

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

CA Code (Nufarm)	: 2848
Product code	: T045A
Oracle Recipe Code (Nufarm)	: 600000154
Item codes	: 110003741
Product form	: Mixture
Trade name	: NU46
Type (Nufarm)	: Country Specific
Country (Nufarm)	: Ireland
Synonyms	: (4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT 500G/L AI

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

1.2.1. Relevant identified uses

Main use category	: Industrial use, 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

Manufacturer

Nufarm UK Limited
Wyke Lane
Wyke
BD12 9EJ Bradford - UK
T +44 (0)1274 691234 - F +44 (0) 1274691176
infouk@uk.nufarm.com

1.4. Emergency telephone number

Emergency number	: +44 (0)1274 696603
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SECTION 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 2	H411

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	: (4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT
Hazard statements (CLP)	: H302 - Harmful if swallowed. H318 - Causes serious eye damage. H410 - Very toxic to aquatic life with long lasting effects.

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P301+P312 - IF SWALLOWED: Call a doctor, a POISON CENTER if you feel unwell.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.

EUH-statements : 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

SECTION 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]
(4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT	(CAS-No.) 2039-46-5 (EC-No.) 218-014-2	56.6	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation : May cause shortness of breath, tightness of the chest, a sore throat and cough.
Symptoms/effects after skin contact : Causes mild skin irritation.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Abdominal pain, nausea. Ingestion may cause nausea and vomiting. May cause irritation to the digestive tract.

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

Treat symptomatically. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid the formation of mists in the atmosphere. Do not manipulate the product in a confined space.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment:

Protective clothing. Gloves. Safety glasses.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: amber. brown.
Odour	: Amine-like.
Odour threshold	: No data available
pH	: 8.9 @ 100%; 7.8 @ 1% (20°C)
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: ≈ 0 °C
Freezing point	: No data available
Boiling point	: > 100 °C
Flash point	: > 110 °C
Auto-ignition temperature	: 420 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.131 (20°C)
Solubility	: Water: Miscible with water
Log Pow	: 0.21 (20°C pH 7.0)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 15.5 mPa·s
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects

NU46	
LD50 oral rat	1239 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.9 mg/l

Acute toxicity (oral) : Oral: Harmful if swallowed.

Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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) pH: 8.9 @ 100%; 7.8 @ 1% (20°C)
Serious eye damage/irritation	: Causes serious eye damage. pH: 8.9 @ 100%; 7.8 @ 1% (20°C)
Respiratory or skin sensitisation	: Not classified (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)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity	: Very toxic to aquatic life.
Chronic aquatic toxicity	: Toxic to aquatic life with long lasting effects.

NU46	
LC50 96h fish	50 mg/l <i>Oncorhynchus mykiss</i> (MCPA DMA)
EC50 48h crustacea	> 190 mg/l <i>daphnia magna</i> ; (MCPA DMA)
EC50 72h algae	> 320 mg/l <i>Selenastrum capricornutum</i> (MCPA DMA)
NOEC (chronic)	50 mg/l <i>Daphnia Magna</i> (MCPA DMA)
NOEC chronic fish	15 mg/l <i>Pimephales promelas</i> ; (MCPA DMA)
Additional ecotoxicological information	
14 d NOErC (<i>Myriophyllum spicatum</i>)	0.0977mg/L (total shoot length, fresh weight)
14 d ErC50 (<i>Myriophyllum spicatum</i>)	0.286mg/L (fresh weight)

12.2. Persistence and degradability

NU46	
Persistence and degradability	Readily biodegradable.
(4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT (2039-46-5)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

NU46	
Log Pow	0.21 (20°C pH 7.0)
Bioaccumulative potential	Low bioaccumulation potential.
(4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT (2039-46-5)	
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

NU46	
Mobility in soil	Adsorbs into the soil
Log Koc	10 - 157 MCPA
(4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, DIMETHYLAMINE SALT (2039-46-5)	
Mobility in soil	Adsorbs into the soil

12.5. Results of PBT and vPvB assessment

NU46	
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 adverse effects

No additional information available

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

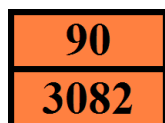
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number 3082	3082	3082
14.2. UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA)	Environmentally hazardous substance, liquid, n.o.s. (MCPA)
Transport document description (ADR)		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MCPA), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (MCPA), 9, III
14.3. Transport hazard class(es) 9	9	9
14.4. Packing group III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



- Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
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)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197
ERG code (IATA)	: 9L

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 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

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:

Section	Changed item	Change	Comments
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
2.2	Hazard pictograms (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures after eye contact	Modified	
9.1	Log Pow	Modified	
9.1	Relative density	Modified	
9.1	pH	Modified	
11.1	LC50 inhalation rat (mg/l)	Modified	
11.1	ATE CLP (oral)	Modified	

NU46

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.1	NOEC (chronic)	Added	
12.1	NOEC chronic fish	Modified	
12.1	NOEC chronic crustacea	Removed	
12.1	EC50 72h algae	Removed	
12.1	EC50 72h algae	Modified	
12.1	EC50 48h crustacea	Modified	
12.1	LC50 96h fish	Modified	
12.3	Log Pow	Modified	
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	Hazard identification number (Kemler No.)	Added	
14.6	Classification code (ADR)	Added	
16	Other information	Removed	

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H318	Causes serious eye damage
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

NUFARM SDS TEMPLATE

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.