

# D50<sup>®</sup>



A soluble concentrate containing 500 g/l (42% w/w) 2,4-D as the dimethylamine salt. For the selective control of the annual and perennial broad leaved weeds in winter and spring wheat, barley and rye, winter oats, undersown cereals, established agricultural and amenity grassland, managed amenity turf, apple and pear orchard floors

## IMPORTANT INFORMATION

### FOR USE ONLY AS AN AGRICULTURAL, ORCHARD AND AMENITY AREA HERBICIDE

Crops	Maximum Individual Dose	Maximum Total Dose	Latest time of application
Winter Wheat, Winter and Spring rye	2.5 L/ha	2.5 L/ha	Before 1st node detectable stage
Spring Wheat, Winter and Spring Barley, Winter Oats	2.0 L/ha	2.0 L/ha	Before 1st node detectable stage
Wheat, Barley, Rye (undersown with grass)	1.0 L/ha	1.0 L/ha	Before 1st node detectable stage
Grassland	3.3 L/ha	3.3 L/ha	Before the crops are 25cm high
Amenity grassland and managed amenity turf	3.3 L/ha	9.9 L/ha	-
Apple (around), Pear (around)	2.8 L/ha	2.8 L/ha	-
Application Method	Hydraulic nozzle sprayer / knapsack / tractor mounted sprayer		

#### Additional Safety Phrases

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).

## Safety Information

### DANGER

**Harmful if swallowed.**  
**Causes serious eye damage.**  
**Very toxic to aquatic life with long lasting effects**

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

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

WASH EYES.

Cautionously wash with water for several minutes.

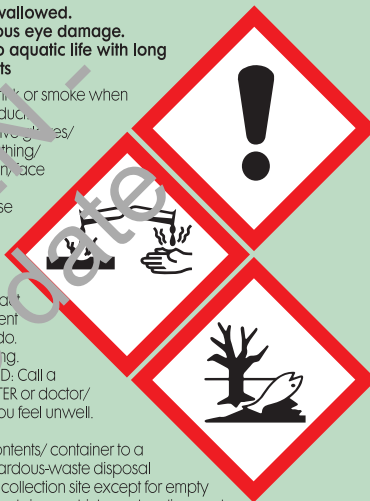
Remove contact lenses, if present and easy to do. Continue rinsing.

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

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.

Contains 2,4-D. May produce an allergic reaction.

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



PCS No. 02366

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**PROTECT FROM FROST**  
**FOR PROFESSIONAL USE ONLY**

# 10 L

510007245

 **Nufarm**  
Grow a better tomorrow

## DIRECTIONS FOR USE

### RESTRICTIONS

- DO NOT use D50 on the seedbed before sowing any crop.
- DO NOT sow any crop into soil treated with D50 for at least 3 months after application.
- DO NOT graze grass for at least 14 days after spraying.
- DO NOT mow or roll four days before or after application. The first four mowings after treatment must be composted for at least 6 months before use.
- DO NOT treat newly established grass or turf less than 1 year old.
- DO NOT treat grass or turf suffering from stress caused by drought, frost, disease or other adverse factors.
- DO NOT roll or harrow crops for 7 days either before or after application of D50.

### WEEDS CONTROLLED

Apply when the majority of annual weeds are at the seedling\* stage. For the control of perennial weeds in established grassland, the best results are obtained if spraying is carried out shortly before flowering. Whilst spraying at this late stage will not give complete control of annual weeds, it may effectively check most of the species mentioned. A second application may be necessary to provide an adequate level of weed control on amenity grassland and managed amenity turf.

\*Seedling = Fully expanded cotyledons to 2 expanded true leaves

### Cereals

Weed species	Rate product/ ha	Comments
Charlock Mustard, Black	700 ml	These weeds will be completely or almost completely killed when applications are made in the cotyledon to early flower-bud stage
Fat Hen Mustard, Treacle Mustard, White Penny-cress, Field Tare, Hairy		These weeds will be completely or almost completely killed when applications are made in the cotyledon to early flower-bud stage
Buttercup, Corn Nettle, Small Radish, Wild Shepherds Purse	1.4 L	These weeds will be completely or almost completely killed when applications are made in the cotyledon up to 2 leaf stage or moderately susceptible at 4 leaves to early flower-bud stage
Forget-me-not, Field Orchid, Common Poppy, Common Sowthistle, Tickell's Sowthistle, Smooth Turnip, Wild		These weeds will be moderately susceptible (with or without mortality) when applications are made in the cotyledon up to 2 leaf stage or moderately resistant at 4 leaves to early flower-bud stage
Bindweed, Black Bugloss Bugloss, Viper's Chickweed, Common Cranesbill, Dove's-foot Field-speedwell, Common Furnitory, Common Gromwell, Field Groundsel Knotgrass Mouse-ear, Common Nightshade, Black Persicaria, Pale Pimpernel, Scarlet Redshank Shepherd's needle Speedwell, Green Field Speedwell, Ivy-leaved Speedwell, Wall Spurge, Sun		These weeds will be moderately resistant when applications are made in the cotyledon up to 2 leaf stage or resistant at 4 leaves to early flower-bud stage
Orache, Common Poppy, Common Sowthistle, Smooth	2.0 L	These weeds will be susceptible when applications are made in the cotyledon up to 4 leaf stage or moderately resistant at 6 leaves to early flower-bud stage

Knotgrass Mayweed, Scentless	2.0 L	These weeds will be moderately resistant when applications are made in the cotyledon up to 2 leaf stage or resistant at 4 leaves to early flower-bud stage
Thistle, Creeping*	2.0 – 2.5 L	These weeds will be susceptible when applications are made in the cotyledon up to early flower-bud stage

\*Aerial growth only

**Hoary Cress** – Good control of this perennial weed can be achieved by treatment in winter cereal crops over two successive seasons using 1.6-1.8 l/ha dose of D50. Apply after the shoots are 25-150 mm high up to but before flowering.

#### Amenity grassland and managed amenity turf

Weed species	Rate product/ ha	Comments
Buttercup, Creeping Hawkweed, Mouse-ear Plantains Thrift	2.8L	These weeds are consistently killed by one application
Bedstraw, Heath Buttercup, Bulbous Cat's-ear Chickweed, Common Daisy Dandelion Dock, Curled Hawkbit, Rough Hawk's-beard, Smooth Pennywort, Marsh Sea-milkwort Sorrel, Common Sorrel, Sheep's Stork's-bill, Common Stork's-bill, Sea Thistle Dwarf		Sometimes killed by one application but may require a second treatment to give complete control
Celandine, Lesser Mouse-ear, Common Pearlwort, Procrumbent Selfheal Yarrow		Some effect from one application, but two applications required to give a useful level of control
Ragwort, Common*	3. L	Moderately susceptible. Sometimes killed by one application but may require further treatment to give complete control

\*treatment will normally kill plants at all stages of growth up to early bud stage. For best levels of control, treat April-June when rosettes are growing strongly but before flower buds are well formed.

**Agricultural grassland (including grass floors under apple and pear trees)**

Weed species	Rate product/ ha	Comments
Buttercup, Creeping Hawkbit, Autumn Hawk's-beard, Rough Plantain, Greater Plantain, Hoary Plantain, Ribwort Sandwort, Thyme-leaved		These weeds are susceptible at all stages of growth up to the beginning of flowering with good control of shoots and roots in established plants
Buttercup, Bulbous Dock, Broad-leaved		Seedlings and shoots are susceptible but established plants in grassland will not be controlled
Dandelion Dock, Curled Nettle, Common Rush, Soft * Thistle, Creeping		Seedlings and shoots are susceptible but only aerial growth of established plants is usually controlled
Thistle, Spear		Seedlings are susceptible but only aerial growth of established plants is usually controlled
Bartsia, Red Bindweed, Hedge Burdock, Lesser Buttercup, Meadow Cat's-Ear Chicory Cress, Hoary Daisy Dock, Clustered Fleabane, Common Goatsbeard Hawk's-beard, Smooth Hawkbit, Rough Hawkweed, Mouse-ear Hempnettle, Large-flowered Knapweed, Common Knawel, Annual Mugwort Oxtongue, Bristly Plantain, Buck's-horn Purple-loosestrife Radish, Horse Scabious, Field Self-heal Thistle, Musk Thornapple Vetch Common Vetch, Tufted	2.8 L	These weeds are well controlled in the seedling or shoot stage with useful suppression or death of aerial parts at later growth stages
Horsetail, Field ** Horsetail, Marsh *	2.8 L	Only controls shoots which are well developed (preferably about 30 cm high). Control of established plants is variable. Re-growth will occur in following season
Sorrel, Common Sorrel, Sheep's Sowthistle, Perennial		Provides useful control of shoots only
Bindweed, Field**** Ragwort, Common**	3.3 L+	Moderately susceptible. Aerial growth usually killed and a useful measure of long term control obtained under suitable conditions

\* May be controlled by application in April to June when growing well. For best results, cut the rushes 4 weeks after treatment or cut them 4 weeks before application and remove stems before spraying

\*\* Use 2.8 litres per hectare and spray when growing well in May or early June. Top growth is removed or considerably reduced for the season of treatment. In grassland for hay or silage, shoot kill may be obtained by using 2.0l/ha two weeks before cutting.

\*\*\* Treatment will normally kill plants at all stages of growth up to early bud stage. For best levels of control, treat in April-June when rosettes are growing strongly but before flower buds are well formed.

\*\*\*\* In order to obtain maximum effect in the year after treatment, spraying should be delayed until shoots are well developed.

+ Application rate of 3.3 L/ha is not permissible around apple and pear trees for the control of common ragwort, although a maximum individual dose and maximum total dose of 2.8 L/ha is permitted.

## Ragwort control

### Rate of use

Agricultural grassland: D50 at 2.8 L/ha + Agritox 500 (PCS No. 05499) at 2.0 L/ha

Do not apply 2.8 L/ha D50 alone as this will not give reliable control of Ragwort.

### Timing

Agricultural grassland (including grass floors under apple and pear trees), Amenity grassland and Managed amenity turf

Spray when the majority of plants are in the rosette stage and growing vigorously in the autumn or spring but before the flower spines start to grow. D50 should be applied in good growing conditions. Treatment of Ragwort should always be part of a programme and repeat application may be necessary together with removal of any flower heads in the summer to reduce seed return to the soil. Fields for hay or silage the following spring should be sprayed in the preceding autumn. Fields to be grazed should be treated in the spring.

**NB.** It is important that all livestock are kept out of treated areas for at least two weeks following treatment and until the Ragwort has died and become unpalatable.

## CROP SPECIFIC INFORMATION

Crop	Dose (L product/ha)	Maximum Total Dose (L product/ha)	Timing and remarks
Winter Wheat, Winter and Spring Rye	0.7 - 2.5	2.3 per crop	<b>Winter Cereals:</b> Apply in the spring from the leaf sheath erect stage but before the 1st node detectable stage <b>Spring Cereals:</b> Apply from the 5 leaf fully expanded stage but before the 1st node detectable stage
Winter and Spring Barley, Winter Oats, Spring Wheat	0.7 - 2.0	2.0 per crop	<b>Winter Cereals:</b> Apply in the spring from the leaf sheath erect stage but before the 1st node detectable stage <b>Spring Cereals:</b> Apply from the 5 leaf fully expanded stage but before the 1st node detectable stage
Wheat, Barley, Rye (undersown with grass)	1.0	1.0 per crop	Apply in the spring following the same recommendations as for cereals. DO NOT spray with D50 before undersowing. Experience has shown that when weeds and cereals form a canopy undersown crops may be safely treated using not more than 1.0 L/ha at low volume.
Rotational and Permanent Grassland established for at least one year. Do not use where dovers are an important part of the sward	3.3	3.3 per year	Apply in spring to autumn at the optimum timing when grass density is low, such as after cutting or grazing, but when weeds are at a susceptible stage. Grassland may be treated with 2.8-3.3 L/ha of D50 according to the weeds present. Recommended rates are given in the weed susceptibility table for grassland.

Grass floors under apple and pear orchards. The orchards must have established for at least one year. Do not apply directly to trees	2.8	2.8 per year	Apply in spring or autumn when weeds are actively growing. Do not spray during blossom or whilst weeds are in flower. Use low pressure nozzles to avoid spray drift. Bramley Seedling, Emmeth Early and Miller's Seedling are particularly susceptible to spray drift. Pears are more susceptible to spray drift than apples and are particularly susceptible to damage via root uptake.
Amenity Grassland and Managed Amenity Turf (established for at least one year).	3.3	9.9 per year	Apply in spring/summer or autumn when the growing conditions are favourable. Amenity grassland and managed amenity turf may be treated with 2.8-3.3 L/ha of D50. The expected levels of control are detailed in the weed susceptibility table for amenity uses. Some perennial weeds will need subsequent application in order to achieve adequate control. Follow up application may also be needed where new seedling weeds appear.

See under 'Weeds Controlled' for specific application rates for individual weeds.

D50 may be used on all varieties of the listed crops within the recommended growth stages. DO NOT treat barley intended for malting, spring oats or any cereal mixture with peas or beans or other legumes.

Apply in at least 110 L/ha water. In grassland and turf, where weeds might be shielded by grasses, use 400 l/ha water. Refer to the table for special situation pertaining to grass floors under apples and pears.

#### MIXING AND SPRAYING

Before use ensure that the spraying equipment has been thoroughly cleaned. Half-fill the spray tank with clean water. With the contents of spray tank under recirculation, add the measured quantities of D50 through the filter. Top up the tank with water to the required level and maintain recirculation until the tank is sprayed out.

Apply the recommended quantity of D50 through a conventional hydraulic sprayer using a MEDIUM spray to cover the weed leaves evenly and thoroughly.

Avoid spray drift onto neighbouring crops and all broad-leaved plants outside the target area. Do not spray in windy weather. Beets, all brassica (including oilseed rape, swedes and turnip) lettuce, sunflowers, onions, peas, potatoes, tomatoes, cucumbers, all fruit crops (including vines) and ornamentals are particularly susceptible to 2,4-D and may be damaged by spray drift.

After each days use, wash out with water and wetting agent. Wash out again with water, drain and allow to dry. Traces of herbicide left in the sprayer may damage susceptible crops if these are subsequently sprayed using the same equipment.

#### Hand-held applicators

##### Knapsack Applicator:

These may be used in Orchards and Grassland areas.

Example of Use:

Equivalent Application Rate	Sprayer Size	Volume D50 (Litres)	Volume Water (Litres)	Area treated
2.8 L product/ha	10 L	0.140	9,860	500 m2
3.3 L product/ha	10 L	0.165	9,835	500 m2

**WEATHER AND GROWING CONDITIONS**

Apply to a dry crop when rain is not forecast for at least 12 hours. Optimum results are obtained when the weeds are actively growing under good soil and weather conditions. Reduced weed control may be obtained during drought or cold weather. If rain falls shortly after application, the effect of D50 may be reduced.

**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.

**TERMS AND CONDITIONS OF SUPPLY, SALE OR USE**

All goods supplied by Nufarm UK Limited are of high grade and we believe them to be suitable for the purposes 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 by re-sellers of the product whether or not they supervise or assist in the use of such goods.

**ACKNOWLEDGEMENTS**

®D50 is the registered trademark of Nufarm UK Limited

SPECIMEN  
2020 to date

## SAFETY DATA SHEET

### 1. Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

CA Code (Nufarm) : 3472  
Product code : NLI1017; U835A  
Oracle Recipe Code (Nufarm) : 600000134  
Item codes : MY3472  
Product form : Mixture  
Product name : 2,4-D DMA 500 g a.e./L  
Type (Nufarm) : Master  
Country (Nufarm) : Master product

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

##### 1.2.1. Relevant identified uses

Main use category : Professional use  
Use of the substance/mixture : Herbicide

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Distributor  
Nufarm GmbH & Co KG  
St.-Peter-Str. 25  
4021 Linz - Österreich  
T +43/732/6918-3187 - F +43/732/6918-63187  
Katharina.Krueger@nufarm.com

#### 1.4. Emergency telephone number

Emergency number : +43/732/6918-246  
(Produktionsstandort  
Linz/Österreich)  
+43/732/4014343  
(Vergiftungsinformations-  
Zentrale)

## 2. Hazards identification

### 2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral),  
Category 4 H302  
Serious eye damage/  
eye irritation, Category 1 H318  
Hazardous to the aquatic  
environment —  
Acute Hazard, Category 1 H400

Hazardous to the aquatic  
environment —  
Chronic Hazard, Category 3 H412

Full text of hazard classes and H-statements : see section 16

### Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

2,4-D DMA

Hazard statements (CLP) :

H302 - Harmful if  
swallowed.

H318 - Causes serious eye  
damage.

H410 - Very toxic to  
aquatic life with long  
lasting effects.

Precautionary statements (CLP) :

P270 - Do not eat, drink or  
smoke when using this  
product.

P280 - Wear protective  
gloves/protective  
clothing/eye protection/  
face protection.

P305+P351+P338 - IF  
IN EYES: Rinse cautiously  
with water for several  
minutes. Remove  
contact lenses, if present  
and easy to do. Continue  
rinsing.

P310 - Immediately call a  
POISON CENTER or  
doctor.

P330 - Rinse mouth.

P391 - Collect spillage.



EUH-statements : P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH208 - Contains (2,4-DICHLOROPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT. May produce an allergic reaction.

EUH401 - To avoid risks to human health and the environment, comply with the instructions for use.

**2.3. Other hazards**  
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

**3. Composition/information on ingredients**

**3.1. Substances**  
Not applicable

**3.2. Mixtures**

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(2,4-DICHLOROPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT	[CAS-No.] 2008-39-1 [EC-No.] 217-915-8	51.4	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

**4. First aid measures**

**4.1. Description of first aid measures**

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Allow affected person to breathe fresh air.  
First-aid measures after skin contact : Wash off immediately with soap and plenty of water.  
First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. If eye irritation persists: Get medical advice/attention.  
First-aid measures after ingestion : Rise mouth 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/effects : Headache. Feeling of weakness. Abdominal pain, nausea. Gastrointestinal complaints. Salivation. Sweating. Coma. Cardiac disorders. Blurred vision. Convulsions. Circulatory collapse.

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

Treat symptomatically.

**5. Firefighting measures**

**5.1. Extinguishing media**

Suitable extinguishing media : Water spray. Dry powder. Sand. Foam. Carbon dioxide.

Insuitable extinguishing media : high volume water jet.

**5.2. Special hazards arising from the substance or mixture**

Hazardous decomposition products in case of fire : Carbon monoxide. Hydrogen chloride. nitrogen oxides (NOx) and chlorine.

**5.3. Advice for firefighters**

Protection during firefighting : Use personal protective equipment (PPE). Wear a self contained breathing apparatus.

Other information :

Contain the spreading of extinguishing fluids (this product may be hazardous for the environment). Do not discharge into drains or the environment.

## 6. Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Wear personal protective equipment. Refer to chapter 8.

#### 6.1.1. For non-emergency personnel

No additional information available

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Do not allow to enter drains or water courses.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

Other information : Never return spills in original containers for possible later re-use.

### 6.4. Reference to other sections

For further information refer to section 15.

## 7. Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Keep out of the reach of children. Avoid all eye and skin contact and do not breathe vapour and mist.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Store at room temperature.

Storage temperature : > 0 °C

Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

Special rules on packaging : Keep only in original container. Store in a closed container.

### 7.3. Specific end use(s)

None.

## 8. Exposure controls/personal protection

### 8.1. Control parameters

#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

United Kingdom	WEL TWV (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup> 8 H
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	20 mg/m <sup>3</sup> 15 min

Additional information : Country Specific

### 8.2. Exposure controls

#### As appropriate engineering controls:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### Personal protective equipment:

Protective clothing. Gloves. Safety glasses.

#### Materials for protective clothing:

According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn. Keep away from food and drink. Wash clothing before re-using

#### Hand protection:

Chemical resistant gloves (according to European standard EN 374 or equivalent)

#### Eye protection:

Safety glasses with side shields. Standard EN 166 - Personal eye-protection.

#### Skin and body protection:

EN 14605. According to the conditions of use, protective gloves, apron, boots, head and face protection must be worn

#### Respiratory protection:

This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used



## 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state :	Liquid
Colour :	brown.
Odour :	Amine-like.
Odour threshold :	No data available
pH :	7.5 - 9
Relative evaporation rate (butylacetate=1) :	No data available
Melting point :	No data available
Freezing point :	No data available
Boiling point :	No data available
Flash point :	> 200 °C
Auto-ignition temperature :	> 600 °C
Decomposition temperature :	No data available
Flammability (solid, gas) :	No data available
Vapour pressure :	No data available
Relative vapour density at 20 °C :	No data available
Relative density :	1.167 - 1.177
Solubility : Water:	completely miscible
Log Pow :	-0.82 (2,4-D, p-HZ)
Viscosity, kinematic :	No data available
Viscosity, dynamic :	13.3 cP
Explosive properties :	Not explosive.
Oxidising properties :	Non oxidizing.
Explosive limits :	No data available

### 9.2. Other information

No additional information available

## 10. Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

None.

## 10.5. Incompatible materials

Strong bases.

## 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. Toxicological information

### 11.1. Information on toxicological effects

2,4-D DMA 500 g a.e./L	
LD50 oral rat	1297 mg/kg
LD50 dermal rat	> 4000 mg/kg
LC50 inhalation rat (mg/l)	> 5.01 mg/l/4h

(2,4-DICHLOROPHOXY)ACETIC ACID, DIMETHYLAMINE SALT (3008-39-1)	
LD50 oral rat	625 mg/kg
LD50 dermal rabbit	2115 mg/kg

Acute toxicity (oral) :	Oral: Harmful if swallowed.
Acute toxicity (dermal) :	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) :	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation :	Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation :	Causes serious eye damage. pH: 7.5 - 9 pH: 7.5 - 9
Respiratory or skin sensitisation :	Not classified (Did not cause sensitisation. Based on available data, the classification criteria are not met)
Germ cell mutagenicity :	Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity :	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity :	Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure :	Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure :	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard :	Not classified (Based on available data, the classification criteria are not met)

## 12. Ecological information

### 12.1. Toxicity

Acute aquatic toxicity :	Very toxic to aquatic life.
Chronic aquatic toxicity :	Harmful to aquatic life with long lasting effects.

#### 2,4-D DMA 500 g a.e./L

LC50 96h fish	> 200 mg/l Oncorhynchus mykiss (Rainbow trout)
EC50 48h crustacea	> 200 mg/l Daphnia magna
EC50 72h algae	> 100 mg/l Pseudokirchneriella subcapitata
ErC50 (other aquatic plants)	44 mg/l 7d; Lemna minor
NOEC (chronic)	45.2 mg/l Daphnia magna; 21d (flowthrough); (2,4-D)
NOEC chronic fish	30.4 mg/l Pimephales promelas; (2,4 D); 32 d ELS (flowthrough)

#### Additional ecotoxicological information

14 d ErC50 (Myriophyllum spicatum) 0.75 mg/L  
 14 d ErC10 (Myriophyllum spicatum) 0.48 mg/L  
 LC50 (Eisenia fetida) >1000mg/Kg soil  
 96h LD50 oral (Apis mellifera) >100 µg/bee  
 96h LD50 contact (Apis mellifera) >200 µg/bee

#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

#### Additional ecotoxicological information

14 d NOErC (Myriophyllum aquaticum) 0.05 mg/L (2,4-D)  
 14 d ErC50 (Myriophyllum aquaticum) 0.346 mg/L (2,4-D)

### 12.2. Persistence and degradability

#### 2,4-D DMA 500 g a.e./L

Persistence and degradability	Readily biodegradable.
Biodegradation	DT50 2.0-58.9d (soil); (2,4-D)

#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

Persistence and degradability	Readily biodegradable.
Biodegradation	DT50 (soil) 2-58.9d (2,4-D)

### 12.3. Bioaccumulative potential

#### 2,4-D DMA 500 g a.e./L

Log Pow	-0.82 (2,4-D, pH7)
Bioaccumulative potential	No bioaccumulation.

#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

Log Pow	-0.82 (2,4-D; pH7)
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#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

Bioaccumulative potential	Low bioaccumulation potential.
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### 12.4. Mobility in soil

#### 2,4-D DMA 500 g a.e./L

Mobility in soil	Mobile
Koc	Koc = 12-382 (2,4-D)

#### (2,4-DICHLOROPHENOXY)ACETIC ACID, DIMETHYLAMINE SALT (2008-39-1)

Mobility in soil	Mobile
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### 12.5. Results of PBT and vPvB assessment

#### 2,4-D DMA 500 g a.e./L

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other

### 12.6. Other adverse effects

No additional information available

## 13. Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods :







Dispose as hazardous waste. Dispose of at authorized waste collection point. Do not remove as household garbage. Must follow special treatment according to local regulation.

Product/Packaging disposal recommendations :

Do not re-use empty containers. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

**14. Transport information**

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
<b>14.1. UN number</b>		
3082	3082	3082
<b>14.2. UN proper shipping name</b>		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D)	Environmentally hazardous substance, liquid, n.o.s. (2,4-D)
<b>Transport document description (ADR)</b>		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D), 9, III, (- )	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (2,4-D), 9, III
<b>14.3. Transport hazard class(es)</b>		
9	9	9
 	 	 
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		
<b>14.6. Special precautions for user</b>		
<b>- Overland transport</b>		
Classification code (ADR) :	M6	Portable tank and bulk container special provisions (ADR) :
Special provisions (ADR) :	274, 335, 375, 601	Tank code (ADR) :
Limited quantities (ADR) :	51	Vehicle for tank carriage :
Excepted quantities (ADR) :	E1	Transport category (ADR) :
Packing instructions (ADR) :	P001, IBC03, LP01, R001	Special provisions for carriage - Packages (ADR) :
Special packing provisions (ADR) :	PP1	Special provisions for carriage - Loading, unloading and handling (ADR) :
Mixed packing provisions (ADR) :	MP19	Hazard identification number (Kemler No.) :
Portable tank and bulk container instructions (ADR) :	T4	
		TPI, TP29
		LGBV
		AT
		3
		V12
		CV13
		90

Orange plates :



Tunnel restriction code (ADR) : -  
EAC code : •3Z  
**- Transport by sea**  
Special provisions (IMDG) : 274, 335, 969  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
Special packing provisions (IMDG) : PPI  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP2, TP29  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-F  
Stowage category (IMDG) : A  
**- Air transport**  
PCA Excepted quantities (IATA) : E1  
PCA Limited quantities (IATA) : Y964  
PCA limited quantity max net quantity (IATA) : 30 g/g  
PCA packing instructions (IATA) : 964  
PCA max net quantity (IATA) : 50L  
CAO packing instructions (IATA) : 964  
CAO max net quantity (IATA) : 450L  
Special provisions (IATA) : A9, A18, A197  
ERG code (IATA) : 9L

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**  
Not applicable

## 15. Regulatory information

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

### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

### 15.1.2. National regulations

#### Germany

VwVwS Annex reference : Water hazard class (WGK) 3, Highly hazardous to water (Classification according to VwVwS, Annex 4)

12th Ordinance implementing the Federal Immission Control Act - 12.BImSchV :

Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van milieugevaarlijke stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

#### Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

None

**16. Other information**

Indication of changes:

Section	Changed item	Change	Comments
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
3	Composition/information on ingredients	Modified	
5.3	EAC code	Added	
7.2	Special rules on packaging	Added	
8.2	Personal protective equipment	Added	
9.1	Viscosity, dynamic	Added	
9.1	Relative density	Added	
9.1	Auto-ignition temperature	Added	
9.1	pH	Modified	
9.1	Log P <sub>ow</sub>	Modified	
9.1	Flash point	Modified	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Added	
11.1	Reason for no classification	Modified	
11.1	Additional information	Removed	
11.1	LD50 oral rat	Modified	
11.1	LD50 dermal rat	Modified	



11.1	LC50 inhalation rat (mg/l)	Modified	
11.1	ATE CLP (oral)	Modified	
12.1	EC50 72h algae	Added	
12.1	EC50 48h crustacea	Added	
12.1	DT50	Removed	
12.1	ErC50 (other aquatic plants)	Removed	
12.1	NOEC chronic fish	Modified	
12.1	NOEC (chronic)	Modified	
12.1	ErC50 (algae)	Modified	
12.1	EC50 other aquatic organisms 1	Removed	
12.2	Biodegradation	Added	
12.3	Log Pow	Modified	
12.4	Mobility in soil	Added	
14.1	UN-No. (ADN)	Added	
14.1	UN-No. (ADR)	Added	
14.1	UN-No. (IMDG)	Added	
14.1	UN-No. (IATA)	Added	
14.2	Proper Shipping Name (ADN)	Added	
14.2	Proper Shipping Name (ADR)	Added	
14.3	Danger Labels (RID)	Added	
14.3	Danger Labels (ADR)	Added	
14.3	Class (ADR)	Added	
14.4	Packing group (ADN)	Added	
14.4	Packing group (IATA)	Added	
14.4	Packing group (IMDG)	Added	
14.4	Packing group (ADR)	Added	
14.6	Special provisions (ADN)	Added	

14.6	Special packing provisions (IMDG)	Added	
14.6	Packing instructions (IMDG)	Added	
14.6	Transport category (ADR)	Added	
14.6	Special provisions (ADR)	Added	
14.6	Excepted quantities (ADR)	Added	
14.6	Limited quantities (ADR)	Added	
14.6	Tunnel restriction code (ADR)	Added	
14.6	Hazard identification number (Kemler No.)	Added	
14.6	Classification code (ADR)	Added	

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxic (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Sens. 1	Skin sensitization, Category 1
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains . May produce an allergic reaction.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.