



SAFETY DATA SHEET

according to regulation (EC) no 1907/2006

Re-Act

Version 3 (UK)

Issue date 10/27/2010

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

Product information

Trade name : **Re-Act**

Usage : herbicide

Company : Nufarm UK Limited
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Wyke
Bradford
West Yorkshire BD12 9EJ
United Kingdom

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2. HAZARDS IDENTIFICATION

Harmful if swallowed.
Risk of serious damage to eyes.
Toxic to aquatic organisms.
May cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Aqueous solution of dimethylammonium salts
Contains MCPA 256.25g/l, Mecoprop-P 237.5g/l and Dicamba 31.25g/l as the dimethylamine salts.

Components	CAS-No.	EINECS-No. ELINCS-No.	Symbol(s)	R-phrases(s)	Concentration (w/w)
MCPA DMA	2039-46-5	218-014-2	N, Xn	R20/21/22, R50/53	22.6 %
Mecoprop-P DMA	66423-09-4		Xn, N	R22, R41, R51/53	20.9 %
Dicamba DMA	2300-66-5	218-951-7	Xi	R36, R52/53	2.8 %

4. FIRST AID MEASURES

Eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Obtain medical attention.

Skin contact : Remove and wash contaminated clothing before re-use. Wash off with warm water and soap. If symptoms persist, call a physician.

Inhalation : Move to fresh air. Oxygen or artificial respiration if needed.



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Ingestion : Obtain medical attention.
: Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Notes to physician

Treatment : Treat symptomatically.

5. FIRE-FIGHTING MEASURES

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

Special protective equipment for fire-fighters : Use personal protective equipment. In the event of fire, wear self-contained breathing apparatus.

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

Extinguishing media which shall not be used for safety reasons : none

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Wear personal protective equipment.

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Use mechanical handling equipment.

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

7. HANDLING AND STORAGE

Handling

Safe handling advice : Wear personal protective equipment. Do not breathe vapours or spray mist.

Storage

Requirements for storage : Store in original container. Keep in a well-ventilated place.



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areas and containers

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

- Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment (gas filter type A).
- Hand protection : PVC or nitrile-rubber gloves
- Eye protection : Goggles, or, Safety glasses
- Skin and body protection : Protective suit
- Hygiene measures : Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Handle in accordance with good industrial hygiene and safety practice for diagnostics.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

- Physical state : liquid
- Colour : dark brown
- Odour : fish-like

Other data

- Boiling point/boiling range : 100 °C
- Flash point : > 100 °C
(closed cup)
- Vapour pressure : 4E-04 Pa
at 32 °C
(MCPA)
- 4E-04 Pa
at 20 °C
(mecoprop-P)



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1.7E-03 Pa
at 25 °C
(Dicamba)

Density : 1.13 g/cm³

Water solubility : completely miscible

pH : 7.5 - 9

Partition coefficient: n-
octanol/water : log POW = 0.71
(MCPA)

log POW = 2.8
(mecoprop-P)

log POW = -1.9
at 25 °C
(Dicamba)

10. STABILITY AND REACTIVITY

Thermal decomposition : No decomposition if stored and applied as directed.

Conditions to avoid : No dangerous reaction known under conditions of normal use.

Materials to avoid : Strong acids

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat
Dose: 962 mg/kg
Test substance: (MCPA)

LD50 rat
Dose: 431 - 1,050 mg/kg
Test substance: (mecoprop-P)



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		LD50 rat Dose: > 1,707 mg/kg Test substance: (Dicamba)
Acute dermal toxicity	:	LD50 rat Dose: > 4,000 mg/kg Test substance: (MCPA)
		LD50 rabbit Dose: > 4,000 mg/kg Test substance: (mecoprop-P)
		LD50 rabbit Dose: > 2,000 mg/kg Test substance: (Dicamba)
Acute inhalation toxicity	:	LC50 rat Exposure time: 4 h Dose: > 6.36 mg/l Test substance: (MCPA)
		LC50 rat Exposure time: 4 h Dose: > 5.6 mg/l Test substance: (mecoprop-P)
		LC50 rat Exposure time: 4 h Dose: 4.46 mg/l Test substance: (Dicamba)
Skin irritation	:	Result: Irritating to skin.
Eye irritation	:	Result: Severe eye irritation
Sensitisation	:	Classification: Not sensitizing to skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

:	LC50 Toxicity to birds Dose: 270 mg/kg Test substance: (MCPA)
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- : LC50 Toxicity to birds
Dose: 497 mg/kg
Test substance: (mecoprop-P)

- : Toxicity to birds
Dose: 2,000 mg/kg
Testing period: 8 d
Test substance: (Dicamba)

- : Bee
Test substance: (MCPA)
Not toxic to bees.
Value ($\mu\text{g}/\text{Species}$): > 200

- : LD50 Bee
Testing period: 2 d
Test substance: (mecoprop-P)
Not toxic to bees.
Value ($\mu\text{g}/\text{Species}$): > 83

- : LD50 Bee
Test substance: (Dicamba)
Not toxic to bees.
Value ($\mu\text{g}/\text{Species}$): > 100

- Toxicity to fish : LC50 Toxicity to fish
Dose: > 100 mg/l
Testing period: 96 h
Test substance: (mecoprop-P)

- LC50 Toxicity to fish
Dose: 50 mg/l
Testing period: 96 h
Test substance: (MCPA)

- LC50 Toxicity to fish
Dose: 135.4 mg/l
Testing period: 96 h
Test substance: (Dicamba)

- Toxicity to daphnia : LC50 Daphnia
Dose: > 190 mg/l
Testing period: 48 h
Test substance: (MCPA)

- EC50 Daphnia
Dose: > 91 mg/l



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Testing period: 48 h
Test substance: (mecoprop-P)

LC50 Daphnia
Dose: 110.7 mg/l
Testing period: 48 h
Test substance: (Dicamba)

Toxicity to algae : EC50 Toxicity to algae
Dose: 57 mg/l
Exposure time: 72 h
Test substance: (MCPA)

EC50 Toxicity to algae
Dose: 16.2 mg/l
Exposure time: 72 h
Test substance: (mecoprop-P)

EC50 Toxicity to algae
Dose: > 3.7 mg/l
Exposure time: 72 h
Test substance: (Dicamba)

13. DISPOSAL CONSIDERATIONS

Product : Dispose of product and packaging in accordance with The Green Code. (The Code of Practice for the safe use of Pesticides on Farms and Holdings.) A MAFF Publication.

Contaminated packaging : Do not re-use empty containers. Dispose at licensed waste disposal site capable of accepting pesticides in compliance with applicable regulations.

14. TRANSPORT INFORMATION

UN number :

ADR/RID :

Not a dangerous substance as defined in the above regulations.

IMDG :



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Not a dangerous substance as defined in the above regulations.

IATA-DGR :

Not a dangerous substance as defined in the above regulations.

15. REGULATORY INFORMATION

Symbol(s)	: Xn N	Harmful Dangerous for the environment
R-phrase(s)	: R22 R41 R51/53	Harmful if swallowed. Risk of serious damage to eyes. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrase(s)	: S25 S26 S35 S39 S46 S57	Avoid contact with eyes. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. This material and its container must be disposed of in a safe way. Wear eye/face protection. If swallowed, seek medical advice immediately and show this container or label. Use appropriate container to avoid environmental contamination.

16. OTHER INFORMATION

Print Date : 27/10/2010

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

Full text of any R phrases referred to under heading 3:

- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R22 - Harmful if swallowed.
- R41 - Risk of serious damage to eyes.
- R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R36 - Irritating to eyes.



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R52/53 - Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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