



# SAFETY DATA SHEET

**SIERRA**

Version 1

Revision Date: 08.03.2019

Publish Date: 08.03.2019

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

### 1.1 Product identifier

Trade name : SIERRA

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

Use of the Substance/Mixture : Herbicide

### 1.3 Details of the supplier of the safety data sheet

**Company** ADAMA South Africa (Pty) Ltd  
Ground Floor, Simeka House,  
The Vineyard Office Estate  
99 Jip de Jager Drive  
Bellville 7530  
South Africa

**Telephone** : +27 (0) 21 982 1460

**E-mail address** : sds@adama.com

### 1.4 Emergency telephone number

**Emergency telephone numbers** : +27 (0) 82 446 8946  
+27 (0) 861 555 777  
+27 (0) 21 982 1460

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4

H332: Harmful if inhaled.

Skin sensitisation, Category 1

H317: May cause an allergic skin reaction.

Chronic aquatic toxicity, Category 2

H411: Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.  
H332 Harmful if inhaled.  
H411 Toxic to aquatic life with long lasting effects.



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

Precautionary statements : **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P280 Wear protective gloves.  
**Response:**  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

pinoxaden  
cloquintocet-mexyl

## 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.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification	Concentration (% w/w)
tris(2-ethylhexyl) phosphate	78-42-2 201-116-6	Skin Irrit. 2; H315	>= 30 - < 50
solvent naphtha (petroleum), heavy arom.	64742-94-5 265-198-5 01-2119451151-53	Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 25 - < 30
2-methylpentane-2,4-diol	107-41-5 203-489-0 01-2119539582-35	Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 10 - < 20
pinoxaden	243973-20-8	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1A; H317 STOT SE 3; H335 Aquatic Chronic 2; H411	>= 5 - < 10
cloquintocet-mexyl	99607-70-2 01-2119381871-32	Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 1 - < 2.5



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|  
For explanation of abbreviations see section 16.

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## 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 centre 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



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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.

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## 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 local / national regulations (see section 13).

### 6.4 Reference to other sections

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

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## 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.



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## 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.

Other data : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

## 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
solvent naphtha (petroleum), heavy arom.	64742-94-5	TWA	20 ppm 100 mg/m <sup>3</sup>	Supplier
2-methylpentane-2,4-diol	107-41-5	STEL	20 ppm 98 mg/m <sup>3</sup>	CH SUVA
	107-41-5	TWA	10 ppm 49 mg/m <sup>3</sup>	CH SUVA
pinoxaden	243973-20-8	TLV-C	0.1 mg/m <sup>3</sup>	Syngenta
cloquintocet-mexyl	99607-70-2	TWA	10 mg/m <sup>3</sup>	Syngenta

### 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 : No special protective equipment required.

#### Hand protection

Material : Nitrile rubber  
Break through time : > 480 min  
Glove thickness : 0.5 mm



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- Remarks : 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 EU Directive 89/686/EEC and the standard EN 374 derived from it.
- 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 : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
Suitable respiratory equipment:  
Respirator with a half face mask  
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.  
  
Use only respiratory protection equipment with CE-symbol including four digit test number.
- Filter type : Particulates type (P)
- 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.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance : liquid, clear
- Colour : light yellow to orange brown
- Odour : sweetish



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pH	:	4.5 Concentration: 1 % w/v
Flash point	:	103 °C(1025.0 hPa) Method: Pensky-Martens closed cup
Density	:	0.965 g/cm <sup>3</sup> (25 °C)
Auto-ignition temperature	:	380 °C
Viscosity		
Viscosity, dynamic	:	50 mPa.s (20 °C) 22.39 mPa.s (40 °C)
Viscosity, kinematic	:	24.23 mm <sup>2</sup> /s (40 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

## 9.2 Other information

Surface tension	:	30.0 mN/m, 20 °C
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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

See section 10.3 "Possibility of hazardous reactions".

### 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.
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### 10.4 Conditions to avoid

Conditions to avoid	:	No decomposition if used as directed.
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### 10.5 Incompatible materials

Materials to avoid	:	None known.
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### 10.6 Hazardous decomposition products

Combustion or thermal decomposition will evolve toxic and irritant vapours.



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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Product:

Acute oral toxicity

: LD50 (Rat, female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity

: LC50 (Rat, male and female): > 2.42 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity

: LD50 (Rat, male and female): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

##### Components:

#### **2-methylpentane-2,4-diol:**

Acute oral toxicity

: LD50 Oral (Rat): 2,000 mg/kg  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity

: LC50 (Rat): 70 ppm  
Exposure time: 8 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity

: LD50 Dermal (Rat): 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

#### **pinoxaden:**

Acute oral toxicity

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

Acute inhalation toxicity

: LC50 (Rat, male): 4.63 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

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  
Assessment: The substance or mixture has no acute oral toxicity



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- Acute inhalation toxicity : LC50 (Rat, male and female): > 0.935 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity  
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

## **Skin corrosion/irritation**

### **Product:**

Species: Rabbit  
Result: Mild skin irritation

### **Components:**

#### **tris(2-ethylhexyl) phosphate:**

Result: Irritating to skin.

#### **2-methylpentane-2,4-diol:**

Species: Rabbit  
Result: Irritating to skin.

#### **pinoxaden:**

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:**

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: A skin sensitizer in animal tests.

### Components:

#### **pinoxaden:**

Test Type: Local Lymph Node Assay

Species: Mouse

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

#### **cloquintocet-mexyl:**

Species: Guinea pig

Result: May cause sensitisation by skin contact.

## Germ cell mutagenicity

### Components:

#### **2-methylpentane-2,4-diol:**

Germ cell mutagenicity- Assessment

: In vitro tests did not show mutagenic effects

#### **pinoxaden:**

Germ cell mutagenicity- Assessment

: Animal testing did not show any mutagenic effects.

#### **cloquintocet-mexyl:**

Germ cell mutagenicity- Assessment

: Animal testing did not show any mutagenic effects.

## Carcinogenicity

### Components:

#### **2-methylpentane-2,4-diol:**

Carcinogenicity - Assessment

: Weight of evidence does not support classification as a carcinogen

#### **pinoxaden:**

Carcinogenicity - Assessment

: No evidence of carcinogenicity in animal studies.

#### **cloquintocet-mexyl:**

Carcinogenicity - Assessment

: No evidence of carcinogenicity in animal studies.



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## Reproductive toxicity

### Components:

#### **2-methylpentane-2,4-diol:**

Reproductive toxicity - Assessment : No toxicity to reproduction

#### **pinoxaden:**

Reproductive toxicity - Assessment : No toxicity to reproduction

#### **cloquintocet-mexyl:**

Reproductive toxicity - Assessment : No toxicity to reproduction

## STOT - single exposure

### Components:

#### **pinoxaden:**

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 the chest and an asthmatic condition.

## Repeated dose toxicity

### Components:

#### **pinoxaden:**

Remarks: No adverse effect has been observed in chronic toxicity tests.

#### **cloquintocet-mexyl:**

Remarks: No adverse effect has been observed in chronic toxicity tests.

## Aspiration toxicity

### Components:

#### **solvent naphtha (petroleum), heavy arom.:**

May be fatal if swallowed and enters airways.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 70.71 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1.8 mg/l  
aquatic invertebrates Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 61 mg/l  
Exposure time: 72 h



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## Ecotoxicology Assessment

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects., Classification of the product is based on the summation of the concentrations of classified components.

### Components:

#### **solvent naphtha (petroleum), heavy arom.:**

##### **Ecotoxicology Assessment**

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

#### **2-methylpentane-2,4-diol:**

Toxicity to fish

: LC50 (*Gambusia affinis* (Mosquito fish)): 8,510 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 5,410 mg/l  
Exposure time: 48 h

#### **pinoxaden:**

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 bahia* (Mysid shrimp)): 4.7 mg/l  
Exposure time: 96 h

Toxicity to algae : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 41 mg/l  
Exposure time: 72 h

ErC50 (*Skeletonema costatum* (marine diatom)): 1.89 mg/l  
Exposure time: 96 h

NOEC (*Skeletonema costatum* (marine diatom)): 0.94 mg/l  
End point: Growth rate  
Exposure time: 96 h

ErC50 (*Lemna gibba* (gibbous duckweed)): 6.6 mg/l  
Exposure time: 7 d

NOEC (*Lemna gibba* (gibbous duckweed)): 0.73 mg/l  
End point: Growth rate  
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC: 6.6 mg/l  
Exposure time: 28 d  
Species: *Oncorhynchus mykiss* (rainbow trout)



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## **cloquintocet-mexyl:**

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.97 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

: ErC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): > 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

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)

## **12.2 Persistence and degradability**

### **Components:**

**2-methylpentane -2,4-diol:**

Biodegradability

: Result: Readily biodegradable.

### **pinoxaden:**

Biodegradability

: Result: Not readily biodegradable.

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:**

Bioaccumulation

: Remarks: Low bioaccumulation potential.

Partition coefficient: n-octanol/water

: log Pow: 3.2 (25 °C)



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## **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:**

Distribution among environmental compartments

: Remarks: Moderately mobile in soils

Stability in soil

: Percentage dissipation: 50 % (DT50: 0.1 - 1.8 d)  
Remarks: Product is not persistent.

#### **cloquintocet-mexyl:**

Distribution among environmental compartments

: Remarks: immobile

Stability in soil

: Percentage dissipation: 50 % (DT50: 2.4 d)  
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:**

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



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: 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

### Components:

#### **tris(2-ethylhexyl) phosphate:**

Additional ecological information

: No data available

#### **solvent naphtha (petroleum), heavy arom.:**

Additional ecological information

: No data available

#### **2-methylpentane-2,4-diol:**

Additional ecological information

: No data available

#### **pinoxaden:**

Additional ecological information

: No data available

#### **cloquintocet-mexyl:**

Additional ecological information

: 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.

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## SECTION 14: Transport information

### 14.1 UN number

ADN

: UN 3082



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**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.  
(SOLVENT NAPHTHA)  
**ADR** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(SOLVENT NAPHTHA)  
**RID** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(SOLVENT NAPHTHA)  
**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S.  
(SOLVENT NAPHTHA)  
**IATA** : Environmentally hazardous substance, liquid, n.o.s.  
(SOLVENT NAPHTHA)

## 14.3 Transport hazard class(es)

**ADN** : 9  
**ADR** : 9  
**RID** : 9  
**IMDG** : 9  
**IATA** : 9

## 14.4 Packing group

**ADN**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
**ADR**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (E)  
**RID**  
Packing group : III  
Classification Code : M6  
Hazard Identification Number : 90  
Labels : 9



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## **IMDG**

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

## **IATA (Cargo)**

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

## **IATA (Passenger)**

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

## **14.5 Environmental hazards**

### **ADN**

Environmentally hazardous : yes

### **ADR**

Environmentally hazardous : yes

### **RID**

Environmentally hazardous : yes

### **IMDG**

Marine pollutant : yes

### **IATA (Passenger)**

Marine pollutant : yes

### **IATA (Cargo)**

Marine pollutant : yes

## **14.6 Special precautions for user**

Not applicable

## **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**

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable  
: Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EC) No 850/2004 on persistent organic pollutants : Not applicable



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

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t
34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)	2,500 t	25,000 t

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

Youth Employment Protection Regulation (ArGV 5, SR 822 115): Adolescents up to completion of their 18th year are only allowed to come in contact or get exposed to this product at their place of work if the Federal Office for Professional Education and Technology (BBT) or the State Secretariat for Economic Affairs (SECO ) has granted an exemption.

## 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

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.
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.



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## Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Acute aquatic toxicity
Aquatic Chronic	: Chronic aquatic toxicity
Asp. Tox.	: Aspiration hazard
Eye Irrit.	: Eye irritation
Skin Irrit.	: Skin irritation
Skin Sens.	: Skin sensitisation
STOT SE	: Specific target organ toxicity - single exposure

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; AICS - Australian Inventory of Chemical Substances; 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; TCSI - Taiwan Chemical Substance 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

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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