

SAFETY DATA SHEET

RELAY TURF ELITE

This safety data sheet complies with the requirements of:
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS # : NF2773-T701A-A
Revision date: 2019-11-27
Format: EU
Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) NF2773-T701A-A
Product Name RELAY TURF ELITE
Synonyms (4-CHLORO-2-METHYLPHENOXY) ACETIC
ACID/(R)-2-(4-CHLORO-2-METHYLPHENOXY)PROPIONIC ACID/DICAMBA K salts

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

Recommended Use: Herbicide, Restricted to professional users
Restrictions on use Use as recommended by the label.

1.3. Details of the supplier of the safety data sheet

Supplier FMC Agro Limited
Rectors Lane
Pentre
Flintshire
CH5 2DH
United Kingdom
Tel: + 44 1244 537370
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point E-Mail: SDS-Info@fmc.com
Phone: +1 215-299-6000 (General Information)

1.4. Emergency telephone number

Emergency telephone

For leak, fire, spill, or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A. & Canada)
1 703 / 527 3887 (CHEMTREC - All Other Countries - Collect)

Medical emergencies:

Austria: +43 1 406 43 43
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Cyprus: 1401
Czech Republic: +420 224 919 293, +420 224 915 402
Denmark: +45 82 12 12 12
France: +33 (0) 1 45 42 59 59
Finland: +358 9 471 977
Greece: 30 210 77 93 777
Hungary: +36 80 20 11 99
Ireland (Republic): +352 1 809 2166

Italy: +39 02 6610 1029
Lithuania: +370 523 62052, +370 687 53378
Luxembourg: +352 8002 5500
Netherlands: +31 30 274 88 88
Norway: +47 22 591300
Poland: +48 22 619 66 54, +48 22 619 08 97
Portugal: 800 250 250 (in Portugal only), +351 21 330 3284
Romania: +40 21318 3606
Slovakia: +421 2 54 77 4 166
Slovenia: +386 41 650 500
Spain: +34 91 562 04 20
Sweden: +46 08-331231112
Switzerland: 145
United Kingdom: 0870 600 6266 (in the UK only)
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture *Regulation (EC) No 1272/2008*

Serious eye damage/eye irritation	Category 1 (H318)
Acute aquatic toxicity	Category 1 (H400)
Chronic aquatic toxicity	Category 1 (H410)

2.2. Label elements

Hazard pictograms



Signal Word
Danger

Hazard Statements

H318 - Causes serious eye damage

H410 - Very toxic to aquatic life with long lasting effects

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

Precautionary Statements

P273 - Avoid release to the environment

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/physician

P391 - Collect spillage

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

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

The product is a mixture, not a substance.

3.2 Mixtures

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
MCPA, POTASSIUM SALT	226-015-4	5221-16-9	25.5	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
(R)-2-(4-CHLORO-2-METHYLPHENOXY)PROPIONIC ACID, POTASSIUM SALT	240-539-0	66423-05-0	4.4	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411	No data available
DICAMBA, POTASSIUM SALT	233-002-7	10007-85-9	2	Acute Tox (Oral), (H302) Eye Irrit. 2 (H319) Aquatic Chronic 3 (H412)	No data available
Tetrasodium EDTA	200-449-4	60-00-4	<0.5	Acute Tox. 4 (Inhalation), (H332) Eye Irrit. 2, (H319) STOT RE 2, (H373)	No data available

Additional Information

For the full text of the H- and EUH- phrases mentioned in this Section, see Section 16

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Skin Contact

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

Inhalation

Move to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

Ingestion

Rinse mouth with water. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Do NOT induce vomiting. Drink 1 or 2 glasses of water.

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

Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Causes mild skin irritation.

Symptoms/effects after eye contact : Serious damage to eyes.

Symptoms/effects after inhalation : May cause shortness of breath, tightness of the chest, a sore throat and cough.

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

Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically. Eye bathing equipment should be available on the premises. A decontamination shower should be available on the premises.

Section 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Small Fire Dry chemical, Carbon dioxide (CO₂).

Large Fire Water spray, Foam.

Unsuitable extinguishing media

Avoid heavy hose streams.

5.2. Special hazards arising from the substance or mixture

Toxic fumes may be released in fire situations.

5.3. Advice for firefighters

Isolate fire area. Evaluate upwind. As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Personal Precautions

Ensure adequate ventilation. Avoid contact with the skin and the eyes.

For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

For emergency responders

Use personal protection recommended in Section 8.

6.2. Environmental precautions

Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. Keep out of waterways.

6.3. Methods and material for containment and cleaning up

Methods for Containment

Nearby surface water drains should be covered. Minor spills on the floor or other impervious surface should immediately be swept up or preferably vacuumed up using equipment with high efficiency final filter. Transfer to suitable containers. Clean area with detergent and water. Do not let wash liquid enter drains or waterways. Absorb wash liquid with an inert absorbent such as universal binder, Fuller's earth, bentonite or other absorbent clay and collect in suitable containers. The used containers should be properly closed and labelled.

Methods for cleaning up

Pick up and transfer to properly labelled containers. Dispose of in accordance with all applicable national environmental laws and regulations.

6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Handling

Ensure adequate ventilation. Wear personal protective equipment. Avoid contact with skin and eyes. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities**Storage**

Protect from freezing. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of reach of children and animals. Avoid contact with water or humidity.

Packaging material Must only be kept in original packaging.

7.3. Specific end use(s)**Specific Use(s)**

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

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

(4-CHLORO-2-METHYLPHENOXY) ACETIC ACID, Potassium salt (5221-16-9)

United Kingdom WEL TWA (mg/m³) 10 mg/m³ 8 H

United Kingdom WEL STEL (mg/m³) 20 mg/m³ 15 min

(R)-2-(4-CHLORO-2-METHYLPHENOXY)PROPIONIC ACID, POTASSIUM SALT (66423-05-0)

United Kingdom WEL TWA (mg/m³) 10 mg/m³ 8 h

United Kingdom WEL STEL (mg/m³) 20 mg/m³ 15 min

EDTA (60-00-4)

EU Local name EDTA

EU Notes (Year of adoption 2009)

EU Regulatory reference SCOEL Recommendations

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering measures Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/Face Protection Safety glasses with side-shields.

Hand Protection Use protective gloves made of chemical materials such as nitrile or neoprene. Wash the outside of gloves with soap and water before reuse. Check regularly for leaks.

Skin and Body Protection Wear protective gloves/clothing.

Respiratory Protection In case of insufficient ventilation wear suitable respiratory equipment.

Environmental exposure controls Do not release to the environment.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical State Liquid

Appearance Liquid

Odour	Phenolic
Colour	Brown
Odour threshold	No information available
pH	7 (1% dilution in water)
Melting point/freezing point	No information available
Boiling point/boiling range	No information available
Flash point	> 100 °C
Evaporation Rate	No information available
Flammability (solid, gas)	
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit	No information available
Vapour pressure	No information available
Vapour density	No information available
Specific gravity	1.1555
Water solubility	Miscible with water
Solubility in other solvents	No information available
Partition coefficient	log Pow = 2.8 (MCPp)
Autoignition temperature	>400 °C
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	4.42 mPa·s (40°C) 4.56 mPa·s (20°C)
Explosive properties	Not explosive
Oxidising properties	Non-oxidizing (by EC criteria)

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available
K _{st}	No information available

Section 10: STABILITY AND REACTIVITY**10.1. Reactivity**

None under normal use conditions

10.2. Chemical stability

Stable under recommended storage conditions.

Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

10.3. Possibility of hazardous reactions**Hazardous polymerisation**

Hazardous polymerization does not occur.

Hazardous reactions

None under normal processing.

10.4. Conditions to avoid

None known. Stable under normal conditions.

10.5. Incompatible materials

Strong acids, Strong bases, oxidising agents.

10.6. Hazardous decomposition products

None known based on information supplied.

Section 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects****Acute toxicity****Product Information**

. RELAY TURF ELITE

LD50 oral rat 300 - 2000 mg/kg (MCPA)

LD50 oral 431 mg/kg (MCPPp)

LD50 dermal rat > 2000 mg/kg (MCPA)

LD50 dermal > 2000 mg/kg (MCPPp) - Rat

LC50 inhalation rat (mg/l) > 5 mg/l/4h (MCPA)

LC50 inhalation rat (Dust/Mist - mg/l/4h) > 5.16 mg/l/4h (MCPPp)

POTASSIUM 3,6-DICHLORO-O-ANISATE (10007-85-9)

LD50 oral rat 1707 mg/kg Dicamba

LD50 dermal rabbit > 2000 mg/kg Dicamba

LC50 inhalation rat (Dust/Mist - mg/l/4h) > 9.6 mg/l/4h Dicamba.

LD50 Oral

Not classified (Based on available data, the classification criteria are not met)

LD50 Dermal

Not classified (Based on available data, the classification criteria are not met)

Inhalation LC50

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/eye irritation

Causes serious eye irritation.

Sensitisation

Not classified (Based on available data, the classification criteria are not met)

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.

STOT - repeated exposure

Not classified.

Aspiration hazard

Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION**12.1. Toxicity****Ecotoxicity**

Very toxic to aquatic life with long lasting effects

The ecotoxicity of the product is measured as:

RELAY TURF ELITE

LC50 96h fish 50 mg/l (MCPA)

LC50 96h fish > 100 (MCPPp)

EC50 48h crustacea > 190 mg/l (MCPA)

EC50 48h crustacea > 100 (MCPPp)

EC50 72h algae > 320 mg/l selenastrum capricornutum (MCPA)

EC50 72h algae 16.2 mg/l MCPPp

NOEC (chronic) 50 mg/l Daphnia magna (MCPA)

NOEC chronic fish 15 mg/l Pimephales promelas (MCPA DMA)

NOEC chronic crustacea > 100 mg/l Daphnia magna (MCPp)

(R)-2-(4-CHLORO-2-METHYLPHENOXY)PROPIONIC ACID, POTASSIUM SALT
(66423-05-0)

Additional ecotoxicological information

14d ErC10 (Myriophyllum spicatum) 0.00106 mg/L

14d ErC50 (Myriophyllum spicatum) 0.0269 mg/L

14d ErC10 (Myriophyllum spicatum) 0.00106 mg/L

14d ErC50 (Myriophyllum spicatum) 0.0269 mg/L

POTASSIUM 3,6-DICHLORO-O-ANISATE (10007-85-9)

LC50 96h fish 135 mg/l Dicamba

EC50 48h crustacea 110 mg/l Dicamba

EC50 72h algae 250 mg/l Dicamba

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

12.4. Mobility in soil

Mobility in soil

Surface tension 50.7 mN/m 20°C

Log Koc Koc = 135-167 (mecoprop-P).

Kfoc = 3.45-21.2, 1/n=0.72-0.93 (Dicamba).

Koc=10-157(MCPA).

12.5. Results of PBT and vPvB assessment

This product is not identified as a PBT substance.

12.6. Other adverse effects

Very toxic to aquatic organisms

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

14.1 UN/ID no

UN3082

14.2 Proper Shipping Name

Environmentally hazardous substance, liquid, n.o.s (MCPA, Mecoprop-p)

14.3 Hazard class

9

14.4 Packing Group III
14.5 Marine Pollutant Yes
Environmental Hazard Yes
14.6 Special Provisions Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not release to the environment

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

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code The product is not transported in bulk by ship.

RID

14.1 UN/ID no UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s (MCPA, Mecoprop-p)
14.3 Hazard class 9
14.4 Packing Group III
14.5 Environmental Hazard Yes
14.6 Special Provisions Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not release to the environment

ADR/RID

14.1 UN/ID no UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s (MCPA, Mecoprop-p)
14.3 Hazard class 9
ADR/RID-Labels Classification code (ADR) : M6
 Special provisions (ADR) : 274, 335, 375, 601
 Limited quantities (ADR) : 5l
 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
14.4 Packing Group III
14.5 Environmental Hazard Yes
14.6 Special Provisions Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not discharge to the environment.

ICAO/IATA

14.1 UN/ID no UN3082
14.2 Proper Shipping Name Environmentally hazardous substance, liquid, n.o.s (MCPA, Mecoprop-p)
14.3 Hazard class 9
14.4 Packing Group III
14.5 Environmental Hazard Yes
14.6 Special Provisions Avoid any unnecessary contact with the product. Misuse can result in damage to health. Do not release to the environment

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

Section 15: REGULATORY INFORMATION

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

European Union

Authorisations and/or restrictions on use:

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
 This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants

Not Applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not Applicable

International Inventories

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
MCPA, POTASSIUM SALT 5221-16-9			X					X
DICAMBA, POTASSIUM SALT 10007-85-9			X					
Tetrasodium EDTA 60-00-4	X	X	X	X	X	X	X	X

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: OTHER INFORMATION

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed
 H312 - Harmful in contact with skin
 H318 - Causes serious eye damage
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H373 - May cause damage to organs through prolonged or repeated exposure
 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
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

Legend

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	CAS (Chemical Abstracts Service)
Ceiling:	Maximum limit value:
DNEL:	Derived No Effect Level (DNEL)
EINECS:	EINECS (European Inventory of Existing Chemical Substances)
GHS:	Globally Harmonised System (GHS)
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods (IMDG)
LC50:	LC50 (lethal concentration)
LD50:	LD50 (lethal dose)
PBT:	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
RID:	Regulations concerning the International Transport of Dangerous Goods by Rail
STEL:	Short term exposure limit
SVHC:	SVHC: Substances of Very High Concern for Authorisation:
TWA:	time weighted average
vPvB:	very Persistent and very Bioaccumulative

Key literature references and sources for data

Data measured on the product are unpublished company data. Data on ingredients are available from published literature and can be found several places.

Revision date: 2019-11-27

Reason for revision: Initial Release.

Training Advice This material should only be used by persons who are made aware of its hazardous properties and have been instructed in the required safety precautions.

Disclaimer

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.

Prepared By

FMC Corporation

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End of Safety Data Sheet