants will not tolerate contact with NOMIX CONQUEROR. Weeds may be controlled by carefully directed sprays to the bottom of the hedge, using a spray shield. Avoid contact with the foliage or stem of hedge plants.

Amenity Grassland and Managed Turf

Preparation for seeding of laying turf.

Treat weed growth with NOMIX CONQUEROR prior to cultivation.

Aquatic Situations

Nomix Conqueror can be used on enclosed waters, open waters and land immediately adjacent to aquatic areas. Nomix Conqueror controls emerged weeds (reeds, rushes, sedges, including Common Reed Sweet-grass, Reed Canary Grass), and floating aquatic weeds including water-lily. Treat when weeds are actively growing with full emergence of green leaf, at flowering and before dieback. Best results are obtained from applications in the periods from mid-July to mid-August on Water-lilies and mid-August to mid-September on reeds.

When spraying from a boat, use a slow forward speed to cause minimum disturbance to the floating leaves of the weeds. The use of a boat may result in some leaves being disturbed before Nomix Conqueror can be absorbed. Applications made in flowing water should be sprayed against the directions of flow. When disturbed by wash, water lilies may require re-treatment.

Nomix Conqueror may be used for the control of aquatic weeds in the presence of fish if used in strict accordance with the recommendations

of this section.

Users must consult the appropriate Environment Agency regional office or Scottish Environmental Protection Agency before applying Nomix Conqueror in reservoirs, watercourses and waterways.

CONDITIONS OF SALE

The following shall form part of the contract of sale of this produce whether sold by the manufacturer or a subsequent owner ("The Seller")

1. The seller warrants that the product complies with the product specification prevailing at the date of sale which is obtainable from the Seller on request provided that (except to the extent any claim is in respect of personal injury or death) the Seller's liability, for breach of this warranty is limited to the price of the products involved in the breach.
2. Except as aforesaid, all conditions and warranties statutory or otherwise and expressed or implied as to the quality of the product or its fitness for any purpose are expressly excluded.
3. Except as aforesaid the Seller shall not be under any liability other than for personal injury or death whether in contract or in tort for any loss or damage arising out of or resulting from the use of the product
4. The Seller shall in no event be liable for any loss or damage caused by the failure of any person to use the product in accordance with the instruction given for use by The Seller

PRODUCT SAFETY INFORMATION

1. IDENTIFICATION

Preparation : NOMIX CONQUEROR
Supplier : Nomix Enviro, A Division of Frontier Agriculture Ltd,
 The Grain Silos, Weyhill Road, Andover, Hampshire,
 SP10 3NT. Tel: 01264 388050

Chemical Emergency Agency Service (24 hr): Tel. 01865 407 333

2. COMPOSITION/INFORMATION ON INGREDIENTS

Composition : ISOPROPYLAMINE SALT OF N-(PHOSPHONOMETHYL)
 GLYCINE
 CAS No. 38641-94-0 EINECS NO. 254-056-8 17.9%
 (Contains 194g/l of the Isopropylamine salt of
 Glyphosate equivalent to 144 g/l glyphosate)
 Other formulating ingredients 82.1%

3. HAZARDS IDENTIFICATION

Human health effects:

On the basis of available information, this material is not expected to produce any significant adverse health effects when recommended use instructions are followed.

Environmental effects:

When recommended use instructions are followed no adverse effects are expected.

4. FIRST-AID MEASURES

Never give fluids or induce vomiting if patient is unconscious or is having convulsions.

Inhalation:

If inhalation of vapour, mists or fumes causes irritation of the nose or throat, or coughing remove patient to fresh air. If irritation persists obtain medical advice.

Skin contact:

Remove contaminated clothing immediately. Wash contaminated skin immediately with plenty of soap and water. If irritation persists get medical attention.

Eye Contact:

Flush immediately with plenty of water, for at least 15 minutes. If pain, redness or irritation persists, get medical attention.

Ingestion:

If oral contamination occurs, wash out mouth with water. If swallowed do not induce vomiting, seek medical advice immediately and show the container, label or this data sheet.

Medical Advice:

Over exposure symptoms:

No symptoms diagnostic of systemic poisoning with this product.

Physician:

No specific antidote. This product is not an inhibitor of cholinesterase, and treatment with atropine and oximes is not indicated. Treat symptomatically.

5. FIREFIGHTING RELEASE MEASURES

Unusual hazards:

Packaging may burn to produce to give toxic fumes.

Extinguishing media:

Extinguish with dry chemical, foam, waterspray, CO₂. Firefighters, and other exposed, wear self contained breathing apparatus. Thoroughly clean equipment after use.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:

Use personal protection recommended in section 8.

Environmental precautions:

Contain liquid spillage with sand or other means to prevent entry into drains.

Methods for cleaning up:

Absorb in earth or sand. Sweep up into containers for disposal. Dig up heavily contaminated soil and place in drums. (Refer to section 10 for types of containers and drums) Wash spill area with soap and water. Refer to section 13 for disposal of spilled material.

7. HANDLING AND STORAGE

Handling:

Good industrial practice in housekeeping and personal hygiene should be followed. Do not breath gas, fumes, vapour or spray. When using do not eat, drink or smoke. Wash hands immediately after handling.

Wash contaminated clothing before reuse. Thoroughly clean equipment after

use.

Storage:

Keep out of reach of children.

Keep away from food, drink and animal feeding stuffs.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits: Not applicable

Engineering measures:

See section 10 - "Materials to avoid" for equipment.

Respiratory protection: No special requirement when used as recommended.

Hand protection: Wear suitable protective gloves when connecting container to equipment.

Eye protection: No special requirement when used as recommended.

Skin protection: Wear suitable protective clothing (coveralls) during application.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Opaque
Colour : White liquid
Flash Point : > 98 °C
Specific Gravity : 1.09 approx (at 20 °C)
Solubility in water : Miscible

10. STABILITY AND REACTIVITY

Conditions to avoid : Not applicable.

Materials to avoid : Galvanised steel or unlined mild steel

11. TOXIC HAZARD

Formulation (Calculated):

Acute oral toxicity LD₅₀ (rat) : > 5 000 mg/kg.
 Acute dermal toxicity LD₅₀ (rat) : > 5 000 mg/kg.
 Not irritating to eyes or skin
 Not sensitizing to skin

Active Ingredient:

Test on glyphosate showed that it did not cause any mutagenic, carcinogenic, teratogenic or adverse reproductive effects. It is not neurotoxic and does not inhibit cholinesterase.

Human Experience:

If swallowed, may cause gastrointestinal tract irritation (discomfort, nausea, vomiting, diarrhoea).

12. ECOLOGICAL INFORMATION

Aquatic Toxicity (derived):

Rainbow Trout: 96 hr LC50 > 900 mg/l
 Daphnia Magna: 48 hr EC50 > 600 mg/l
 Green Algae: 72 hr EC50 > 100 mg/l

Other Wildlife toxicity:

Tests in a variety of mammalian, avian and aquatic species have shown that Glyphosate does not bio-accumulate.

13. DISPOSAL CONSIDERATIONS

Product:

Absorb in earth or sand. Shovel up into covered containers for disposal. Dig up heavily contaminated soil and place in drums. (Refer to section 10 for types of containers and drums). Send to special chemical waste disposal facility or burn only in special, controlled high temperature incinerator. Do not empty into drains. Flush spill area with water.

Container:

Empty container completely before disposal. Dispose of container through a reputable waste disposal contractor. Do not contaminate waterways, ponds or ditches with waste product or container. All local and national regulations should be followed.

14. TRANSPORT INFORMATION

ADR Class/Conveyance class: 9
 Packing group: III
 UN No: 3082

15. REGULATORY INFORMATION

Hazard Symbol: None required.
Risk Phrases: None

16. OTHER INFORMATION

The information contained within this Material Safety Data Sheet does not constitute the users own assessment of workplace risk as required by other national health and safety legislation such as the Health and Safety at Work Act (1974) and the Control of Substances Hazardous to Health Regulations (1988 and subsequent amendments).

Date of MSDS Review: 03.01.08 Supersedes MSDS Dated : 08.06.05

The information in this data sheet is to the best of our knowledge true and accurate, but all instructions, recommendations and suggestions are made without guarantee. Since the conditions of use are beyond its control, Nomix Enviro, A Division of Frontier Agriculture Ltd disclaims any liability for loss or damage suffered from use of this information. Furthermore no liability is accepted if use of any product in accordance with these instructions, recommendations and suggestions infringes any patent.