

DUPLOSAN SUPER



MAPP 18231
PCS No. 04853

A soluble concentrate formulation containing 310 g/L (26.2% w/w) dichlorprop-p acid, 160 g/L (13.5% w/w) MCPA acid and 130 g/L (11.0% w/w) mecoprop-p acid formulated as the dimethylamine salt for the control of broad-leaved weeds in cereals.

IMPORTANT INFORMATION FOR USE ONLY AS AN AGRICULTURAL HERBICIDE.

Crop	Maximum Individual Dose	Maximum Total Dose	Latest time of application
Wheat, Barley, Oats, Rye, Triticale, Spelt and Durum Wheat	2.5 L product/ha	2.5 L/ha	Before 2 nd node detectable stage

Other specific restrictions:

- The total amount of Mecoprop-p applied to an individual crop, or in a single year in the case of a perennial crop, must not exceed the maximum total dose of Mecoprop-p approved for application to that crop by any single Mecoprop-p containing product.
- The earliest time of application for all crops is the 1 March in the year of harvest.

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.



Safety Information

DANGER

Harmful if swallowed.

May cause an allergic skin reaction.

Causes serious eye damage.

Avoid breathing mist/vapours/spray.

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.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical advice/attention.

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple-rinsed empty 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.

MAPP 18231 PCS No. 04853

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 FACE PROTECTION (FACESHIELD) when handling the concentrate

WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces

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

- UK only

IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY with plenty of water and seek medical advice.

Environmental Protection

Extreme care must be taken to avoid spray drift onto non-crop plants outside the target area.

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.

Storage and Disposal

DO NOT RE-USE CONTAINER for any purpose.

KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS.

KEEP OUT OF REACH OF CHILDREN.

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

WASH OUT CONTAINER THOROUGHLY, and dispose of safely.

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

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

Technical Helpline

telephone number: +44 (0)1274 694714

24-hour emergency

telephone number: +44 (0)1274 696603

10 Litres^e

PROTECT FROM FROST.
FOR PROFESSIONAL USE ONLY.

510000093



Grow a better tomorrow.

PEEL BACK FOR DIRECTIONS FOR USE LEAFLET

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

- Do not** spray cereals that have been, or are to be, undersown with clover.
- Do not** roll or harrow crops within a week of spraying.
- Avoid** overlapping spray swathes.
- Do not** apply during cold weather or drought.
- Do not** apply during rain or if rain is expected.
- Do not** spray in windy weather and avoid drift onto broad-leaved plants outside the target area.

WEEDS CONTROLLED

Weeds Controlled in Cereals

Susceptible at 1.5 L product/ha

Charlock	<i>Sinapis arvensis</i>	5cm across/high
Common Chickweed	<i>Stellaria media</i>	5cm across/high
Crane's-bill species	<i>Geranium</i> spp.	6 true leaves
Fat Hen	<i>Chenopodium album</i>	5cm across/high
Shepherd's Purse	<i>Capsella bursa-pastoris</i>	4 true leaves

Susceptible at 2.0 L product/ha

Common Poppy	<i>Papaver rhoeas</i>	5cm across/high
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Susceptible at 2.5 L product/ha

Buttercup	<i>Ranunculus</i> species	6 true leaves
Cleavers	<i>Galium aparine</i>	5cm across/high
Common Mouse Ear	<i>Cerastium holosteoides</i>	5cm across/high
Corn Spurrey	<i>Spergula arvensis</i>	5cm across/high
Hempnettles	<i>Galeopsis</i> spp.	4 true leaves

Moderately Susceptible at 1.5 L product/ha

White clover	<i>Trifolium repens</i>	5cm across/high
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Moderately Susceptible at 2.0 L product/ha

Creeping Thistle #	<i>Cirsium arvense</i>	6 true leaves
Deadnettle species	<i>Lamium</i> spp.	Before flowers open
Fumitory	<i>Fumaria officinalis</i>	8 true leaves
Runch	<i>Raphanus raphanistrum</i>	Before side shoots form

Moderately Susceptible at 2.5 L product/ha

Field Pansy	<i>Viola arvensis</i>	4 true leaves
Mayweeds	<i>Matricaria</i> species	2 true leaves
Oilseed rape	<i>Brassica napus</i>	3 true leaves
Redshank	<i>Polygonum persicaria</i>	2 true leaves
Speedwells	<i>Veronica</i> species	6 true leaves

Creeping thistle will be effectively controlled, but some re-growth may occur from rhizomes.

CROP SPECIFIC INFORMATION

CEREALS

DUPLOSAN SUPER can be used on all commercial varieties of winter and spring sown wheat, winter and spring sown barley, winter and spring sown oats, rye, triticale, spelt and durum wheat.

Rate of use

Apply DUPLOSAN SUPER at 1.5 - 2.5 L product/ha. Use the appropriate rate as indicated in the weed control table.

Water Volume

200 to 400 L water/ha. Use the higher rate in dense stands of cereals, or if weed growth is dense.

Timing

Winter Sown Wheat, Barley, Durum Wheat, Rye, Oats, Spelt and Triticale:

Apply DUPLOSAN SUPER in the spring from leaf sheath erect stage until before the 2nd node

detectable stage (GS 32).

Spring Sown Wheat, Barley, Rye, Oats, Spelt and Triticale:

Apply DUPLOSAN SUPER from first leaf fully expanded stage until before the 2nd node detectable stage (GS 32).

Spray weeds when the crop is actively growing and is at the correct growth stage. The best results will be obtained if spraying is done while the majority are at the seedling stage. However, spraying at the seedling stage is not advised if temperatures are low and should be delayed until temperatures increase and growth becomes more active. Optimum control will be achieved by spraying when the temperature is above 10°C.

Application

Spray Quality

Apply as a medium quality spray (as defined by BCPC). A spray pressure of 2-3 bar is recommended.

Mixing and Spraying

Apply using conventional ground vehicle mounted/drawn equipment. Ensure that all application equipment is clean. Make sure the sprayer is set to give an even application at the correct volume. Add half the required volume of water and start agitation, add the required quantity of DUPLOSAN SUPER. Fill the tank to the required volume of water whilst maintaining agitation. Triple rinse containers with water and add washing to the spray tank. Continuous agitation must be maintained until spraying is complete. After use, the spraying machine must be thoroughly cleaned.

Wash equipment thoroughly with water and wetting agent or liquid detergent immediately after use. Wash out again with water, drain and allow drying.

Spray out, fill with clean water and leave overnight. Spray out again before storing or using for another product. Residues of DUPLOSAN SUPER can cause harm to susceptible crops sprayed later.

Drift

Do not spray in windy conditions as the spray drift may cause damage to neighbouring crops. The following crops are particularly susceptible: sugar beet, oilseed rape, peas, turnips and most market garden crops including lettuce and tomatoes under glass.

Succeeding Crops

In the event of crop failure for whatever reason following the use of DUPLOSAN SUPER, a period of 90 days should elapse before planting a broad-leaved crop. Deep ploughing should be carried out prior to planting any succeeding crop.

Resistance Management

When herbicides with the same mode of action are used repeatedly over several years in the same field, selection of resistant biotypes can take place. These can propagate and may become dominating. A weed species is considered to be resistant to a herbicide if it survives a correctly-applied treatment at the recommended dose. 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 provided by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop adviser or product manufacturer

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations 2011. It provides additional advice on product use at the discretion of Nufarm UK Limited.

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 resellers of the product whether or not they supervise or assist in the use of such goods.

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name: Duplosan Super

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

Use: Herbicide

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

EG_1272/08 :	AcuteTox.4	H302 - Harmful if swallowed.
	SkinSens.1	H317 - May cause an allergic skin reaction.
	EyeDam.1	H318 - Causes serious eye damage.

2.2. Label elements

Pictogram:



GHS05



GHS07

Signal word: Danger

H302	-	Harmful if swallowed.
H317	-	May cause an allergic skin reaction.
H318	-	Causes serious eye damage.
EUH401	-	To avoid risks to human health and the environment, comply with the instructions for use.
P261	-	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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.
P305 + P351 + P338	-	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	-	If skin irritation occurs: Get medical advice/ attention.
P501	-	Dispose of contents/ container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non hazardous waste.

2.3. Other hazards

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Aqueous solution of the dimethylammonium salt Dichlorprop-P 310g/l, MCPA 160g/l & Mecoprop-P 130 g/l .

3.2. Mixtures

Components:

<u>dichlorprop-P</u>	
CAS-No.:	15165-67-0
EINECS-No. / ELINCS No.:	403-980-1
REACH No.:	
Concentration:	26.7 % (w/w)

Classification:

EG_1272/08 :	AcuteTox.4	H302 - Harmful if swallowed.
	SkinIrrit.2	H315 - Causes skin irritation.
	EyeDam.1	H318 - Causes serious eye damage.
	SkinSens.1	H317 - May cause an allergic skin reaction.

MCPA

CAS-No.:	94-74-6
EINECS-No. / ELINCS No.:	202-360-6
REACH No.:	
Concentration:	13.8 % (w/w)

Classification:

EG_1272/08 :	AcuteTox.4	H302 - Harmful if swallowed.
	SkinIrrit.2	H315 - Causes skin irritation.
	EyeDam.1	H318 - Causes serious eye damage.
	AcuteTox.4	H400 - Very toxic to aquatic life.
	AquaticChronic1	H410 - Very toxic to aquatic life with long lasting effects.

mecoprop-P

CAS-No.:	16484-77-8
EINECS-No. / ELINCS No.:	240-539-0
REACH No.:	01-2119447100-56
Concentration:	11.2 % (w/w)

Classification:

EG_1272/08 :	AcuteTox.4	H302 - Harmful if swallowed.
	EyeDam.1	H318 - Causes serious eye damage.
	AquaticChronic2	H411 - Toxic to aquatic life with long lasting effects.

2,4-Dichlorophenol

CAS-No.:	120-83-2
EINECS-No. / ELINCS No.:	204-429-6
REACH No.:	01-2119513326-47
Concentration:	0.1 % (w/w)

Classification:

EG_1272/08 :	AcuteTox.4	H311 - Toxic in contact with skin.
	AcuteTox.3	H302 - Harmful if swallowed.
	SkinCorr.1B	H314 - Causes severe skin burns and eye damage.
	AquaticChronic2	H411 - Toxic to aquatic life with long lasting effects.

4-chloro-o-cresol

CAS-No.:	1570-64-5
EINECS-No. / ELINCS No.:	216-381-3
REACH No.:	01-2119455846-26
Concentration:	0.1 % (w/w)

Classification:

EG_1272/08 : AcuteTox.3 H331 - Toxic if inhaled.
SkinCorr.1A H314 - Causes severe skin burns and eye damage.
AquaticAcute1 H400 - Very toxic to aquatic life.

dimethylamine

CAS-No.: 124-40-3
EINECS-No. / ELINCS No.: 204-697-4
REACH No.: 01-2119475495-27
Concentration: 10% - 15% (w/w)

Classification:

EG_1272/08 : Flam.Gas1 H220 - Extremely flammable gas.
AcuteTox.4 H332 - Harmful if inhaled.
STOT_SE3 H335 - May cause respiratory irritation.
SkinIrrit.2 H315 - Causes skin irritation.
EyeDam.1 H318 - Causes serious eye damage.
Press.Gas ---

4. FIRST AID MEASURES

4.1. Description of first aid measures

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin contact:

Take off all contaminated clothing immediately. Wash off immediately with soap and plenty of water. If symptoms persist, call a physician. Wash contaminated clothing before re-use.

Inhalation:

Move to fresh air. If symptoms persist, call a physician.

Ingestion:

Induce vomiting if person is conscious. Rinse mouth. If conscious, drink plenty of water. If symptoms persist, call a physician.

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

Symptoms: No information available.

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

Treatment: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Carbon dioxide (CO₂), Dry powder, Alcohol-resistant foam

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 fire fighting: In the event of fire (HCl, Cl₂, NO_x, CO) may be formed.

5.3. Advice for firefighters

Special protective equipment for fire-fighters: Use personal protective equipment. Wear self contained breathing apparatus for fire fighting if necessary. 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 in original container. Keep containers tightly closed in a cool, well-ventilated place.

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

7.3. Specific end uses(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
dichloroprop-P	15165-67-0		no classification available
MCPA	94-74-6		no classification available
mecoprop-P	16484-77-8		no classification available
2,4-Dichlorophenol	120-83-2		no classification available
4-chloro-o-cresol	1570-64-5		no classification available
dimethylamine	124-40-3	3.8 mg/m ³	Long-term exposure limit

8.2. Exposure controls

Personal protective equipment

Respiratory protection: No special protective equipment required.

Hand protection: PVC or nitrile-rubber gloves

Eye protection: Safety glasses, or, Goggles

Skin and body protection: lightweight protective clothing

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: Avoid contact with skin, eyes and clothing. Keep working clothes separately.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

Physical state: liquid
Form: Soluble concentrate
Colour: dark yellow
Odour: amine-like
Flash point: >100 °C
Ignition temperature: 405 °C
Density: 1.163 g/cm³
at 20 °C

Water solubility: completely soluble
pH: 6.8
at 10 g/l (20 °C)

Partition coefficient:
n-octanol/water: log POW = -0.25 at 25 °C
(pH 7), (dichlorprop-P)
log POW = -0.71 at 25 °C
(pH 7), (MCPA)
log POW = 0.02 at 20 °C
(pH 7), (MCP-P)
30.7 mPa.s at 20 °C

Viscosity, dynamic

9.2. Other information

none

10. STABILITY AND REACTIVITY

10.1. Reactivity

no data available

10.2. Chemical stability

No decomposition if stored and applied as directed.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use.

10.5. Incompatible materials to avoid

Strong acids and strong bases

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity : LD50 rat
Dose: 300 - 500 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 rat
Dose: > 2,000 mg/kg
Method: OECD Test Guideline 402

Acute inhalation toxicity : LC50 rat
Exposure time: 4 h
Dose: > 5.2 mg/l
Method: OECD Test Guideline 403

Skin irritation : rabbit

Classification: No skin irritation

Result: No skin irritation

Method: OECD Test Guideline 404
rabbit

Eye irritation :

Result: Severe eye irritation
Method: OECD Test Guideline 405

Sensitisation :

mouse
Classification: May cause sensitization by skin contact.
Result: Causes sensitization.
Method: OECD Test Guideline 429

12. ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to bees : LD50 (oral) Apis mellifera (Honey bee)
Testing period: 48 h
Dose (µg/Species): > 100
LD50 (contact) Apis mellifera (Honey bee)
Testing period: 48 h
Dose (µg/Species): > 107.6

Toxicity to fish : LC50 Oncorhynchus mykiss (Rainbow trout)
Dose: > 1000 mg/l
Testing period: 96 h

Toxicity to daphnia : EC50 Daphnia magna (Water flea)
Dose: > 825 mg/l

Toxicity to algae : EC50 Chlorella fusca
Dose: 1,170 mg/l
Exposure time: 96 h
EC50 Lemna gibba (Duckweed)
Dose: 7.5 mg/l
Exposure time: 7 d

12.2. Persistence and degradability

Biodegradability : Readily biodegradable.
Stability in soil : DT50: 26.1 d (dichlorprop-P)
DT50: 24 d (MCPA)
DT50: 8.2 d (mecoprop-P)

12.3. Potential bioaccumulation

Bioaccumulation : Does not bioaccumulate.

12.4. Mobility in soil

Koc = 12.9 - 83.7L/kg; 1/n = 0.589 - 0.908 (dichlorprop-P)
Koc = 10 - 157 (MCPA)
Koc = 20 - 43 (pH 5.6 - 7.6), 135 - 167 (pH 4.3 - 4.4) [mecoprop-P]

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

no data available

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: Dispose of product and packaging in accordance with the "Code of practice for using plant protection products". A DEFRA publication.

Contaminated packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1. UN number

14.2. Proper shipping name

not applicable

14.3. Transport hazard class(es)

ADR/RID: Not a dangerous substance as defined in the above regulations.

IMDG: Not a dangerous substance as defined in the above regulations.

IATA-DGR: Not a dangerous substance as defined in the above regulations.

14.4. Packaging group

not applicable

14.5. Environmental hazards

not applicable

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

Print Date: 2017/10/06

The date format YYYY/MM/DD is used according to ISO 8601.

(Alterations are indicated in the left hand margin by: ||)

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.