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

1.1 Product identifier

Product name ALCANCE® SYNC TEC

Other means of identification

Product code 50000812

Unique Formula Identifier

(UFI)

MR50-03WQ-9N43-CF2K

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.

For professional users only.

1.3 Manufacturer or supplier's details

Supplier Address FMC Agro ITALIA S.r.I

Via Fratelli Bronzetti 32/28

24124 Bergamo

Italy

Telephone: (+39) 035 199 04 468 E-mail address: info.it@fmc.com

SDS-Info@fmc.com.

1.4 Emergency telephone number

For leak, fire, spill or accident emergencies, call: 1703 / 741-5970 (CHEMTREC - International)

1 202 / 483-7616 (CHEMTREC - Alternate International)

Medical emergency:

Malta: 112

All other countries: +1 651 / 632-6793 (Collect)

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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child.

Short-term (acute) aquatic hazard, Cate-

gory 1

H400: Very toxic to aquatic life.

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





Signal word : Warning

Hazard statements : H361d Suspected of damaging the unborn child.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : P102 Keep out of reach of children.

Prevention:

P201 Obtain special instructions before use.

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container as hazardous waste in

accordance with local regulations.

Hazardous components which must be listed on the label:

pendimethalin (ISO)

Additional Labelling

EUH401 To avoid risks to human health and the environment, comply

with the instructions for use.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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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

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
pendimethalin (ISO)	40487-42-1 254-938-2 609-042-00-X	Repr. 2; H361d Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 100 M-Factor (Chronic aquatic toxicity): 10	>= 25 - < 30
calcium chloride	10043-52-4 233-140-8 017-013-00-2	Eye Irrit. 2; H319	>= 1 - < 10
sodium nitrate	7631-99-4 231-554-3	Ox. Sol. 2; H272 Acute Tox. 4; H302 Eye Irrit. 2; H319 Acute toxicity estimate Acute oral toxicity: 2,000 mg/kg	>= 1 - < 10
clomazone (ISO)	81777-89-1	Acute Tox. 4; H302	>= 2.5 - < 10

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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		613-340-00-5	Acute Tox. 4; H332 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
			Acute toxicity estimate Acute oral toxicity: 768 mg/kg Acute inhalation toxicity (dust/mist): 4.85 mg/l	

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 ambu-

lance.

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

If on skin, rinse well with water.

Wash off with soap and plenty of water.

Get medical attention 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 : Do not induce vomiting without medical advice.

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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. Take victim immediately to hospital.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Suspected of damaging the unborn child.

4.3 Indication of any immediate medical attention and special treatment needed

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

Treat symptomatically.

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 prod: :

ucts

Fire may produce irritating, corrosive and/or toxic gases.

Nitrogen oxides (NOx) Hydrogen cyanide Carbon oxides Sodium oxides

Chlorinated compounds Halogenated compounds

Hydrogen chloride 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.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.

Use personal protective equipment. If it can be safely done, stop the leak.

Do not touch or walk through the spilled material. 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 : Soak up with inert absorbent material (e.g. sand, silica gel,

acid binder, universal binder, sawdust).

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 contact with skin and eyes.

For personal protection see section 8.

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

plication area.

Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against :

fire and explosion

Normal measures for preventive fire protection.

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

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 installa-

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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tions / working materials must comply with the technological

safety standards.

Further information on stor-

age conditions

The product is stable under normal conditions of warehouse storage (0 - 40°C). Protect from frost and extreme heat. 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. A warning sign reading "POISON" is recommended. 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.

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
calcium chloride	Consumers	Inhalation	Long-term local ef- fects	2.5 mg/m3

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 per-

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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sonal 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 in-

structions.

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 instruc-

tions for use.

not determined

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state liquid Form viscous Colour dark yellow Odour slight

Odour Threshold not determined Melting point/freezing point not determined

Initial boiling point and boiling

range not determined not determined

Upper explosion limit / Upper

flammability limit Lower explosion limit / Lower

flammability limit

> 100 °C Flash point

Auto-ignition temperature No data available Decomposition temperature not determined pН 6.2 (21 °C)

Concentration: 1 %

Viscosity

Viscosity, dynamic 129 - 397 mPa,s (20 °C)

Viscosity, kinematic No data available

Solubility(ies)

Water solubility dispersible

Partition coefficient: n-Not available for this mixture.

octanol/water

Not available for this mixture. Vapour pressure

Relative density 1.13 (20 °C) Relative vapour density not determined

Particle characteristics

Particle size Not applicable Particle Size Distribution Not applicable Not applicable Shape

9.2 Other information

Explosives Not explosive Oxidizing properties Non-oxidizing

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Flammability (liquids) : Not applicable

Self-ignition : 267 °C

Evaporation rate : not determined

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 va-

pours.

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

Not classified based on available information.

Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.48 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

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Components:

pendimethalin (ISO):

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Method: US EPA Test Guideline OPP 81-1

Acute inhalation toxicity : LC50 (Rat): > 2.26 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: US EPA Test Guideline OPP 81-3

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: US EPA Test Guideline OPP 81-2

calcium chloride:

Acute oral toxicity : LD50 (Rat, male): 2,120 mg/kg

Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rabbit, male and female): > 5,000 mg/kg

sodium nitrate:

Acute oral toxicity : LD50 (Rat, male and female): 3,430 mg/kg

Method: OECD Test Guideline 401

LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 425

Acute inhalation toxicity : LD50 (Rat): > 0.527 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 402

clomazone (ISO):

Acute oral toxicity : Acute toxicity estimate: 768 mg/kg

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

LD50 (Rat, female): 768 mg/kg Method: OECD Test Guideline 425

LD50 (Rat, female): 300 - 2,000 mg/kg Method: OECD Test Guideline 423

Target Organs: Liver

Assessment: The component/mixture is moderately toxic after

single ingestion.

LD50 (Rat, female): 1,564 mg/kg

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Symptoms: ataxia

Acute inhalation toxicity : Acute toxicity estimate: 4.85 mg/l

Test atmosphere: dust/mist

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

LC50 (Rat): > 5.02 mg/l Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 403

LC50 (Rat, female): 4.23 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: EPA OPP 81 - 3 Symptoms: Breathing difficulties

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg

Method: US EPA Test Guideline OPP 81-2

Assessment: The component/mixture is minimally toxic after

single contact with skin. Remarks: no mortality

Skin corrosion/irritation

Not classified based on available information.

Product:

Assessment : Not classified as irritant

Result : No skin irritation

Components:

pendimethalin (ISO):

Species : Rabbit

Assessment : Not classified as irritant

Method : US EPA Test Guideline OPP 81-5

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

calcium chloride:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

clomazone (ISO):

Species : Rabbit

Assessment : Not classified as irritant
Method : OECD Test Guideline 404
Result : slight or no skin irritation.

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Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404 Remarks : May cause mild irritation.

Minimal effects that do not meet the threshold for classifica-

tion.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Assessment : No eye irritation

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Components:

pendimethalin (ISO):

Species : Rabbit

Assessment : No eye irritation

Method : US EPA Test Guideline OPP 81-4

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

calcium chloride:

Species : Rabbit

Method : OECD Test Guideline 405

Result : Irritation to eyes, reversing within 21 days

sodium nitrate:

Species : Rabbit

Assessment : Irritating to eyes.

Method : OECD Test Guideline 405

Result : Eye irritation

clomazone (ISO):

Species : Rabbit

Assessment : Not classified as irritant
Method : OECD Test Guideline 405
Result : Slight or no eye irritation

GLP : yes

Species : Rabbit

Assessment : No eye irritation

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

Minimal effects that do not meet the threshold for classifica-

tion.

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Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Product:

Result : Did not cause sensitisation on laboratory animals.

Components:

sodium nitrate:

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Method : OECD Test Guideline 429

Result : Does not cause skin sensitisation.

clomazone (ISO):

Method : OECD Test Guideline 429
Result : Not a skin sensitizer.

Species : Guinea pig

Assessment : Not a skin sensitizer.

Method : US EPA Test Guideline OPP 81-6

Result : Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Components:

calcium chloride:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 471

Result: negative

sodium nitrate:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Genotoxicity in vivo : Test Type: unscheduled DNA synthesis assay

Species: Mouse Application Route: Oral Result: negative

clomazone (ISO):

Genotoxicity in vitro : Test Type: Ames test

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: yes

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Result: negative

Genotoxicity in vivo Test Type: Cytogenetic assay

Species: Rat

Method: OECD Test Guideline 473

Result: negative

Carcinogenicity

Not classified based on available information.

Components:

clomazone (ISO):

Species Rat, male and female

Application Route Oral Exposure time 2 Years Result negative

Species Mouse

Method **OECD Test Guideline 453**

Result negative

Reproductive toxicity

Suspected of damaging the unborn child.

Product:

Reproductive toxicity - As-

sessment

: Suspected of damaging the unborn child.

Components:

pendimethalin (ISO):

Reproductive toxicity - Assessment

Suspected of damaging the unborn child.

calcium chloride:

Effects on foetal develop-

ment

Test Type: reproductive and developmental toxicity study

Species: Rat

Application Route: Oral

Method: OECD Test Guideline 414

Remarks: No significant adverse effects were reported

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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sodium nitrate:

Effects on fertility : Test Type: reproductive and developmental toxicity study

Species: Rat

Application Route: Oral 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

Result: negative

clomazone (ISO):

Effects on fertility : Test Type: Two-generation study

Species: Rat, male and female

Application Route: Oral

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Oral Symptoms: Maternal effects

Result: negative

Test Type: Embryo-foetal development

Species: Rabbit Application Route: Oral Symptoms: Maternal effects

Result: negative

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

clomazone (ISO):

Species : Rat, male and female

NOEL : 1000 ppm Application Route : Oral Exposure time : 90 days

Symptoms : increased liver weight

Species : Rat LOAEL : 400 mg/kg Exposure time : 90 d

Method : OECD Test Guideline 408

Symptoms : Liver effects

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

Components:

clomazone (ISO):

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.

Components:

clomazone (ISO):

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

Components:

clomazone (ISO):

Remarks : When fed to animals, clomazone caused decreased activity,

tearing eyes, bleeding from the nose and incoordination.

SECTION 12: Ecological information

12.1 Toxicity

Product:

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 17.6

mg/

Exposure time: 72 h

ErC50 (Navicula pelliculosa (Diatom)): 1.63 mg/l

Exposure time: 72 h

NOEC (Lemna gibba (duckweed)): 0.477 mg/l

Exposure time: 7 d

ErC50 (Lemna gibba (duckweed)): 8.7 mg/l

Exposure time: 7 d

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

Components:

pendimethalin (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.14 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.28 mg/l

Exposure time: 48 h

M-Factor (Acute aquatic tox- :

icity)

100

M-Factor (Chronic aquatic

toxicity)

10

Toxicity to soil dwelling or-

ganisms

EC50:

>1000 parts per million Exposure time: 14 d

Species: worms

Toxicity to terrestrial organ-

isms

LD50: 1,421 mg/kg

Species: Anas platyrhynchos (Mallard duck)

LD50: 101.2 µg/bee

Species: Apis mellifera (bees)

calcium chloride:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4,630 mg/l

Exposure time: 96 h

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 2,400 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Chlorella vulgaris (Fresh water algae)): 2,900 mg/l

Exposure time: 72 h

EC10 (Chlorella vulgaris (Fresh water algae)): 1,000 mg/l

Exposure time: 72 h

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

EC10: 320 mg/l Exposure time: 21 d

sodium nitrate:

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)): 8,600 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

Toxicity to microorganisms : EC50 :> 1,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Toxicity to fish (Chronic tox-

icity)

NOEC: 157 mg/l

Exposure time: 32 d

Species: Pimephales promelas (fathead minnow)

clomazone (ISO):

Toxicity to fish : LC50 (Menidia beryllina (Silverside)): 6.3 mg/l

Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): > 45 mg/l

Exposure time: 96 h

LC50 (Lepomis macrochirus (Bluegill sunfish)): 34 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 40.8 mg/l

Exposure time: 48 h

EC50 (Daphnia (water flea)): 5.2 mg/l

Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 12.7 mg/l

Exposure time: 48 h Test Type: static test

EC50 (Mysidopsis bahia (opossum shrimp)): 9.8 mg/l

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Exposure time: 48 h

LC50 (Americamysis bahia (mysid shrimp)): 0.57 mg/l

Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae/aquatic

plants

EbC50 (Selenastrum capricornutum (green algae)): 2 mg/l

Exposure time: 72 h

ErC50 (Selenastrum capricornutum (green algae)): 4.1 mg/l

Exposure time: 72 h

ErC50 (Navicula pelliculosa (Freshwater diatom)): 0.136 mg/l

Exposure time: 120 h

EC50 (Lemna gibba (duckweed)): 13.9 mg/l

Exposure time: 7 d

NOEC (Navicula pelliculosa (Freshwater diatom)): 0.05 mg/l

End point: Growth rate Exposure time: 120 h

NOEC (algae): 0.05 mg/l Exposure time: 96 h

EC50 (Lemna gibba (duckweed)): 13.9 mg/l

Exposure time: 7 d

EC50 (algae): 0.136 mg/l Exposure time: 72 h

M-Factor (Acute aquatic tox-

icity)

1

Toxicity to fish (Chronic tox-

icity)

NOEC: 2.3 mg/l

Exposure time: 21 d

Species: Oncorhynchus mykiss (rainbow trout)

Test Type: flow-through test

NOEC: 2.29 mg/l Exposure time: 57 d

Species: Oncorhynchus mykiss (rainbow trout)

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC: 2.2 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

NOEC: 0.032 mg/l Exposure time: 28 d

Species: Americamysis bahia (mysid shrimp)

Test Type: flow-through test

NOEC: 1.25 mg/l

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test Type: static test

M-Factor (Chronic aquatic

toxicity)

: 1

Toxicity to soil dwelling or-

ganisms

LC50: 156 mg/kg Exposure time: 14 d

Species: Eisenia fetida (earthworms)

Toxicity to terrestrial organ-

isms

LD50: > 2,510 mg/kg

Species: Anas platyrhynchos (Mallard duck)

LC50: > 5620 ppm

Species: Anas platyrhynchos (Mallard duck)

Remarks: Dietary

LD50: > 2000

Species: Coturnix japonica (Japanese quail)

NOEC: 94 mg/kg

End point: Reproduction Test Species: Colinius virginianus

LC50: > 85.29

Species: Apis mellifera (bees)

LC50: > 100

Species: Apis mellifera (bees)

Remarks: Contact

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: Product contains minor amounts of not readily bio-

degradable components, which may not be degradable in

waste water treatment plants.

Components:

pendimethalin (ISO):

Biodegradability : Remarks: Substance/product is moderately persistent in the

environment.

Stability in water : Degradation half life (DT50): 21 d

sodium nitrate:

Biodegradability : Remarks: The methods for determining biodegradability are

not applicable to inorganic substances.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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clomazone (ISO):

Biodegradability Result: Not readily biodegradable.

Remarks: Substance/product is moderately persistent in the

environment.

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:

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

Components:

pendimethalin (ISO):

Bioaccumulation Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 5,100

Remarks: The product/substance has a potential to bioaccu-

mulate.

It is rapidly excreted.

Partition coefficient: n-

octanol/water

log Pow: 5.2

clomazone (ISO):

Bioaccumulation Bioconcentration factor (BCF): 27 - 40

Remarks: Low potential for bioaccumulation

Partition coefficient: n-

octanol/water

log Pow: 2.61 - 2.69 (20 - 21 °C)

pH: 4 - 10

Method: Regulation (EC) No. 440/2008, Annex, A.8

12.4 Mobility in soil

Product:

Distribution among environ-

mental compartments

Remarks: No data is available on the product itself.

Components:

pendimethalin (ISO):

Distribution among environmental compartments

Koc: 17491 ml/g, log Koc: 4.24

Kd: 228 ml/g

Remarks: Slightly mobile in soils

Stability in soil

clomazone (ISO):

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Distribution among environ-

mental compartments

Koc: 300 ml/g, log Koc: 2.47

Remarks: Moderately mobile in soils

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.

Components:

clomazone (ISO):

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 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.

Components:

clomazone (ISO):

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

: An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

Components:

clomazone (ISO):

Additional ecological infor-

mation

: An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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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.

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 han-

dling 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.

(Pendimethalin, Clomazone)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Pendimethalin, Clomazone)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Pendimethalin, Clomazone)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Pendimethalin, Clomazone)

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

(Pendimethalin, Clomazone)

14.3 Transport hazard class(es)

Class Subsidiary risks

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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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 : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passen- : 964

ger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Environmentally hazardous yes

IMDG

Marine pollutant yes

IATA (Passenger)

Environmentally hazardous yes

IATA (Cargo)

Environmentally hazardous ves

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 75, 3

If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

Not applicable

Regulation (EC) on substances that deplete the ozone

laver

Not applicable

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

tants (recast)

Not applicable

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

of dangerous chemicals

Not applicable

REACH - List of substances subject to authorisation

(Annex XIV)

Not applicable

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors

This product is regulated by Regulation (EU) 2019/1148: all suspi- sodium nitrate (ANNEX II)

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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cious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

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

ENVIRONMENTAL HAZARDS

Other regulations:

Take note of Directive 92/85/EEC regarding maternity protection or stricter national regulations, where applicable.

E2

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

TCSI : On the inventory, or 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.

2-(2-CHLOROBENZYL)-4,4-DIMETHYLISOXAZOLIDIN-3-

ONE

pendimethalin (ISO)

ENCS : Not in compliance with the inventory

ISHL : Not in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : Not in compliance with the inventory

IECSC : On the inventory, or 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

H272 : May intensify fire; oxidizer.

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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H302 : Harmful if swallowed.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H361d : Suspected of damaging the unborn child.

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
Ox. Sol. : Oxidizing solids
Repr. : Reproductive toxicity

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

Further information

Classification of the mixture: Classification procedure:

Repr. 2 H361d Calculation method

Aquatic Acute 1 H400 Based on product data or assessment

according to Regulation (EC) No. 1907/2006, as amended by Commission Regulation (EU) 2020/878



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Aquatic Chronic 1 H410 Based on product data or assessment

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