According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



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

1.1 Product identifier

Product name RATIO (R) 50SX

Other means of identification

Product code 50000040

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

Use of the Sub- Herbicide

stance/Mixture

Recommended restrictions

on use

Use as recommended by the label.

1.3 Details of the supplier of the safety data sheet

<u>Supplier Address</u> FMC Agricultural Solutions A/S

Thyborønvej 78 DK-7673 Denmark

Telephone: +45 9690 9690 Telefax: +45 9690 9691

E-mail address: SDS-Info@fmc.com (E-Mail General Infor-

mation)

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call:

Finland: 358-942419014 (CHEMTREC)

Medical emergency: Finland: 0800 147 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Specific target organ toxicity - repeated H373

exposure, Category 2

H373: May cause damage to organs through pro-

longed or repeated exposure.

Short-term (acute) aquatic hazard, Cate-

H400: Very toxic to aquatic life.

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gory 1

Long-term (chronic) aquatic hazard, Cat-

egory 1

H410: Very toxic to aquatic life with long lasting

effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms

¥2>

Signal word : Warning

Hazard statements : H373 May cause damage to organs through prolonged or

repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard

Statements

EUH401

To avoid risks to human health and the

environment, comply with the instructions for use.

Precautionary statements :

P102 Keep out of reach of children.

Prevention:

P260 Do not breathe gas/fumes/vapour/spray.

Response:

P314 Get medical advice/ attention if you feel unwell.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container in accordance with local

regulation.

Additional Labelling

EUH208 Contains Tribenuron-methyl. May produce an allergic reaction.

2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

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.

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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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
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	>= 30 - < 50
Tribenuron-methyl	101200-48-0 401-190-1 607-177-00-9	Skin Sens. 1; H317 STOT RE 2; H373 (Thyroid, Nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 100	>= 10 - < 20
sodium carbonate	497-19-8 207-838-8 011-005-00-2	Eye Irrit. 2; H319	>= 10 - < 20
Phosphoric acid, trisodium salt, dodecahydrate	10101-89-0	Acute Tox. 3; H331 Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H335 (Respiratory system) Acute toxicity estimate Acute inhalation toxicity (dust/mist):	>= 1 - < 10

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0,830083 mg/l

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Remove victim from exposure and then have him lie down in

the recovery position.

Call a physician immediately.

Show this safety data sheet to the doctor in attendance.

Keep at rest.

Keep warm and in a quiet place. Do not leave the victim unattended.

If inhaled : If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

In case of skin contact : If on clothes, remove clothes.

In case of skin contact

Wash off immediately with soap and plenty of water.

If skin irritation persists, call a physician.

In case of eye contact : Rinse immediately with plenty of water for at least 15 minutes.

Remove contact lenses.

If eye irritation persists, consult a specialist.

If swallowed : Do not induce vomiting without medical advice.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

4.2 Most important symptoms and effects, both acute and delayed

Risks : May cause damage to organs through prolonged or repeated

exposure.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray, fog, or regular foam.

Unsuitable extinguishing

media

: High volume water jet

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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 prod: :

Thermal decomposition can lead to release of irritating gases

and vapours. Carbon oxides

Nitrogen oxides (NOx)

Sulphur oxides

5.3 Advice for firefighters

Special protective equipment:

for firefighters

Wear self-contained breathing apparatus for firefighting if nec-

essary.

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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment.

Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

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

Keep in suitable, closed containers for disposal. Methods for cleaning up

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

Avoid formation of respirable particles. Advice on safe handling

Do not breathe vapours/dust.

For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

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plication area.

Provide sufficient air exchange and/or exhaust in work rooms. Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against

fire and explosion

Avoid dust formation. Provide appropriate exhaust ventilation

at places where dust is formed.

Hygiene measures : When using do not eat or drink. When using do not smoke.

Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands and face before breaks and immediately after handling the prod-

uct.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological

safety standards.

Further information on stor-

age 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
sodium carbonate	Workers	Inhalation	Long-term local ef- fects	10 mg/m3
Phosphoric acid, trisodium salt, dodec- ahydrate	Workers	Inhalation	Long-term systemic effects	4,07 mg/m3

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

Substance name	Environmental Compartment	Value
Phosphoric acid, trisodium salt,	Sewage treatment plant	50 mg/l
dodecahydrate		

8.2 Exposure controls

Personal protective equipment

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Eye 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 : Dust impervious protective suit

Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear appropriate chemical resistant clothing to prevent skin contact depending on the extent of exposure. During most normal work situations where exposure to the material cannot be avoided for a limited time span, waterproof pants and apron of chemical resistant material or coveralls of polyethylene (PE) will be sufficient. Coveralls of PE must be discarded after use if contaminated. In cases of excessive or prolonged exposure, coveralls of barrier laminate may be

required.

Impervious clothing

Respiratory protection : Use respiratory protection unless adequate local exhaust ven-

tilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Equipment should conform to EN 143

For prolonged spraying and when there is a risk of inhalation of spray mist, half mask with combination filter A1 / P3 is

used.

Filter type : Particulates type (P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : granular

Colour : light brown

Odour : slight, acidic

Odour Threshold : Not applicable

Melting point/range : Not available for this mixture.

Boiling point/boiling range : Decomposition

Flammability : Does not sustain combustion.

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Upper explosion limit / Upper

flammability limit

Not available for this mixture.

Lower explosion limit / Lower

flammability limit

Not available for this mixture.

Flash point : Not applicable

Auto-ignition temperature : 385 °C

Decomposition temperature : Not available for this mixture.

pH : 9,1 (20 °C)

Concentration: 10 g/l

Viscosity

Viscosity, kinematic : Not applicable

Solubility(ies)

Water solubility : soluble

Partition coefficient: n-

octanol/water

Not available for this mixture.

Vapour pressure : Not available for this mixture.

Bulk density : 692 kg/m3packed

Relative vapour density : Not available for this mixture.

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The product is not oxidizing.

Evaporation rate : Not applicable

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.

Dust may form explosive mixture in air.

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10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Strong acids

Strong bases

Strong oxidizing agents

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

Not classified based on available information.

Product:

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

Method: Fixed Dose Method

Remarks: (Data on the product itself)

Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

Method: OECD Test Guideline 402 Remarks: (Data on the product itself) Information source: Internal study report

LD50 (Rat): > 5.000 mg/kg

Components:

thifensulfuron-methyl (ISO):

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

Acute inhalation toxicity : LC50 (Rat): > 7,9 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

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

Tribenuron-methyl:

Acute oral toxicity : LD50: > 5.000 mg/kg

Method: OECD Test Guideline 425

Acute inhalation toxicity : LC50 (Rat): > 5,14 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

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

Method: OECD Test Guideline 402

sodium carbonate:

Acute oral toxicity : LD50 (Rat, male and female): 2.800 mg/kg

Acute inhalation toxicity : LC50 (Rat, male): 2,3 mg/l

Exposure time: 2 h

Test atmosphere: dust/mist

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

Target Organs: Skin Symptoms: Erythema

Phosphoric acid, trisodium salt, dodecahydrate:

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

Method: OECD Test Guideline 420

Remarks: no mortality

Acute inhalation toxicity : LC50 (Rat, male and female): > 0,83 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

Remarks: Based on data from similar materials

no mortality

Acute toxicity estimate: 0,830083 mg/l

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : LD50 (Rat, male and female): > 2.000 mg/kg

Method: OECD Test Guideline 402

Remarks: Based on data from similar materials

no mortality

Skin corrosion/irritation

Not classified based on available information.

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Product:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Remarks : (Data on the product itself)

Components:

Tribenuron-methyl:

Species : Rabbit

Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Remarks : May cause mild irritation.

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

sodium carbonate:

Species : Rabbit Exposure time : 4 h

Method : OECD Test Guideline 404

Result : No skin irritation

Phosphoric acid, trisodium salt, dodecahydrate:

Species : Rabbit Result : Skin irritation

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species : Rabbit

Method : OECD Test Guideline 405

Result : No eye irritation

Remarks : (Data on the product itself)

Components:

Tribenuron-methyl:

Species : Rabbit

Assessment : No eye irritation

Method : OECD Test Guideline 405 Remarks : May cause mild irritation.

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

sodium carbonate:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

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Phosphoric acid, trisodium salt, dodecahydrate:

Species : Rabbit

Method : EPA OTS 798.4500

Result : Irritation to eyes, reversing within 21 days

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Test Type : Maximisation Test Species : Guinea pig

Assessment : Not a skin sensitizer.

Method : US EPA Test Guideline OPPTS 870.2600

Result : Animal test did not cause sensitization by skin contact.

Remarks : (Data on the product itself)

Components:

thifensulfuron-methyl (ISO):

Species : Guinea pig

Result : Does not cause skin sensitisation.

Tribenuron-methyl:

Test Type : Maximisation Test Species : Guinea pig

Assessment : May cause sensitisation by skin contact.

Method : OECD Test Guideline 406 Result : Causes skin sensitization.

Phosphoric acid, trisodium salt, dodecahydrate:

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Method : OECD Test Guideline 429

Result : Does not cause skin sensitisation.
Remarks : Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

thifensulfuron-methyl (ISO):

Germ cell mutagenicity- As- : Weight of evidence does not support classification as a germ

sessment cell mutagen.

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Tribenuron-methyl:

Germ cell mutagenicity- As-

sessment

Did not show mutagenic effects in animal experiments.

sodium carbonate:

Genotoxicity in vitro : Test Type: reverse mutation assay

Method: Mutagenicity (Salmonella typhimurium - reverse mu-

tation assay) Result: negative

Remarks: Based on data from similar materials

Germ cell mutagenicity- As-

sessment

Weight of evidence does not support classification as a germ

cell mutagen.

Phosphoric acid, trisodium salt, dodecahydrate:

Genotoxicity in vitro : Test Type: gene mutation test

Method: OECD Test Guideline 490

Result: negative

Remarks: Based on data from similar materials

Test Type: Micronucleus test Method: OECD Test Guideline 487

Result: negative

Germ cell mutagenicity- As-

sessment

: In vitro tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Components:

thifensulfuron-methyl (ISO):

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Tribenuron-methyl:

Remarks : No significant adverse effects were reported

Carcinogenicity - Assess-

ment

Did not show carcinogenic effects in animal experiments.

Reproductive toxicity

Not classified based on available information.

Components:

Tribenuron-methyl:

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Reproductive toxicity - As-

sessment

No toxicity to reproduction

Animal testing did not show any effects on foetal development., Did not show teratogenic effects in animal experiments.

sodium carbonate:

Effects on foetal develop-

ment

Species: Rat

Application Route: Oral

Dose: 2.45, 11.4, 52.9, 245 milligram per kilogram

Duration of Single Treatment: 6 - 15 d

General Toxicity Maternal: NOAEL: > 245 mg/kg body weight

Teratogenicity: NOAEL: > 245 mg/kg body weight

Result: negative

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

Phosphoric acid, trisodium salt, dodecahydrate:

Effects on fertility : Species: Rat, male and female

Application Route: Oral Dose: 1000 mg/kgbw

General Toxicity - Parent: NOAEL: 1.000 mg/kg bw/day General Toxicity F1: NOAEL: 1.000 mg/kg bw/day

Method: OECD Test Guideline 422

Result: negative

Remarks: Based on data from similar materials

Effects on foetal develop-

ment

Test Type: reproductive and developmental toxicity study

Species: Rat

Application Route: Oral

Dose: 4.1,19,88.3,410mg/kgbw/day Duration of Single Treatment: 20 d

General Toxicity Maternal: NOAEL: > 410 mg/kg bw/day Embryo-foetal toxicity: NOAEL: > 410 mg/kg bw/day

Result: negative

Remarks: Based on data from similar materials

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

STOT - single exposure

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

Components:

Tribenuron-methyl:

Assessment : The substance or mixture is not classified as specific target

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organ toxicant, single exposure.

Phosphoric acid, trisodium salt, dodecahydrate:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Prolonged or repeated exposure may cause target organ effects.

Product:

Assessment : May cause damage to organs through prolonged or repeated

exposure.

Components:

Tribenuron-methyl:

Target Organs : Thyroid, Nervous system

Assessment : May cause damage to organs through prolonged or repeated

exposure.

sodium carbonate:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, repeated exposure.

Repeated dose toxicity

Components:

Tribenuron-methyl:

Species : Rabbit LOAEL : 80 mg/kg

Target Organs : Thyroid, Nervous system

Assessment : The substance or mixture is classified as specific target organ

toxicant, repeated exposure, category 2.

Remarks : Increased mortality or reduced survival

sodium carbonate:

Species : , male and female NOAEL : > 0,01 mg/kg

Application Route : inhalation (dust/mist/fume)

Test atmosphere : dust/mist

Phosphoric acid, trisodium salt, dodecahydrate:

Species : Dog, female

NOAEL : 492.77 mg/kg bw/day LOAEL : 1433.56 mg/kg bw/day

Application Route : Oral - feed Exposure time : 90 d

Dose : 129.31,492.77,1433.56mg/kgbw/d

Target Organs : Kidney

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Remarks : Based on data from similar materials

Species : Dog, male

NOAEL : 322.88 mg/kg bw/day LOAEL : 1107.12 mg/kg bw/day

Application Route : Oral - feed Exposure time : 90 d

Dose : 94.23,322.88,1107.12mg/kgbw/da

Target Organs : Kidney

Remarks : Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Product:

The mixture does not have properties associated with aspiration hazard potential.

Components:

Tribenuron-methyl:

The substance does not have properties associated with aspiration hazard potential.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components consid-

ered 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.

Further information

Product:

Remarks : No data available

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 130 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203 Remarks: (Data on the product itself)

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 130 mg/l

Exposure time: 48 h

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> Method: OECD Test Guideline 202 Remarks: (Data on the product itself)

Toxicity to algae/aquatic

plants

EC50 (Lemna gibba (duckweed)): 0,0029 mg/l

End point: Frond Exposure time: 14 d

Method: US EPA Test Guideline OPP 122-2 & 123-2

Remarks: (Data on the product itself)
Information source: Internal study report

ErC50 (Pseudokirchneriella subcapitata (microalgae)): > 0,16

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201 Remarks: (Data on the product itself) Information source: Internal study report

Toxicity to soil dwelling or-

ganisms

LC50: > 1.000 mg/kg Exposure time: 14 d

Species: Eisenia fetida (earthworms)

Method: OECD Test Guideline 207

GLP:yes

Remarks: Information source: Internal study report

Toxicity to terrestrial organ-

isms

LD50: > 112.2 μg/bee

Exposure time: 48 h

End point: Acute oral toxicity Species: Apis mellifera (bees) Method: OECD Test Guideline 213

GLP:yes

Remarks: Information source: Internal study report

LD50: > 100 µg/bee Exposure time: 48 h

End point: Acute contact toxicity Species: Apis mellifera (bees) Method: OECD Test Guideline 214

GLP:yes

Remarks: Information source: Internal study report

Components:

thifensulfuron-methyl (ISO):

Toxicity to fish : LC50 (Salmo gairdneri): 100 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 470 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

IC50 (green algae): 0,0159 mg/l

Exposure time: 72 h

EC50 (Lemna minor (duckweed)): 1,3 μg/l

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M-Factor (Acute aquatic tox-

icity)

100

Toxicity to fish (Chronic tox-

icity)

NOEC: 250 mg/l Exposure time: 28 d

Species: Salmo gairdneri

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC: 100 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

100

Toxicity to soil dwelling or-

ganisms

LC50: > 2.000 mg/kg

Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organ-

isms

LD50: > 5.620 ppm

Species: Colinus virginianus (Bobwhite quail)

LD50: > 2.510 mg/kg

Species: Anas platyrhynchos (Mallard duck)

LD50: > 7,1 μ g/bee

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.

Tribenuron-methyl:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 738 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Crustaceans): > 320 mg/l

Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): > 894 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

0,068 mg/l

Exposure time: 72 h

ErC50 (Lemna gibba (duckweed)): 0,0047 mg/l

Exposure time: 7 d

NOEC (Lemna gibba (duckweed)): 0,001 mg/l

Exposure time: 7 d

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



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M-Factor (Acute aquatic tox-

icity)

100

Toxicity to fish (Chronic tox-

icity)

NOEC: 114 mg/l Exposure time: 21 d

Species: Cyprinodon variegatus (sheepshead minnow)

Method: OECD Test Guideline 211

NOEC: 560 mg/l Exposure time: 21 d

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC: 41 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic

toxicity)

100

Toxicity to soil dwelling or-

ganisms

NOEC: 3,2 mg/kg Exposure time: 56 d

Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organ-

isms

LD50: > 2.250 mg/kg

Species: Colinus virginianus (Bobwhite quail)

LD50: > 5.620 ppm

Species: Colinus virginianus (Bobwhite quail)

Remarks: Dietary

LD50: > 5.620 ppm

Species: Anas platyrhynchos (Mallard duck)

Remarks: Dietary

LD50: > 98.4 µg/bee Exposure time: 48 h

End point: Acute contact toxicity Species: Apis mellifera (bees)

LD50: > 9.1 µg/bee Exposure time: 48 h

End point: Acute oral 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.

sodium carbonate:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 300 mg/l

Exposure time: 96 h

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Test Type: static test

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Ceriodaphnia (water flea)): 200 mg/l

Exposure time: 48 h Test Type: semi-static test

Phosphoric acid, trisodium salt, dodecahydrate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 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)): > 100 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h Method: EU Method C3

Remarks: Based on data from similar materials

NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l

Exposure time: 72 h Method: EU Method C3

Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): 1.000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

NOEC (activated sludge): 1.000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

Toxicity to soil dwelling or-

ganisms

LC50: > 3.500 mg/kg Exposure time: 14 d

Species: Eisenia fetida (earthworms) Method: OECD Test Guideline 207

Remarks: Based on data from similar materials

12.2 Persistence and degradability

Product:

Biodegradability : Result: Not readily biodegradable.

Remarks: Estimation based on data obtained on active ingre-

dient.

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Components:

Tribenuron-methyl:

Biodegradability : Result: Not readily biodegradable.

Remarks: The product/substance is not persistent in the envi-

ronment.

Primary degradation half-lives vary with circumstances, from a

few days to a few weeks in aerobic water and soil.

Metabolites are considered as persistent.

According to the results of tests of biodegradability this prod-

uct is not readily biodegradable.

sodium carbonate:

Biodegradability : Remarks: The methods for determining biodegradability are

not applicable to inorganic substances.

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Does not bioaccumulate.

Estimation based on data obtained on active ingredient.

Components:

thifensulfuron-methyl (ISO):

Bioaccumulation : Remarks: Does not bioaccumulate.

Tribenuron-methyl:

Bioaccumulation : Bioconcentration factor (BCF): < 1

Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

log Pow: -0,38

sodium carbonate:

Bioaccumulation : Remarks: Does not bioaccumulate.

12.4 Mobility in soil

Product:

Distribution among environ-

mental compartments

Remarks: Under normal conditions the active ingredient/s is/are of high to intermediate mobility in soil. There is a poten-

tial for leaching to groundwater.

Components:

thifensulfuron-methyl (ISO):

Distribution among environ:

mental compartments

Remarks: Mobile in soils

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Tribenuron-methyl:

Distribution among environmental compartments Remarks: Under normal conditions the active ingredient/s is/are of high to intermediate mobility in soil. There is a potential for leaching to groundwater.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This mixture contains no substance considered to be persis-

tent, bioaccumulating and toxic (PBT).. This mixture contains no substance considered to be very persistent and very bio-

accumulating (vPvB).

: 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 consid-

ered 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 infor-

mation

No other ecological effects to be specially mentioned.

See product label for additional application instructions relat-

ing to environmental precautions.

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 chemi-

cal or used container.

Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



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> Dispose of as unused product. Do not re-use empty containers.

Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADN : UN 3077
ADR : UN 3077
RID : UN 3077
IMDG : UN 3077
IATA : UN 3077

14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Thifensulfuron-methyl, Tribenuron-methyl)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Thifensulfuron-methyl, Tribenuron-methyl)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Thifensulfuron-methyl, Tribenuron-methyl)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Thifensulfuron-methyl, Tribenuron-methyl)

IATA : Environmentally hazardous substance, solid, n.o.s.

(Thifensulfuron-methyl, Tribenuron-methyl)

14.3 Transport hazard class(es)

 ADN
 : 9

 ADR
 : 9

 RID
 : 9

 IMDG
 : 9

 IATA
 : 9

14.4 Packing group

ADN

Packing group : III
Classification Code : M7
Hazard Identification Number : 90
Labels : 9

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ADR

Packing group Ш Classification Code M7 Hazard Identification Number : 90 Labels 9 Tunnel restriction code (-)

RID

Packing group Ш Classification Code M7 Hazard Identification Number : 90 Labels 9

IMDG

Packing group Ш Labels 9

EmS Code F-A, S-F

IATA (Cargo)

Packing instruction (cargo 956

aircraft)

Packing instruction (LQ) Y956 Packing group Ш

Labels Miscellaneous

IATA (Passenger)

Packing instruction (passen-956

ger aircraft)

Packing instruction (LQ) Y956 Packing group

Labels Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous yes

Environmentally hazardous yes

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.

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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)

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

of dangerous chemicals

REACH - List of substances subject to authorisation

(Annex XIV)

ENVIRONMENTAL HAZARDS

Not applicable

Not applicable

Not applicable

Not applicable

Not applicable

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.

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

E1

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.

ENCS Not in compliance with the inventory

According to Commission Regulation (EU) 2020/878 of amending Regulation (EC) No 1907/2006



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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

No Chemical Safety Assessment has been carried out for this mixture.

SECTION 16: Other information

Full text of H-Statements

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.

H331 : Toxic if inhaled.

H335 : May cause respiratory irritation.

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.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard

Eye Irrit. : Eye irritation
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure STOT SE : Specific target organ toxicity - single exposure

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

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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

Further information

Other information : see user defined free text

Classification of the mixture: Classification procedure:

STOT RE 2 H373 Based on product data or assessment Aquatic Acute 1 H400 Based on product data or assessment

Aquatic Chronic 1 H410 Calculation method

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