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

1.1 Product identifier

Trade name : LUTIMOR

Design code : A21796A

Unique Formula Identifier

(UFI)

: PWF4-80FT-E00J-CKQ0

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

Use of the : Herbicide

Substance/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 : +44 1484 538444

number

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Skin irritation, Category 2 H315: Causes skin irritation.

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

Long-term (chronic) aquatic hazard, H411: Toxic to aquatic life with long lasting effects.

Category 2

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :





Signal word : Warning

Hazard statements : H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical

advice/ attention.

P362 + P364 Take off contaminated clothing and wash it

before reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/container to a licensed hazardouswaste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-

hazardous waste.

Hazardous components which must be listed on the label:

pinoxaden (ISO) cloquintocet-mexyl

Additional Labelling

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

instructions 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.

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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 922-153-0 01-2119451097-39 | Asp. Tox. 1; H304 Aquatic Chronic 2; H411 | >= 25 - < 30 |
| 2-methylpentane-2,4-diol | 107-41-5 203-489-0 603-053-00-3 01-2119539582-35 | Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319 | >= 10 - < 20 |
| 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 M-Factor (Chronic | >= 3 - < 10 |
| cloquintocet-mexyl | 99607-70-2 01-2119381871-32, 01-2119387592-28 | aquatic toxicity): 1 Acute Tox. 4; H332 Skin Sens. 1; H317 STOT RE 2; H373 (Urinary system, Liver) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 | >= 1 - < 2.5 |

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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

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

respiration.

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.

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.

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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Extinguishing media - small fires

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

carbon 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

fire.

5.2 Special hazards arising from the substance or mixture

Specific hazards during

firefighting

As the product contains combustible organic components, fire

will produce dense black smoke containing hazardous

products 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

apparatus.

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.

6.3 Methods and material for containment and cleaning up

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

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

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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

Occupational Exposure Limits

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|--|-----------------|-------------------------------|---------------------|------------|
| hydrocarbons, C10-C13, aromatics, <1% naphthalene | Not Assigned | TWA | 8 ppm 50 mg/m3 | Supplier |
| 2-methylpentane- 2,4-diol | 107-41-5 | TWA | 25 ppm 123 mg/m3 | GB EH40 |
| | | STEL | 25 ppm 123 mg/m3 | GB EH40 |
| pinoxaden (ISO) | 243973-20- 8 | TLV-C | 0.1 mg/m3 | Syngenta |
| cloquintocet-mexyl | 99607-70-2 | TWA | 5 mg/m3 | Syngenta |
| naphthalene | 91-20-3 | TWA | 10 ppm 50 mg/m3 | 91/322/EEC |

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Further information: Indicative

Biological occupational exposure limits

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|----------------|---------|--------------------|---------------|---------|
| naphthalene | 91-20-3 | 1-hydroxypyrene: 4 | After shift | GB EH40 |
| | | µmol/mol | | BAT |
| | | creatinine | | |
| | | (Urine) | | |

Derived No Effect Level (DNEL):

| 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 effects | 200 mg/kg |
| | Consumers | Dermal | Long-term systemic effects | 25 mg/kg |
| | 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 |
| 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 effects | 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 effects | 25 mg/m3 |
| | Consumers | Oral | Long-term systemic effects | 1 mg/kg |
| | Consumers | Dermal | Long-term systemic effects | 1 mg/kg |

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

Predicted No Effect Concentration (PNEC):

| 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 |

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| | 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 protection Hand protection

No special protective equipment required.

Material : Nitrile rubber
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.

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

concentration and amount of dangerous substances, and to

the specific work-place.

Remove and wash contaminated clothing before re-use.

Wear as appropriate: Impervious clothing

Respiratory protection : No personal respiratory protective equipment normally

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required.

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

appropriate professional advice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : clear to opalescent Colour : light yellow

. ..g... ,

Odour : aromatic

Odour Threshold : No data available

pH : 3-7

Concentration: 1 % w/v

Melting point/range : No data available

Boiling point/boiling range : No data available

Flash point : 104 °C

Method: Pensky-Martens closed cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower :

flammability limit

No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : 0.95 - 0.99 g/cm3 (20 °C)

Solubility(ies)

Water solubility : No data available Solubility in other solvents : No data available

Partition coefficient: n- : No data available

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octanol/water

Auto-ignition temperature : 370 °C

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : 22.7 mm2/s (40 °C)

Explosive properties : Not explosive

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

9.2 Other information

Particle size : No data available

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 toxicological effects

Information on likely routes of:

exposure

Ingestion Inhalation

Skin contact Eye contact

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Acute toxicity

Product:

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

Assessment: The substance or mixture has no acute oral

toxicity

Remarks: Based on data from similar materials

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

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: Based on data from similar materials

Components:

2-methylpentane-2,4-diol:

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

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

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.

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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

single ingestion.

Skin corrosion/irritation

Product:

Species : Rabbit

Result : Irritating to skin.

Remarks : Based on data from similar materials

Result : Repeated exposure may cause skin dryness or cracking.

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

Remarks : Based on data from similar materials

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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

Respiratory or skin sensitisation

Product:

Test Type : Buehler Test Species : Guinea pig

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

Remarks : Based on data from similar materials

Components:

pinoxaden (ISO):

Test Type : mouse lymphoma cells

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-

: In vitro tests did not show mutagenic effects

Assessment

pinoxaden (ISO):

Germ cell mutagenicity- : Animal testing did not show any mutagenic effects.

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Assessment

cloquintocet-mexyl:

Germ cell mutagenicity-

Assessment

Animal testing did not show any mutagenic effects.

Carcinogenicity

Components:

2-methylpentane-2,4-diol:

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

Assessment carcinogen

pinoxaden (ISO):

cloquintocet-mexyl:

Carcinogenicity - : No evidence of carcinogenicity in animal studies.

Assessment

Carcinogenicity - : No evidence of carcinogenicity in animal studies.

Assessment

naphthalene:

Carcinogenicity - : Limited evidence of carcinogenicity in animal studies

Assessment

Reproductive toxicity

Components:

2-methylpentane-2,4-diol:

Reproductive toxicity - : No toxicity to reproduction

Assessment

pinoxaden (ISO):

Reproductive toxicity - : No toxicity to reproduction

Assessment

cloquintocet-mexyl:

Reproductive toxicity - : No toxicity to reproduction

Assessment

STOT - single exposure

Components:

pinoxaden (ISO):

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

classified as specific target organ toxicant, single exposure,

category 3 with respiratory tract irritation.

Remarks : Breathing difficulties

Cough

Acute irritation of the respiratory system leading to tightness of

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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.

Aspiration toxicity

Components:

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

May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Product:

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

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

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

Exposure time: 48 h

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

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

mg/l

Exposure time: 72 h

Remarks: Based on data from similar materials

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

mg/l

End point: Growth rate

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Exposure time: 72 h

Remarks: Based on data from similar materials

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 :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): 1.1 mg/l

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

Toxicity to algae/aquatic

plants

: ErC50 (Raphidocelis subcapitata (freshwater green alga)): 3.6

mg/l

Exposure time: 72 h

ErC50 (Skeletonema costatum (marine diatom)): 1.72 mg/l

Exposure time: 72 h

NOEC (Skeletonema costatum (marine diatom)): 0.94 mg/l

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End point: Growth rate Exposure time: 96 h

NOEC (Lemna gibba (gibbous duckweed)): 0.73 mg/l

End point: Growth rate Exposure time: 7 d

M-Factor (Acute aquatic

toxicity)

1

Toxicity to fish (Chronic

toxicity)

: NOEC: 6.6 mg/l Exposure time: 28 d

Species: Oncorhynchus mykiss (rainbow trout)

M-Factor (Chronic aquatic

toxicity)

: 1

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

toxicity)

: 1

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

Exposure time: 3 h

Toxicity to daphnia and other :

aquatic invertebrates (Chronic 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.

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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: rapidly degradable

Stability in water : Degradation half life: 0.3 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 : Remarks: Low bioaccumulation potential.

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 : Remarks: Moderately mobile in soils

environmental compartments

Stability in soil : Dissipation time: 0.1 - 1.8 d

Percentage dissipation: 50 % (DT50)

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Remarks: Product is not persistent.

cloquintocet-mexyl:

Distribution among : Remarks: immobile

environmental compartments

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.

Components:

2-methylpentane-2,4-diol:

Assessment : This substance is not considered to be persistent,

bioaccumulating 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,

bioaccumulating 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,

bioaccumulating 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,

bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating

(vPvB).

12.6 Other adverse effects

No data available

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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Do not contaminate ponds, waterways or ditches with

chemical or used container.

Do not dispose of waste into sewer.

Where possible recycling is preferred to disposal or

incineration.

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

handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number

 ADR
 : UN 3082

 RID
 : UN 3082

 IMDG
 : UN 3082

 IATA
 : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL AND SOLVENT NAPHTHA)

RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL AND SOLVENT NAPHTHA)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(CLOQUINTOCET-MEXYL AND SOLVENT NAPHTHA)

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

(CLOQUINTOCET-MEXYL AND SOLVENT NAPHTHA)

14.3 Transport hazard class(es)

 ADR
 : 9

 RID
 : 9

 IMDG
 : 9

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IATA : 9

14.4 Packing group

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 : 964

(passenger aircraft)

Packing instruction (LQ) : Y964
Packing group : III

Labels : Miscellaneous

14.5 Environmental hazards

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

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Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

REACH - Restrictions on the manufacture, placing on Conditions of restriction for the the market and use of certain dangerous substances. following entries should be considered:

preparations 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 Not applicable

deplete the ozone layer

Regulation (EU) 2019/1021 on persistent organic

pollutants (recast)

Regulation (EC) No 649/2012 of the European

Parliament and the Council concerning the export and

import of dangerous chemicals

UK REACH List of substances subject to authorisation : Not applicable

(Annex XIV)

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

Number on list 3

Not applicable

naphthalene

Not applicable

Quantity 1 Quantity 2 E2 **ENVIRONMENTAL** 200 t 500 t

HAZARDS

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.

May cause an allergic skin reaction. H317

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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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.

Full text of other abbreviations

Acute Tox. : Acute toxicity

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

Asp. Tox.

Carc.

Eye Irrit.

Flam. Sol.

Repr.

Skin Irrit.

Skin Sens.

Skin sensitisation

Aspiration hazard

Carcinogenicity

Eye irritation

Flammable solids

Reproductive toxicity

Skin irritation

Skin sensitisation

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

91/322/EEC : Europe. Commission Directive 91/322/EEC on establishing

indicative limit values

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits
GB EH40 BAT : UK. Biological monitoring guidance values

91/322/EEC / TWA : Limit Value - eight hours

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European 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

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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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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