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



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

1.1 Product identifier

Trade name : KANASTER

Design code : A13814D

Product Registration Number : MAPP 20008

Unique Formula Identifier

(UFI)

D495-20DH-G001-UY0Y

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

professional use

1.3 Details of the supplier of the safety data sheet

Company : Syngenta UK Limited

CPC4, Capital Park

Fulbourn, Cambridge CB21 5XE

United Kingdom

Telephone : +44 (0) 1223 883400

Telefax : +44 (0) 1223 882195

E-mail address of person

responsible for the SDS

: customer.services@syngenta.com

1.4 Emergency telephone number

Emergency telephone num: +44 1484 538444

her

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2 H315: Causes skin irritation.

Skin sensitisation, Sub-category 1A H317: May cause an allergic skin reaction.

Reproductive toxicity, Category 2 H361d: Suspected of damaging the unborn child. Long-term (chronic) aquatic hazard, Cat-H411: Toxic to aquatic life with long lasting effects.

egory 2

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :

> <!



Signal word : Warning

Hazard statements : H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
H361d Suspected of damaging the unborn child.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.
P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection/ hearing protection.

Response:

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

attention.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed hazardouswaste disposal contractor or collection site except for empty

clean

containers which can be disposed of as non-hazardous waste.

Hazardous components which must be listed on the label:

2-methylpentane-2,4-diol pinoxaden (ISO) cloquintocet-mexyl

Additional Labelling

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

tions for use.

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.

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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)
hydrocarbons, C10-C13, aromatics, <1% naphthalene	Not Assigned 01-2119451097-39- xxxx	Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	>= 20 - < 25
2-methylpentane-2,4-diol	107-41-5 203-489-0 603-053-00-3 01-2119539582-35- xxxx	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Repr. 2; H361d	>= 20 - < 30
pinoxaden (ISO)	243973-20-8 607-726-00-2	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1A; H317 Repr. 2; H361d STOT SE 3; H335 (Respiratory system) Aquatic Acute 1; H400 Aquatic Chronic 3; H412 M-Factor (Acute aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: 500 mg/kg Acute inhalation toxicity (dust/mist): 4.63 mg/l	>= 3 - < 10
cloquintocet-mexyl	99607-70-2 01-2119381871-32-	Acute Tox. 4; H332 Skin Sens. 1; H317 STOT RE 2; H373	>= 1 - < 2.5
	XXXX	(Urinary system, Liver)	

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



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		Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
naphthalene	91-20-3 202-049-5 601-052-00-2	Flam. Sol. 2; H228 Acute Tox. 4; H302 Carc. 2; H351 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0.1 - < 0.25

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Have the product container, label or Safety Data Sheet with

you when calling the emergency number, a poison control

center or physician, or going for treatment.

If inhaled : Move the victim to fresh air.

If breathing is irregular or stopped, administer artificial respira-

tion.

Keep patient warm and at rest.

Call a physician or poison control centre immediately.

In case of skin contact : Take off all contaminated clothing immediately.

Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids,

for at least 15 minutes. Remove contact lenses.

Immediate medical attention is required.

If swallowed : If swallowed, seek medical advice immediately and show this

container or label.

Do not induce vomiting: contains petroleum distillates and/or

aromatic solvents.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.

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



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4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.

Treat symptomatically.

Do not induce vomiting: contains petroleum distillates and/or

aromatic solvents.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires

Use water spray, alcohol-resistant foam, dry chemical or car-

bon dioxide.

Extinguishing media - large fires

Alcohol-resistant foam

or

Water spray

Unsuitable extinguishing

media

Do not use a solid water stream as it may scatter and spread

tire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

As the product contains combustible organic components, fire

will produce dense black smoke containing hazardous prod-

ucts of combustion (see section 10).

Exposure to decomposition products may be a hazard to

health.

5.3 Advice for firefighters

Special protective equipment:

for firefighters

Wear full protective clothing and self-contained breathing ap-

paratus.

Further information : Do not allow run-off from fire fighting to enter drains or water

courses.

Cool closed containers exposed to fire with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform

respective authorities.

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



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6.3 Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage, and then collect with non-combustible ab-

sorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local

/ national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents.

Retain and dispose of contaminated wash water.

6.4 Reference to other sections

For disposal considerations see section 13., Refer to protective measures listed in sections 7 and 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling No special protective measures against fire required.

> Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of

the reach of children. Keep away from food, drink and animal

feedingstuffs.

7.3 Specific end use(s)

Specific use(s) For proper and safe use of this product, please refer to the

approval conditions laid down on the product label.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

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

Substance name	End Use	Exposure routes	Potential health effects	Value
tris(2-ethylhexyl) phosphate	Workers	Inhalation	Long-term systemic effects	350 mg/m3
	Workers	Inhalation	Acute systemic effects	2800 mg/m3
	Workers	Dermal	Long-term systemic effects	50 mg/kg
	Workers	Dermal	Acute systemic effects	40 mg/kg
	Consumers	Dermal	Acute systemic ef- fects	200 mg/kg
	Consumers	Dermal	Long-term systemic effects	25 mg/kg

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	Consumers	Inhalation	Acute systemic effects	500 mg/m3
	Consumers	Inhalation	Long-term systemic effects	62.5 mg/m3
	Consumers	Oral	Acute systemic effects	200 mg/kg
	Consumers	Oral	Long-term systemic effects	25 mg/kg
hydrocarbons, C10- C13, aromatics, <1% naphthalene	Workers	Inhalation	Long-term systemic effects	151 mg/m3
	Workers	Dermal	Long-term systemic effects	12.5 mg/kg
	Consumers	Inhalation	Long-term systemic effects	32 mg/m3
	Consumers	Dermal	Long-term systemic effects	7.5 mg/kg
	Consumers	Oral	Long-term systemic effects	7.5 mg/kg
2-methylpentane-2,4-diol	Workers	Inhalation	Short-term exposure, Local effects	98 mg/m3
	Workers	Inhalation	Long-term systemic effects	14 mg/m3
	Workers	Inhalation	Long-term local ef- fects	49 mg/m3
	Workers	Dermal	Long-term systemic effects	2 mg/kg
	Consumers	Inhalation	Short-term exposure, Local effects	49 mg/m3
	Consumers	Inhalation	Long-term systemic effects	3.5 mg/m3
	Consumers	Inhalation	Long-term local ef- fects	25 mg/m3
	Consumers	Oral	Long-term systemic effects	1 mg/kg
	Consumers	Dermal	Long-term systemic effects	1 mg/kg
castor oil, ethoxylated	Workers	Inhalation	Long-term systemic effects	16.4 mg/m3
	Workers	Dermal	Long-term systemic effects	4.67 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.9 mg/m3
	Consumers	Dermal	Long-term systemic effects	1.67 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	1.67 mg/kg bw/day
cloquintocet-mexyl	Industrial use	Dermal	Long-term exposure, Systemic effects	3.33 mg/kg
	Industrial use	Inhalation	Long-term exposure, Systemic effects	0.303 mg/m3
naphthalene	Workers	Inhalation	Long-term systemic	25 mg/m3

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		effects	
Workers	Inhalation	Long-term local effects	25 mg/m3
Workers	Dermal	Long-term systemic effects	3.57 mg/kg

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

Substance name	Environmental Compartment	Value
tris(2-ethylhexyl) phosphate	Sewage treatment plant	1 mg/l
2-methylpentane-2,4-diol	Fresh water	0.429 mg/l
	Marine water	0.0429 mg/l
	Fresh water sediment	1.79 mg/kg
	Marine sediment	0.179 mg/kg
	Soil	0.11 mg/kg
castor oil, ethoxylated	Fresh water sediment	0.0129 mg/kg dry
		weight (d.w.)
	Marine sediment	0.00129 mg/kg
		dry weight (d.w.)
	Soil	0.00258 mg/kg
		dry weight (d.w.)
cloquintocet-mexyl	Fresh water	0.0018 mg/l
	Fresh water sediment	0.934 mg/kg dry
		weight (d.w.)
	Marine water	0.00018 mg/l
	Marine sediment	0.0934 mg/kg dry
		weight (d.w.)
	Soil	0.463 mg/kg dry
		weight (d.w.)
naphthalene	Fresh water	0.0024 mg/l
	Marine water	0.0024 mg/l
	Sewage treatment plant	2.9 mg/l
	Fresh water sediment	0.0672 mg/kg
	Marine sediment	0.0672 mg/kg
	Soil	0.0533 mg/kg

8.2 Exposure controls

Engineering measures

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Eye/face protection Hand protection

No special protective equipment required.

Material : Nitrile rubber

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Break through time : > 480 min Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove

does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374

derived from it.

Skin and body protection : Choose body protection in relation to its type, to the concen-

tration and amount of dangerous substances, and to the spe-

cific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Respiratory protection : No personal respiratory protective equipment normally re-

quired.

When workers are facing concentrations above the exposure

limit they must use appropriate certified respirators.

Protective measures : The use of technical measures should always have priority

over the use of personal protective equipment.

When selecting personal protective equipment, seek appro-

priate professional advice.

Environmental exposure controls

Water :

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform

respective authorities.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : clear to slightly turbid, liquid

Colour : light yellow to brown

Odour : aromatic

Odour Threshold : No data available

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



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Melting point/range : No data available

Boiling point/boiling range : No data available

Flammability : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Flash point : 102 °C

Method: Pensky-Martens closed cup

Auto-ignition temperature : 375 °C

Decomposition temperature : No data available

pH : 4.3

Concentration: 1 %w/v

Viscosity

Viscosity, dynamic : 55 mPa.s (20 °C)

24 mPa.s (40 °C)

Viscosity, kinematic : No data available

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Vapour pressure : No data available

Density : 0.965 g/cm3

Relative vapour density : No data available

Particle characteristics

Particle size : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

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Evaporation rate : No data available

Miscibility with water : Miscible

Surface tension : 30.4 mN/m, 1.300 %, 20 °C

SECTION 10: Stability and reactivity

10.1 Reactivity

None reasonably foreseeable.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : None known.

10.6 Hazardous decomposition products

Hazardous decomposition

products

: No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of:

exposure

Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity

Product:

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

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

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

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Assessment: The substance or mixture has no acute dermal

toxicity

Components:

2-methylpentane-2,4-diol:

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

Assessment: The substance or mixture has no acute oral tox-

icity

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

Assessment: The substance or mixture has no acute dermal

toxicity

pinoxaden (ISO):

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

Acute toxicity estimate: 500 mg/kg

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

Acute inhalation toxicity : LC50 (Rat, male): 4.63 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute toxicity estimate: 4.63 mg/l Test atmosphere: dust/mist

Method: Acute toxicity estimate according to Regulation (EC)

No. 1272/2008

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

Assessment: The substance or mixture has no acute dermal

toxicity

cloquintocet-mexyl:

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

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.935 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Assessment: The component/mixture is moderately toxic after

short term inhalation.

Remarks: Highest attainable concentration

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

Assessment: The substance or mixture has no acute dermal

toxicity

naphthalene:

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after

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single ingestion.

Skin corrosion/irritation

Product:

Species : Rabbit

Result : Irritating to skin.

Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Result : Repeated exposure may cause skin dryness or cracking.

2-methylpentane-2,4-diol:

Species : Rabbit

Result : Irritating to skin.

pinoxaden (ISO):

Method : Based on Human Evidence

Result : Irritating to skin.

cloquintocet-mexyl:

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Product:

Species : Rabbit

Result : No eye irritation

Components:

2-methylpentane-2,4-diol:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

pinoxaden (ISO):

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

cloquintocet-mexyl:

Species : Rabbit

Result : No eye irritation

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Respiratory or skin sensitisation

Product:

Test Type : Buehler Test Species : Guinea pig

Result : The product is a skin sensitiser, sub-category 1A.

Components:

pinoxaden (ISO):

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Result : The product is a skin sensitiser, sub-category 1A.

Test Type : Respiratory sensitisation

Result : Does not cause respiratory sensitisation. Remarks : Experience with human exposure

cloquintocet-mexyl:

Species : Guinea pig

Result : May cause sensitisation by skin contact.

Germ cell mutagenicity

Components:

2-methylpentane-2,4-diol:

Germ cell mutagenicity- As-

sessment

In vitro tests did not show mutagenic effects

pinoxaden (ISO):

Germ cell mutagenicity- As-

sessment

Animal testing did not show any mutagenic effects.

cloquintocet-mexyl:

Germ cell mutagenicity- As-

sessment

Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

2-methylpentane-2,4-diol:

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

pinoxaden (ISO):

Carcinogenicity - Assess-

No evidence of carcinogenicity in animal studies.

ment

cloquintocet-mexyl:

Carcinogenicity - Assess- : No evidence of carcinogenicity in animal studies.

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ment

naphthalene:

Carcinogenicity - Assess-

ment

: Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Components:

2-methylpentane-2,4-diol: Reproductive toxicity - As-

sessment

Some evidence of adverse effects on development, based on

animal experiments.

pinoxaden (ISO):

Reproductive toxicity - As-

sessment

No toxicity to reproduction

cloquintocet-mexyl:

Reproductive toxicity - As-

sessment

No toxicity to reproduction

STOT - single exposure

Components:

pinoxaden (ISO):

Assessment : Based on Human Evidence, The substance or mixture is clas-

sified as specific target organ toxicant, single exposure, cate-

gory 3 with respiratory tract irritation.

Remarks : Breathing difficulties

Cough

Acute irritation of the respiratory system leading to tightness of

the chest and an asthmatic condition.

cloquintocet-mexyl:

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

organ toxicant, single exposure.

STOT - repeated exposure

Components:

pinoxaden (ISO):

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

organ toxicant, repeated exposure.

cloquintocet-mexyl:

Target Organs : Urinary system, Liver

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

toxicant, repeated exposure, category 2.

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



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Aspiration toxicity

Product:

No aspiration toxicity classification

Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

May be fatal if swallowed and enters airways.

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.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 19 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 1.8 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)): 32

mg/l

Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 5.5

mg/l

End point: Growth rate Exposure time: 72 h

Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 3.6 mg/l

Exposure time: 96 h

Remarks: Information given is based on data obtained from

similar substances.

Toxicity to daphnia and other : EL50 (Daphnia magna (Water flea)): 1.1 mg/l

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



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aquatic invertebrates Exposure time: 48 h

Remarks: Information given is based on data obtained from

similar substances.

Toxicity to algae/aquatic

plants

EL50 (Raphidocelis subcapitata (freshwater green alga)): 7.9

mg/l

End point: Growth rate Exposure time: 72 h

Remarks: Information given is based on data obtained from

similar substances.

NOELR (Raphidocelis subcapitata (freshwater green alga)):

0.22 mg/l

End point: Growth rate Exposure time: 72 h

Remarks: Information given is based on data obtained from

similar substances.

Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

pinoxaden (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10.3 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 52 mg/l

Exposure time: 48 h

LC50 (Americamysis): 4.7 mg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

ErC50 (Raphidocelis subcapitata (freshwater green alga)):

2.39 mg/l

Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)):

0.601 mg/l

End point: Growth rate Exposure time: 72 h

ErC50 (Glyceria maxima (reed sweet grass)): 0.498 mg/l

Exposure time: 14 d

EC10 (Glyceria maxima (reed sweet grass)): 0.0239 mg/l

End point: Growth rate Exposure time: 14 d

M-Factor (Acute aquatic tox-

icity)

•

Toxicity to fish (Chronic tox-

icity)

NOEC: 3.2 mg/l Exposure time: 28 d

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



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Species: Oncorhynchus mykiss (rainbow trout)

cloquintocet-mexyl:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.97 mg/l

Exposure time: 96 h

LC50 (Gobiocypris rarus (rare gudgeon)): 0.102 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 0.82 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): > 2.2 mg/l

Exposure time: 72 h

NOEC (Desmodesmus subspicatus (green algae)): 0.12 mg/l

End point: Growth rate Exposure time: 72 h

M-Factor (Acute aquatic tox-

icity)

: 1

Toxicity to microorganisms : EC50 (activated sludge): > 1,000 mg/l

Exposure time: 3 h

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC: > 0.437 mg/l Exposure time: 21 d

Species: Daphnia (water flea)

M-Factor (Chronic aquatic

toxicity)

1

naphthalene:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

12.2 Persistence and degradability

Components:

hydrocarbons, C10-C13, aromatics, <1% naphthalene:

Biodegradability : Result: Readily biodegradable.

2-methylpentane-2,4-diol:

Biodegradability : Result: Readily biodegradable.

pinoxaden (ISO):

Biodegradability : Result: Not readily biodegradable.

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



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Stability in water : Degradation half life: 0.1 d

Remarks: Product is not persistent.

cloquintocet-mexyl:

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 0.4 d

Remarks: Product is not persistent.

12.3 Bioaccumulative potential

Components:

pinoxaden (ISO):

Bioaccumulation : Bioconcentration factor (BCF): 1.17

Remarks: Low bioaccumulation potential.

Partition coefficient: n-

octanol/water

log Pow: 3.2 (25 °C)

cloquintocet-mexyl:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-

octanol/water

log Pow: 5.24 (25 °C)

12.4 Mobility in soil

Components:

pinoxaden (ISO):

Distribution among environ-

mental compartments

Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 0.4 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

cloquintocet-mexyl:

Distribution among environ-

mental compartments

Remarks: immobile

Stability in soil : Dissipation time: 2.4 d

Percentage dissipation: 50 % (DT50) Remarks: Product is not persistent.

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.

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



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Components:

2-methylpentane-2,4-diol:

Assessment : This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT).. This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

pinoxaden (ISO):

Assessment : This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT).. This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

cloquintocet-mexyl:

Assessment : This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT).. This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

naphthalene:

Assessment : This substance is not considered to be persistent, bioaccumu-

lating and toxic (PBT).. This substance is not considered to be

very persistent and very bioaccumulating (vPvB).

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

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with chemi-

cal or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or incinera-

tion.

If recycling is not practicable, dispose of in compliance with

local regulations.

Contaminated packaging : Empty remaining contents.

Triple rinse containers.

Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

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



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Do not re-use empty containers.

Waste Code : uncleaned packagings

15 01 10, packaging containing residues of or contaminated

by hazardous substances

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.

(CLOQUINTOCET-MEXYL, SOLVENT NAPHTHA)

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL, SOLVENT NAPHTHA)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL, SOLVENT NAPHTHA)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL, SOLVENT NAPHTHA)

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

(CLOQUINTOCET-MEXYL, SOLVENT NAPHTHA)

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

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



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Hazard Identification Number : 90 Labels : 9

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

ADR

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

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

RID

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

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

IMDG

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

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

IATA (Cargo)

Packing instruction (cargo : 964

aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

IATA (Passenger)

Packing instruction (passen-

ger aircraft)

964

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



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Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

Remarks : This product can be subject to exemptions when packaged in

single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

net mass of 5 kg or less for solids.

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 75, 3

If you intend to use this product as tattoo ink, please contact your ven-

N-methyl-2-pyrrolidone (Number on list 72, 71, 30)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).

Not applicable

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



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Regulation (EC) No 1005/2009 on substances that de- : Not applicable

plete the ozone laver

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

tants (recast)

Regulation (EC) No 649/2012 of the European Parlia: Not applicable

ment and the Council concerning the export and import

of dangerous chemicals

REACH - List of substances subject to authorisation : Not applicable

(Annex XIV)

Seveso III: Directive 2012/18/EU of the Euro- E2 ENVIRONMENTAL HAZARDS

pean Parliament and of the Council on the control of major-accident hazards involving

dangerous substances.

Other regulations:

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

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

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

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance when it is used in the specified applications.

SECTION 16: Other information

Full text of H-Statements

H228 : Flammable solid. H302 : Harmful if swallowed.

H304 : May be fatal if swallowed and enters airways.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.

H319 : Causes serious eye irritation.

H332 : Harmful if inhaled.

H335 : May cause respiratory irritation. H351 : Suspected of causing cancer.

H361d : Suspected of damaging the unborn child.

H373 : May cause damage to organs through prolonged or repeated

exposure.

H400 : Very toxic to aquatic life.

H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

EUH066 : Repeated exposure may cause skin dryness or cracking.

Full text of other abbreviations

Acute Tox. : Acute toxicity

Aquatic Acute : Short-term (acute) aquatic hazard

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



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Skin Sens.

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Aquatic Chronic Long-term (chronic) aquatic hazard

Asp. Tox. Aspiration hazard Carcinogenicity Carc. Eve Irrit. Eye irritation Flam. Sol. Flammable solids Reproductive toxicity Repr. Skin Irrit. Skin irritation 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 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:

Skin Irrit. 2 H315 Based on product data or assessment Skin Sens. 1A H317 Based on product data or assessment

Repr. 2 H361d Calculation method Aquatic Chronic 2 H411 Calculation method

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



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