Fluroxypyr-meptyl 150 gL + Thifensulfuron-methyl 30 gL + Metsulfuron-methyl 3 gL OD

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.11.2023	50000101	Date of first issue: 28.11.2023

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

1.1 Product identifier

Product name Fluroxypyr-meptyl 150 gL + Thifensulfuron-methyl 30 gL + Metsulfuron-methyl 3 gL OD

Other means of identification

Product code 50000101

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

Use of the Substance/Mixture : Herbicide

Recommended restrictions on use : Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

Supplier Address

FMC Agricultural Solutions A/S
Thyborønvej 78
DK-7673 Harboøre
Denmark

Telephone: +45 9690 9690
Telefax: +45 9690 9691
E-mail address: SDS-Info@fmc.com .

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:
Denmark: +45-69918573 (CHEMTREC)

Medical emergency:
Denmark: +45 82 12 12 12

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.
Long-term (chronic) aquatic hazard, Category 1	H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

Signal word : Warning

Hazard statements :
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P261 Avoid breathing mist or vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water and soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

P501 Dispose of contents/container as hazardous waste in accordance with local regulations.

Additional Labelling

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

For special phrases (SP) and safety intervals, consult the label.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
fluroxypyr-meptyl (ISO)	81406-37-3 279-752-9 607-272-00-5	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 20 - < 25
methyl decanoate	110-42-9 203-766-6	Aquatic Chronic 2; H411	>= 10 - < 20
12-Hydroxystearic acid, oligomers, reaction products with stearic acid	58128-22-6 500-140-7	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 1 - < 10
thifensulfuron-methyl (ISO)	79277-27-3 016-096-00-2	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	>= 2,5 - < 10
metsulfuron-methyl (ISO)	74223-64-6 613-139-00-2	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute	>= 0,25 - < 1

		aquatic toxicity): 1.000 M-Factor (Chronic aquatic toxicity): 1.000	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

In case of skin contact : If on clothes, remove clothes.
If on skin, rinse well with water.
Wash off immediately with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.
Immediate medical attention is required in case of ingestion.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.
Nitrogen oxides (NOx)
Carbon oxides
Sulphur oxides
Hydrogen cyanide
Hydrogen fluoride
Hydrogen chloride
Chlorine compounds
Fluorine compounds

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
If it can be safely done, stop the leak.
Keep people away from and upwind of spill/leak.
Remove all sources of ignition.
Immediately evacuate personnel to safe areas.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective

equipment may intervene.

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.
Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures : When using do not eat or drink. When using do not smoke.
Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : No smoking. Keep in a well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Observe label precautions. Electrical installa-

tions / working materials must comply with the technological safety standards.

Further information on storage conditions : The product is stable under normal conditions of warehouse storage. Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.

Advice on common storage : Do not store near acids.

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Registered pesticide to be used in accordance with a label approved by country-specific regulatory authorities.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
methyl decanoate	Workers	Inhalation	Long-term systemic effects	61,4 mg/m3
	Workers	Dermal	Long-term systemic effects	121,8 mg/kg
	Consumers	Inhalation	Long-term systemic effects	15,13 mg/m3
	Consumers	Dermal	Long-term systemic effects	60,9 mg/kg
	Consumers	Oral	Long-term systemic effects	6,09 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
methyl decanoate	Fresh water	0,0011 mg/l
	Marine water	110 ng/l
	Intermittent use/release	0,0011 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	0,0469 mg/kg dry weight (d.w.)
	Marine sediment	0,0047 mg/kg dry

		weight (d.w.)
	Soil	10 mg/kg dry weight (d.w.)
methyl octanoate	Fresh water	0,002 mg/l
	Intermittent use (freshwater)	47,6 µg/l
	Marine water	180 ng/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	0,028 mg/kg dry weight (d.w.)
	Marine sediment	0,003 mg/kg dry weight (d.w.)
	Soil	10 mg/kg dry weight (d.w.)
	Secondary poisoning (predators)	66,6 mg/kg
	Marine water	0 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection
Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Protective measures : Plan first aid action before beginning work with this product.
Always have on hand a first-aid kit, together with proper instructions.
Wear suitable protective equipment.
When using do not eat, drink or smoke.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	light grey
Odour	:	solvent-like
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	93 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	3,9 - 4,9 Concentration: 1 %
Viscosity		
Viscosity, dynamic	:	231,9 mPa.s (20 °C)
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	Not available for this mixture.

Relative density	:	Not available for this mixture.
Density	:	0,89 - 1,09 g/cm3
Relative vapour density	:	Not available for this mixture.
Particle characteristics		
Particle size	:	Not applicable

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	The product is not oxidizing.
Flammability (liquids)	:	Based on available information, the classification criteria for flammability hazard are not met.
Self-ignition	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.
Protect from frost.
Heating of the product will produce harmful and irritant vapours.

10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers

10.6 Hazardous decomposition products

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

Product:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 425 Remarks: (Data on the product itself) Information source: Internal study report
Acute inhalation toxicity	:	LC50 (Rat): > 5,11 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Remarks: (Data on the product itself) Information source: Internal study report
Acute dermal toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 402 Remarks: (Data on the product itself) Information source: Internal study report

Components:

fluroxypyr-meptyl (ISO):

Acute oral toxicity	:	LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 401
Acute inhalation toxicity	:	LC50 (Rat): > 1 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2.000 mg/kg Method: OECD Test Guideline 402

methyl decanoate:

Acute oral toxicity	:	LD50 (Rat, male and female): > 2.000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: Based on data from similar materials

Acute inhalation toxicity : LC0 (Rat, male and female): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
Remarks: Based on data from similar materials
no mortality

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg

thifensulfuron-methyl (ISO):

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5,03 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg

metsulfuron-methyl (ISO):

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: US EPA Test Guideline OPP 81-1

Acute inhalation toxicity : LC50 (Rat): > 5,3 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: US EPA Test Guideline OPPTS 870.1300
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg
Method: US EPA Test Guideline OPP 81-2

Skin corrosion/irritation

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

Product:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : (Data on the product itself)
Information source: Internal study report

Components:

fluroxypyr-meptyl (ISO):

Species : Rabbit

Assessment : Not classified as irritant
Result : No skin irritation

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Species : Rabbit
Result : Skin irritation

thifensulfuron-methyl (ISO):

Assessment : No skin irritation
Method : OECD Test Guideline 404
Remarks : Minimal effects that do not meet the threshold for classification.

metsulfuron-methyl (ISO):

Species : Rabbit
Method : US EPA Test Guideline OPP 81-5
Result : No skin irritation

Serious eye damage/eye irritation

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

Product:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
Remarks : (Data on the product itself)
Information source: Internal study report

Components:

fluroxypyr-meptyl (ISO):

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Remarks : Minimal effects that do not meet the threshold for classification.

methyl decanoate:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Species : Rabbit
Method : Draize Test
Result : Mild eye irritation

thifensulfuron-methyl (ISO):

Method : OECD Test Guideline 405
Result : No eye irritation

metsulfuron-methyl (ISO):

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

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

Product:

Species : mice
Method : OECD Test Guideline 429
Result : May cause sensitisation by skin contact.
Remarks : (Data on the product itself)
Information source: Internal study report

Components:

fluroxypyr-meptyl (ISO):

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

methyl decanoate:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
Remarks : Based on data from similar materials

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Test Type : Maximisation Test
Species : Guinea pig
Result : Does not cause skin sensitisation.

thifensulfuron-methyl (ISO):

Species : Guinea pig
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.

metsulfuron-methyl (ISO):

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Method	:	US EPA Test Guideline OPPTS 870.2600
Result	:	Not a skin sensitizer.

Germ cell mutagenicity

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

Components:

methyl decanoate:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials
Genotoxicity in vivo	:	Test Type: Chromosome aberration test in vitro Species: Chinese hamster (male and female) Application Route: Oral Result: negative

thifensulfuron-methyl (ISO):

Genotoxicity in vitro	:	Test system: Chinese hamster ovary cells Method: OECD Test Guideline 476 Result: negative Remarks: In vitro tests did not show mutagenic effects
Germ cell mutagenicity- Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

metsulfuron-methyl (ISO):

Genotoxicity in vitro	:	Test Type: Ames test Metabolic activation: with and without metabolic activation Result: negative Test Type: Chromosome aberration test in vitro Metabolic activation: Metabolic activation Result: positive
Genotoxicity in vivo	:	Test Type: Micronucleus test Species: Mouse Result: negative
Germ cell mutagenicity- Assessment	:	Animal testing did not show any mutagenic effects.

Carcinogenicity

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

Components:

fluroxypyr-meptyl (ISO):

Species	:	Rat
Method	:	OECD Test Guideline 451
Result	:	negative
Species	:	Mouse
Method	:	OECD Test Guideline 453
Result	:	negative

thifensulfuron-methyl (ISO):

Carcinogenicity - Assessment	:	Weight of evidence does not support classification as a carcinogen

metsulfuron-methyl (ISO):

Species	:	Rat, male and female
Exposure time	:	104 weeks
NOAEL	:	500 ppm
Result	:	negative
Species	:	Mouse, male and female
Exposure time	:	18 month(s)
NOAEL	:	5.000 ppm
Result	:	negative
Carcinogenicity - Assessment	:	Animal testing did not show any carcinogenic effects.

Reproductive toxicity

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

Components:

fluroxypyr-meptyl (ISO):

Effects on fertility	:	Method: OECD Test Guideline 416 Result: negative
Effects on foetal development	:	Method: OECD Test Guideline 414 Result: negative

methyl decanoate:

Effects on fertility	:	Test Type: reproductive and developmental toxicity study Species: Rat, male and female Application Route: Oral Method: OECD Test Guideline 422

Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

thifensulfuron-methyl (ISO):

Reproductive toxicity - Assessment : Did not show teratogenic effects in animal experiments.

metsulfuron-methyl (ISO):

Effects on fertility : Test Type: Two-generation study
Species: Rat, male and female
Application Route: Oral
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit, female
Application Route: Ingestion
Symptoms: Maternal effects
Result: negative

Test Type: Embryo-foetal development
Species: Rat, female
Application Route: Ingestion
Symptoms: Maternal effects
Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT - single exposure

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

STOT - repeated exposure

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

Repeated dose toxicity

Components:

fluroxypyr-meptyl (ISO):

Species : Rat
NOAEL : 80 mg/kg
Exposure time : 90 d
Method : OECD Test Guideline 408

Target Organs	:	Kidney

methyl decanoate:

Species	:	Rat, male and female
NOAEL	:	1.000 mg/kg
Application Route	:	Oral
Exposure time	:	14 - 45 d
Method	:	OECD Test Guideline 422
Remarks	:	Based on data from similar materials

thifensulfuron-methyl (ISO):

Species	:	Rat
LOAEL	:	ca.200 mg/kg
Exposure time	:	90 d
Target Organs	:	No specific target organs noted
Symptoms	:	Reduced body weight

metsulfuron-methyl (ISO):

Species	:	Rat, male and female
NOEL	:	1000 ppm
Application Route	:	Oral - feed
Exposure time	:	90 days
Symptoms	:	Reduced body weight

Aspiration toxicity

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

Product:

No aspiration toxicity classification

Components:

methyl decanoate:

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Neurological effects

Components:

metsulfuron-methyl (ISO):
No neurotoxicity observed in animal studies

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 1,2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 1,2 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 10 mg/l Exposure time: 72 h ErC50 (Lemna gibba (duckweed)): 0,033 mg/l Exposure time: 7 d
Toxicity to soil dwelling organisms	:	LC50: > 108 mg/kg Exposure time: 28 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 214 µg/bee Exposure time: 48 h End point: Acute oral toxicity Species: Apis mellifera (bees) LD50: > 200 µg/bee Exposure time: 48 h End point: Acute contact toxicity Species: Apis mellifera (bees)

Ecotoxicology Assessment

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

Components:

fluroxypyr-meptyl (ISO):

Toxicity to fish	:	LC50 (Lepomis macrochirus (Bluegill sunfish)): > 0,63 mg/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,183 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 1,41 mg/l Exposure time: 72 h LC50 (Scenedesmus subspicatus): > 0,5 mg/l Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,2 mg/l Exposure time: 21 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,06 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	1
Toxicity to soil dwelling organisms	:	LC50: > 1.000 mg/kg Exposure time: 14 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 2.000 mg/kg Species: Anas platyrhynchos (Mallard duck) LD50: > 2.000 mg/kg Species: Colinus virginianus (Bobwhite quail) LD50: > 100 µg/bee Exposure time: 48 h End point: Acute oral toxicity Species: Apis mellifera (bees) LD50: > 100 µg/bee Exposure time: 48 h End point: Acute contact toxicity Species: Apis mellifera (bees)

methyl decanoate:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): 170 mg/l Exposure time: 48 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1,1 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,055 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: No toxicity at the limit of solubility
Toxicity to microorganisms	:	NOEC (activated sludge): >= 1.000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Crustaceans): 1.614 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Skeletonema costatum (marine diatom)): > 10.000 mg/l Exposure time: 72 h

thifensulfuron-methyl (ISO):

Toxicity to fish	:	LC50 (Salmo gairdneri): 100 mg/l Exposure time: 96 h LC50 (Oncorhynchus mykiss (rainbow trout)): > 250 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 120 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	IC50 (green algae): 0,0159 mg/l Exposure time: 72 h ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1,4 mg/l Exposure time: 72 h EC50 (Lemna minor (duckweed)): 1,3 µg/l
M-Factor (Acute aquatic tox-	:	100

icity)

Toxicity to fish (Chronic toxicity)	:	NOEC: 250 mg/l Exposure time: 28 d Species: Salmo gairdneri NOEC: 10,6 mg/l Exposure time: 21 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 100 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	100
Toxicity to soil dwelling organisms	:	LC50: > 2.000 mg/kg Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 2.510 mg/kg Species: Anas platyrhynchos (Mallard duck) LD50: > 5.620 ppm Species: Anas platyrhynchos (Mallard duck) Remarks: Dietary LD50: > 5.620 ppm Species: Colinus virginianus (Bobwhite quail) LD50: > 7.1 µg/bee End point: Acute oral toxicity Species: Apis mellifera (bees) LD50: > 100 µg/bee End point: Acute contact toxicity Species: Apis mellifera (bees)

Ecotoxicology Assessment

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

metsulfuron-methyl (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 113 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 LC50 (Poecilia reticulata (guppy)): > 100 mg/l Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 120 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Lemna minor (duckweed)): 0,16 µg/l Exposure time: 14 d ErC50 (Anabaena flos-aquae (cyanobacterium)): 0,1134 mg/l Exposure time: 72 h IC50 (Selenastrum capricornutum (green algae)): 0,045 mg/l Exposure time: 72 h ErC50 (Myriophyllum spicatum): 0,23 µg/l ErC50 (Lemna gibba (gibbous duckweed)): 0,57 µg/l
M-Factor (Acute aquatic toxicity)	:	1.000
Toxicity to fish (Chronic toxicity)	:	NOEC: 68 mg/l Exposure time: 21 d Species: Oncorhynchus mykiss (rainbow trout)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,5 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
M-Factor (Chronic aquatic toxicity)	:	1.000
Toxicity to soil dwelling organisms	:	NOEC: 6 mg/kg Exposure time: 56 d Species: Eisenia fetida (earthworms)
Toxicity to terrestrial organisms	:	LD50: > 100 µg/bee End point: Acute contact toxicity Species: Apis mellifera (bees) LD50: > 91,72 µg/bee End point: Acute oral toxicity Species: Apis mellifera (bees) LD50: > 2.510 mg/kg Species: Anas platyrhynchos (Mallard duck)

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: No data is available on the product itself.

Components:

fluroxypyr-meptyl (ISO):

Biodegradability : Remarks: Not readily biodegradable.

methyl decanoate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 78 %
Exposure time: 28 d

12-Hydroxystearic acid, oligomers, reaction products with stearic acid:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 57 %
Exposure time: 28 d
Method: OECD Test Guideline 301C

thifensulfuron-methyl (ISO):

Biodegradability : Remarks: Not readily biodegradable.
Primary degradation half-lives vary with circumstances, from a few days to a few weeks in aerobic water and soil.

metsulfuron-methyl (ISO):

Biodegradability : Result: Not readily biodegradable.
Remarks: Primary degradation half-lives vary with circumstances, from a few weeks to a few months in aerobic soil and water.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data is available on the product itself.

Components:

fluroxypyr-meptyl (ISO):

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 4,5 (25 °C)

methyl decanoate:

Partition coefficient: n-octanol/water : log Pow: 4,42

thifensulfuron-methyl (ISO):

Bioaccumulation	:	Bioconcentration factor (BCF): 1 Remarks: Does not bioaccumulate.

metsulfuron-methyl (ISO):

Bioaccumulation	:	Species: Lepomis macrochirus (Bluegill sunfish) Exposure time: 28 d Bioconcentration factor (BCF): < 1 Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water	:	log Pow: -1,7 (25 °C) pH: 7

12.4 Mobility in soil

Product:

Distribution among environmental compartments	:	Remarks: No data is available on the product itself.

Components:

fluroxypyr-meptyl (ISO):

Distribution among environmental compartments	:	Remarks: The product is not expected to be mobile in soils.

thifensulfuron-methyl (ISO):

Distribution among environmental compartments	:	Koc: 28,3, log Koc: 1,45 Remarks: Highly mobile in soils
Stability in soil	:	

12.5 Results of PBT and vPvB assessment

Product:

Assessment	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Do not re-use empty containers.
Packaging that is not properly emptied must be disposed of as the unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 3082

ADR : UN 3082

RID : UN 3082

IMDG : UN 3082

IATA : UN 3082

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr-meptyl, Thifensulfuron-methyl, Metsulfuron-methyl)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr-meptyl, Thifensulfuron-methyl, Metsulfuron-methyl)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr-meptyl, Thifensulfuron-methyl, Metsulfuron-

methyl)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Fluroxypyr-meptyl, Thifensulfuron-methyl, Metsulfuron-methyl)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Fluroxypyr-meptyl, Thifensulfuron-methyl, Metsulfuron-methyl)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	9	
ADR	9	
RID	9	
IMDG	9	
IATA	9	

14.4 Packing group

ADN

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

ADR

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9
Tunnel restriction code	:	(-)

RID

Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

IATA (Passenger)
Environmentally hazardous : yes

IATA (Cargo)
Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Conditions of restriction for the following entries should be considered: Number on list 3
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import	:	Not applicable

of dangerous chemicals

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	E1	ENVIRONMENTAL HAZARDS

Other regulations:
Young people under the age of 18 are not allowed to use or be exposed to the product professionally. Young people above the age of 15 are, however, except from this rule if the product is a necessary part of their education.

The components of this product are reported in the following inventories:

TCSI	:	Not in compliance with the inventory
TSCA	:	Product contains substance(s) not listed on TSCA inventory.
AIIC	:	Not in compliance with the inventory
DSL	:	This product contains the following components that are not on the Canadian DSL nor NDSL. MEM TECHNICAL (MANATI) METHYL 3-{[(4-METHOXY-6-METHYL-1,3,5-TRIAZIN-2-YL)CARBAMOYL]SULFAMOYL}THIOPHENE-2-CARBOXYLATE fluroxypyr-meptyl (ISO) Benzenesulfonic acid, 4-C10-13-sec-alkyl derivs., compds. with 2-propanamine
ENCS	:	Not in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	Not in compliance with the inventory
PICCS	:	Not in compliance with the inventory
IECSC	:	Not in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	Not in compliance with the inventory

15.2 Chemical safety assessment

A chemical safety assessment is not required for this product (mixture).

SECTION 16: Other information

Full text of H-Statements

H315	:	Causes skin irritation.
H319	:	Causes serious eye irritation.
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.

Full text of other abbreviations

Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Eye Irrit.	:	Eye irritation
Skin Irrit.	:	Skin irritation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Fluroxypyr-meptyl 150 gL + Thifensulfuron-methyl 30 gL + Metsulfuron-methyl 3 gL OD

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	28.11.2023	50000101	Date of first issue: 28.11.2023

Further information

Classification of the mixture:		**Classification procedure:**
Skin Sens. 1	H317	Based on product data or assessment
Aquatic Acute 1	H400	Based on product data or assessment
Aquatic Chronic 1	H410	Based on product data or assessment

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Prepared by

FMC Corporation

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