

DIRECTIONS FOR USE

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

RESTRICTIONS

- Only use on crops at risk of lodging.
- Do not apply STABILAN 750 if night frost is expected.
- Do not apply STABILAN 750 under slow growing conditions, if crop is wet or if rain is imminent.
- Do not apply in tank-mix with liquid nitrogen fertilisers.
- Avoid spray drift onto neighbouring crops.
- Care should be taken to avoid overlap of spray swaths.
- Do not use on very late sown spring crops.
- Do not apply to crop on soils of low fertility unless they receive adequate dressing of nitrogen fertiliser.
- Applications must be made to stress-free crops under good growing conditions.
- Do not apply to very late sown wheat or oats.
- Do not use straw from STABILAN 750 treated cereals as a horticultural growth medium or as a mulch.

MODE OF ACTION

Stabilan 750 is taken up by the leaves and acts systemically on the developed stem, shortening and thickening the internodes. Lodging control is most consistent in wheat and short-strawed oats. Use on barley has given inconsistent results.

Applications at early growth stages are often less effective, especially if unfavourable weather conditions slows down growth.

Stabilan 750 should only be used on crops that are growing satisfactorily, without stress and under fertile conditions. When used according to directions Stabilan 750 will shorten and strengthen the stems of wheat and oats, and thereby help to protect these crops against lodging.

CROP SPECIFIC INFORMATION

Winter wheat

Application rate: 2.0 l/ha

Apply after BBCH 30 (Pseudostem erect stage) to before third node detectable stage (BBCH 33).

Apply in 200-400 litres water per hectare.

Spring wheat

Application rate: 1.12 l/ha

Apply from between the leaf sheath erect stage and to before second node detectable stage (BBCH 32).

Apply in 200-400 litres water per hectare.

Winter and spring oats

Application rate: 2.0 l/ha

Apply after BBCH 30 (Pseudostem erect stage) before third node detectable stage of crop growth (BBCH 33). When STABILAN 750 is applied alone to oats, an Officially Listed non-ionic wetter should be added to the spray solution.

Apply in 200-400 litres water per hectare.

Winter barley and triticale

Application rate: 2.0 l/ha.

Apply after BBCH 30 (Pseudostem erect stage) to before first node detectable (BBCH 31).

Apply in 200-400 litres water per hectare.

It should be noted that the beneficial effect of Chlormequat when used on winter barley is not consistent.

Spring barley

Application rate: 1.12 l/ha

Apply from between the leaf sheath erect stage and to before first node detectable stage (BBCH 31).

Apply in 200-400 litres water per hectare.

Rye

Application rate: 2.0 l/ha.

Apply after BBCH 30 (Pseudostem erect stage) to before second node detectable (BBCH 32).

Results will vary but lodging can often be prevented

Apply in 200-400 litres water per hectare.

Undersown Crops

Stabilan 750 may be safely used on wheat and oats undersown with grasses and clovers.

Method of application

Ground sprayer

Before spraying ensure that the sprayer is clean and in good working order. Check all hoses, filters and nozzles. Calibrate

according to the sprayer manufacturer's recommendations.

Volume of Water

At least 200 to 400 litres of water per hectare.

Mixing

Add the appropriate amount of Stabilan 750 to clean water in a half filled sprayer tank. Start agitation and when mixed thoroughly add the remainder of the water. Continue agitation during spraying.

WASH EQUIPMENT THOROUGHLY with water and wetting agent immediately after use and spray out. Spray out again before storing or using for another product.

Compatibility

The following products are compatible with Stabilan 750: Approved formulations of 2,4-D, Dichlorprop-P, Mecoprop-P and MCPA

All tank mixtures must be used in accordance with the label recommendations.

Note that the optimum timing for most cereal herbicide applications is earlier than that for STABILAN 750

TERMS AND CONDITIONS OF SUPPLY, SALE OR USE

All goods supplied by Nufarm UK Ltd. are high grade and we believe them to be suitable for the purpose for which we expressly supply them: but as we cannot exercise any control over their mixing, use or application which may affect the performance of the goods all conditions and warranties statutory or otherwise as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us or our Associate Companies for any damage or injury whatsoever arising from their storage, handling, re-application or use. These conditions cannot be varied by our staff, our agents or the re-sellers of the product whether or not they supervise or assist in the use of such goods.

ACKNOWLEDGEMENTS

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SAFETY DATA SHEET

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

1.1. Product identifier

Trade name: Stabilan 750

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use: Plant growth regulator

1.3. Details of the supplier of the safety data sheet

Nufarm UK Limited
Wyke Lane
Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom
Telephone: +44 (0)1274 691234
Telefax: +44 (0)1274 691176
E-mail address: infouk@uk.nufarm.com

1.4. Emergency telephone number

+44 (0)1274 696603

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

EEC/09/45 : Xn R22 - Harmful if swallowed.
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
EG_1272/08 : AcuteTox.4 H302 - Harmful if swallowed.
AcuteTox.4 H312 - Harmful in contact with skin.
AquaticChronic3 H412 - Harmful to aquatic life with long lasting effects.

2.2. Label elements



Xn
R22 - Harmful if swallowed.
R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S2 - Keep out of the reach of children.
S13 - Keep away from food, drink and animal feedingstuffs.
S36 - Wear suitable protective clothing.
S46 - If swallowed, seek medical advice immediately and show this container or label.
S35 - This material and its container must be disposed of in a safe way.
- Do not contaminate ponds, waterways or ditches with the chemical or used container

REGULATION (EC) No 1272/2008



GHS07

Signal word: Warning

H302 - Harmful if swallowed.
H312 - Harmful in contact with skin.
H412 - Harmful to aquatic life with long lasting effects.
EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.
P234 - Keep only in original container.
P262 - Do not get in eyes, on skin, or on clothing.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P330 - Rinse mouth.
P363 - Wash contaminated clothing before reuse.
P501 - Dispose of contents/ container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed containers which can be disposed of as non hazardous waste.

2.3. Other hazards

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Aqueous solution

Contains 750 g/l Chlormequat chloride

3.2. Mixtures

Components:

chlormequat chloride

CAS-No.: 999-81-5

EINECS-No. / ELINCS No.: 213-666-4

REACH No.:

Concentration: 65.9 % (w/w)

Classification:

EG_1272/08 : AcuteTox.4 H302 + H312 - Harmful if swallowed or in contact with skin

EEC/67/548 : Xn R21/22 - Harmful in contact with skin and if swallowed.

4. FIRST AID MEASURES

4.1. Description of first aid measures

General advice: When symptoms persist or in all cases of doubt seek medical advice.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes. If eye irritation persists, consult a specialist.

Skin contact: Remove and wash contaminated clothing before re-use. Wash off immediately with soap and plenty of water.

If symptoms persist, call a physician.

Inhalation: Move out of dangerous area. Move affected person(s) into fresh air. If symptoms persist, call a physician.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention. If swallowed, seek medical advice immediately and show this container or label.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Nausea, Vomiting, sweating, Diarrhoea, Salivation, Irregular cardiac activity, unconsciousness, impairment of

vision

4.3. Indication of any immediate medical attention and special treatment needed

Treatment: Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Dry powder, Foam, Carbon dioxide (CO₂)

Extinguishing media which shall not be used for safety reasons: High volume water jet

5.2. Special hazards arising from the substance or mixture

Specific hazards during firefighting: In the event of fire (HCl, Cl₂, NO_x, CO) may be formed.

5.3. Advice for firefighters

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary. Use personal protective equipment.

Further Information: Standard procedure for chemical fires. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. (see Chapter 8)

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Sweep up and shovel into suitable containers for disposal.

Additional advice: Never return spills in original containers for re-use.

6.4. Reference to other sections

see Chapter 13

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Safe handling advice: Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers: Store at room temperature in the original container.

Advice on common storage: Keep away from food, drink and animal feeding stuffs. Keep out of reach of children.

Storage stability

Storage temperature: > 0 °C

7.3. Specific end use(s)

none

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Components with workplace control parameters

(EH40/2005 Workplace exposure limits)

Components	CAS-No.	National occupational exposure limits	Note
chlormequat chloride	999-81-5		no classification available

8.2. Exposure controls

Personal protective equipment

Respiratory protection: Suitable respiratory protection for higher concentrations or long-term effect: Combination filter for gases/vapours of organic, inorganic, acid inorganic and alkaline compounds (e.g. EN 14387 Type ABEK).

Hand protection: Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other

Eye protection: Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Skin and body protection: Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

Hygiene measures: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

Protective measures: The statements on personal protective equipment in the instructions for use apply when handling

crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid at 20 °C

Form: Soluble concentrate

Colour: light yellow

Odour: amine-like

Start of crystallisation: < -5 °C

Boiling point/boiling range: 100 °C at 1,013 hPa

Flash point: not applicable

Ignition temperature: not applicable

Explosivity: Not explosive

Vapour pressure: < 1.0E-06 Pa at 20 °C (Chlormequat chloride)

Density: 1.138 g/cm³ at 20 °C

Water solubility: completely miscible

Partition coefficient: n-octanol/water: log POW = -3.08 at 20 °C

(pH 4), (Chlormequat chloride)

log POW = -3.47 at 20 °C

(pH 7), (Chlormequat chloride)

log POW = -3.07 at 20 °C

(pH 10), (Chlormequat chloride)

Dissociation constant: not applicable

Viscosity, dynamic: 22 mPa.s at 20 °C

15 mPa.s at 40 °C

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

Stable under recommended storage conditions., No spontaneous or exothermic decomposition up to 150 °C.

10.3. Possibility of hazardous reactions

no data available

10.4. Conditions to avoid

no data available

10.5. Incompatible materials to avoid

Aluminium and its alloys

10.6. Hazardous decomposition products

none

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity: LD50 rat Dose: ca. 600 mg/kg

Acute dermal toxicity: LD50 rabbit Dose: 1,250 mg/kg

Acute inhalation toxicity: LC50 rat Exposure time: 4 h Dose: > 0.709 mg/l

Skin irritation: rabbit Result: No skin irritation

Eye irritation: rabbit Result: No eye irritation

Sensitisation: Guinea-pig Result: Did not cause sensitization.

Carcinogenicity: Did not show carcinogenic effects in animal experiments.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to bees: Not toxic to bees.

Toxicity to fish: LC50 Dose: 652 mg/l Testing period: 96 h

Toxicity to daphnia: EC50 Daphnia Dose: ca. 379 mg/l Testing period: 3 d

Toxicity to algae: LC50 Toxicity to algae Dose: 652 mg/l Exposure time: 72 h

EbC50 Lemna gibba (Duckweed) Dose: 5.3 mg/l Exposure time: 7 d

12.2. Persistence and degradability

Biodegradability: Readily biodegradable.

12.3. Potential bioaccumulation

Bioaccumulation: Accumulation in aquatic organisms is unlikely.

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

12.6. Other adverse effects

none

13. DISPOSAL CONSIDERATIONS

According to European Directive 2000/532/EC as amended :

Waste Code: 02 01 08 (agrochemical waste containing dangerous substances)

13.1. Waste treatment methods

Product: In accordance with local and national regulations.

Contaminated packaging: Do not re-use empty containers. Dispose empty and triple rinsed container within a local disposing system according to EC directive 94/62/EC

14. TRANSPORT INFORMATION

14.1. UN number

UN1760

14.2. Proper shipping name

UN1760 CORROSIVE LIQUID, N.O.S. (chlormequat)

14.3. Transport hazard class(es)

ADR/RID:

Class: 8

IMDG:

Class: 8

IATA-DGR:

Class: 8

14.4. Packaging group

ADR/RID: III

IMDG: III

IATA-DGR: III

14.5. Environmental hazards

14.6. Special precautions for user

none

15. REGULATORY INFORMATION

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

Other regulations: The product is classified and labelled in accordance with EC directives or respective national laws.

15.2. Chemical Safety Assessment

none

16. OTHER INFORMATION

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.

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.

STABILAN® 750

Contains 750 g/l chlormequat chloride formulated as a soluble concentrate
Stabilan 750 is a plant growth regulator for use in cereals.

Crops	Maximum Individual Dose (l/ha)	Maximum Total Dose (l/ha/crop)	Latest Time of Application
Winter Wheat	2.0	2.0	BBCH 33 (Before 3 rd node detectable stage)
Spring Wheat	1.12	1.12	BBCH 32 (Before 2 nd node detectable stage)
Winter Barley	2.0	2.0	BBCH 31 (Before 1 st node detectable stage)
Spring Barley	1.12	1.12	BBCH 31 (Before 1 st node detectable stage)
Triticale	2.0	2.0	BBCH 31 (Before 1 st node detectable stage)
Spring and Winter Oats	2.0	2.0	BBCH 33 (Before 3 rd node detectable stage)
Rye	2.0	2.0	BBCH 32 (Before 2 nd node detectable stage)

Safety Information

WARNING

Harmful if swallowed

Harmful in contact with skin

Harmful to aquatic life with long lasting effects

Keep only in original container

Do not get in eyes, on skin, or on clothing

Do not eat, drink or smoke when using this product

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

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

IF ON SKIN: Wash with plenty of soap and water

Rinse mouth

Wash contaminated clothing before reuse

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site

except for empty triple rinsed containers which can be disposed of as non-hazardous waste

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

PCS No. 04767



Additional Safety Phrase:

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).

15 Litres e

FOR PROFESSIONAL USE ONLY

PROTECT FROM FROST

Nufarm UK Limited, Wyke Lane, Wyke, Bradford, West Yorkshire BD12 9EJ, United Kingdom

Technical Helpline telephone number +44 (0)1274 694714

24-hour emergency telephone number +44 (0)1274 696603

80000-000 0615



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