

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



CIRCLE

Version 10.1 Revision Date: 04.01.2018 SDS Number: S1457830653 This version replaces all previous versions.

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

1.1 Product identifier

Trade name : CIRCLE

Design code : A8587F

Product Registration number : MAPP 18381

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

Use of the Substance/Mixture : Plant growth regulator

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 number : +44 1484 538444

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Flammable liquids, Category 3

H226: Flammable liquid and vapour.

Eye irritation, Category 2

H319: Causes serious eye irritation.

Specific target organ toxicity - single exposure, Category 3, Respiratory system

H335: May cause respiratory irritation.

Chronic aquatic toxicity, Category 1

H410: Very toxic to aquatic life with long lasting effects.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word :

Warning

Hazard statements :

H226 Flammable liquid and vapour.
H319 Causes serious eye irritation.
H320 Causes eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H410 Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements :

EUH066 Repeated exposure may cause skin dryness or cracking.
EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements :

P102 Keep out of reach of children.
Prevention:
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P235 Keep cool.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391 Collect spillage.
Storage:
P403 Store in a well-ventilated place.
Disposal:
P501 Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty triple rinsed clean containers which can be disposed of as non-hazardous waste.

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

Hazardous components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
pentanol isomers	94624-12-1 305-536-1 603-006-00-7 01-2119492626-27	Flam. Liq. 3; H226 Acute Tox. 4; H332 STOT SE 3; H335	>= 50 - < 70
trinexapac-ethyl	95266-40-3	Aquatic Chronic 1; H410	>= 25 - < 30
poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-	99734-09-5	Aquatic Chronic 3; H412	>= 2.5 - < 10
calcium dodecylbenzene sulpho-nate	26264-06-2 247-557-8 01-2119560592-37	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	>= 1 - < 2.5

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.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Nonspecific
No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : There is no specific antidote available.
Treat symptomatically.

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

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 fire-fighting : 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.
Flash back possible over considerable distance.

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.
Keep people away from and upwind of spill/leak.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Remove all sources of ignition.
Pay attention to flashback.

6.2 Environmental precautions

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

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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).
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 : Avoid contact with skin and eyes.
When using do not eat, drink or smoke.
Use only in an area containing flame proof equipment.
Take precautionary measures against static discharges.
For personal protection see section 8.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from combustible material. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feed-stuffs. No smoking.

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
trinexapac-ethyl	95266-40-3	TWA	5 mg/m ³	Syngenta

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

Substance name	End Use	Exposure routes	Potential health effects	Value
calcium dodecylben-	Workers	Dermal	Long-term systemic	1.7 mg/kg

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Substance name	End Use	Exposure routes	Potential health effects	Value
zene sulphonate			effects	
	Consumers	Oral	Short-term exposure, Systemic effects	89 mg/kg
	Consumers	Dermal	Long-term systemic effects	85 mg/kg
pentanol isomers	Workers	Inhalation	Short-term exposure, Systemic effects, Local effects	292 mg/m3
	Consumers	Inhalation	Short-term exposure, Systemic effects, Local effects	15.4 mg/m3
	Workers	Inhalation	Long-term exposure, Systemic effects, Local effects	73.16 mg/m3
	Consumers	Inhalation	Long-term exposure, Systemic effects, Local effects	256.4 mg/m3
	Consumers	Oral	Long-term exposure, Systemic effects, Local effects	25 mg/kg

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

Substance name	Environmental Compartment	Value
calcium dodecylbenzene sulpho-nate	Fresh water	0.023 mg/l
	Marine water	0.0023 mg/l
	Fresh water sediment	0.174 mg/kg
	Marine sediment	0.0174 mg/kg
	Soil	0.62 mg/kg
	Sewage treatment plant	3 mg/l
	Intermittent use/release	0.01 mg/l
pentanol isomers	Fresh water	0.013 mg/l
	Marine water	0.0013 mg/l
	Fresh water sediment	0.055 mg/kg
	Marine sediment	0.0055 mg/kg
	Soil	2.5 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 : No special protective equipment required.

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Hand protection		
Remarks	:	No special protective equipment required.
Skin and body protection	:	No special protective equipment required. Select skin and body protection based on the physical job requirements.
Respiratory protection	:	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Suitable respiratory equipment: Respirator with combination filter for vapour/particulate (EN 141) 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.
Filter type	:	Combined particulates and organic vapour type (A-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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid, clear to slightly turbid
Colour	:	light yellow to reddish brown
Odour	:	sweetish, pungent
Odour Threshold	:	No data available
pH	:	2 - 6 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	44 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper	:	No data available

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flammability limit

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : 0.94 g/cm³ (20 °C)

Solubility(ies)

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : 335 °C

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 9.44 mPa.s (20 °C)

4.71 mPa.s (40 °C)

Explosive properties : Not explosive

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

9.2 Other information

Surface tension : 38.6 mN/m, 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.

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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

Acute toxicity

Product:

Acute oral toxicity : LD50 (Rat, male and female): > 3,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity
Remarks: The toxicological data has been taken from products of similar composition.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.45 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: The toxicological data has been taken from products of similar composition.

Components:

pentanol isomers:

Acute oral toxicity : LD50 (Rat): 4,172 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 14 mg/l
Exposure time: 6 h
Test atmosphere: vapour
Assessment: The component/mixture is moderately toxic after short term inhalation.

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Acute dermal toxicity : LD50 (Rabbit): > 3,160 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

trinexapac-ethyl:

Acute oral toxicity : LD50 (Rat, male and female): 4,460 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.69 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

Acute oral toxicity : LD50 Oral (Rat): 5,000 mg/kg
Assessment: The substance or mixture has no acute oral toxicity

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

Skin corrosion/irritation

Product:

Species: Rabbit

Result: No skin irritation

Remarks: The toxicological data has been taken from products of similar composition.

Components:

trinexapac-ethyl:

Species: Rabbit

Result: No skin irritation

calcium dodecylbenzene sulphonate:

Result: Irritating to skin.

Serious eye damage/eye irritation

Product:

Species: Rabbit

Result: Irritation to eyes, reversing within 21 days

Remarks: The toxicological data has been taken from products of similar composition.

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Components:

pentanol isomers:

Species: Rabbit
Result: No skin irritation

trinexapac-ethyl:

Species: Rabbit
Result: No eye irritation

calcium dodecylbenzene sulphonate:

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Product:

Test Type: Buehler Test
Species: Guinea pig
Result: Did not cause sensitisation on laboratory animals.

Components:

trinexapac-ethyl:

Test Type: mouse lymphoma cells
Species: Mouse
Result: Did not cause sensitisation on laboratory animals.

Germ cell mutagenicity

Components:

pentanol isomers:

Germ cell mutagenicity- Assessment : Tests on bacterial cell cultures did not show mutagenic effects.

trinexapac-ethyl:

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

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

Germ cell mutagenicity- Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Components:

trinexapac-ethyl:

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

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Reproductive toxicity

Components:

pentanol isomers:

Reproductive toxicity - Assessment : Animal testing did not show any effects on fertility.

trinexapac-ethyl:

Reproductive toxicity - Assessment : No toxicity to reproduction

STOT - single exposure

Components:

pentanol isomers:

Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

Repeated dose toxicity

Components:

trinexapac-ethyl:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 94 mg/l
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
- Toxicity to algae : ErC50 (Anabaena flos-aquae (bluegreen algae)): > 100 mg/l
Exposure time: 72 h

Ecotoxicology Assessment

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

Components:

pentanol isomers:

Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): 59 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203

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Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 13 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : (Desmodesmus subspicatus (green algae)): 81 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC10 (activated sludge): 370 mg/l
Exposure time: 3 h

trinexapac-ethyl:

Toxicity to fish

: LC50 (Oncorhynchus mykiss (rainbow trout)): 68 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 142 mg/l
Exposure time: 48 h

LC50 (Americamysis): 6.5 mg/l
Exposure time: 96 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 24.5 mg/l
Exposure time: 96 h

ErC50 (Myriophyllum spicatum (Eurasian watermilfoil)): 1.2 mg/l
Exposure time: 14 d

EC10 (Myriophyllum spicatum (Eurasian watermilfoil)): 0.011 mg/l
Exposure time: 14 d

NOEC (Myriophyllum spicatum (Eurasian watermilfoil)): 0.025 mg/l
Exposure time: 14 d

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 0.41 mg/l
Exposure time: 35 d
Species: Pimephales promelas (fathead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 2.4 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

M-Factor (Chronic aquatic toxicity) : 1

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Ecotoxicology Assessment

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

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 21 mg/l
Exposure time: 96 h

Ecotoxicology Assessment

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

calcium dodecylbenzene sulphonate:

Ecotoxicology Assessment

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

12.2 Persistence and degradability

Components:

trinexapac-ethyl:

Biodegradability : Result: Not readily biodegradable.
Stability in water : Degradation half life: 3.9 - 5.5 d
Remarks: Product is not persistent.

12.3 Bioaccumulative potential

Components:

trinexapac-ethyl:

Bioaccumulation : Remarks: Does not bioaccumulate.
Partition coefficient: n-octanol/water : log Pow: -2.1 (25 °C)
log Pow: -0.29 (25 °C)
log Pow: 1.5 (25 °C)

12.4 Mobility in soil

Components:

trinexapac-ethyl:

Distribution among environmental compartments : Remarks: Moderately mobile in soils
Stability in soil : Dissipation time: < 0.2 d

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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:

pentanol isomers:

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)..

trinexapac-ethyl:

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)..

poly(oxy-1,2-ethanediyl), -[2,4,6-tris(1-phenylethyl)phenyl]- -hydroxy-:

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

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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Waste Code : uncleaned packagings
150110, packaging containing residues of or contaminated by
dangerous substances

SECTION 14: Transport information

14.1 UN number

ADN : UN 1105
ADR : UN 1105
RID : UN 1105
IMDG : UN 1105
IATA : UN 1105

14.2 UN proper shipping name

ADN : PENTANOLS SOLUTION
ADR : PENTANOLS SOLUTION
RID : PENTANOLS SOLUTION
IMDG : PENTANOLS SOLUTION
IATA : Pentanols solution

14.3 Transport hazard class(es)

ADN : 3
ADR : 3
RID : 3
IMDG : 3
IATA : 3

14.4 Packing group

ADN
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

ADR
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3
Tunnel restriction code : (D/E)

RID
Packing group : III
Classification Code : F1
Hazard Identification Number : 30
Labels : 3

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IMDG

Packing group : III
Labels : 3
EmS Code : F-E, S-D

IATA (Cargo)

Packing instruction (cargo aircraft) : 366
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquid

IATA (Passenger)

Packing instruction (passenger aircraft) : 355
Packing instruction (LQ) : Y344
Packing group : III
Labels : Flammable Liquid

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

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

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

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

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals : Not applicable

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

Quantity 1

Quantity 2

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P5c	FLAMMABLE LIQUIDS	5,000 t	50,000 t
E2	ENVIRONMENTAL HAZARDS	200 t	500 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.

Use plant protection products safely. Always read the label and product information before use.

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

H226	: Flammable liquid and vapour.
H315	: Causes skin irritation.
H318	: Causes serious eye damage.
H332	: Harmful if inhaled.
H335	: May cause respiratory irritation.
H410	: Very 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 Chronic	: Chronic aquatic toxicity
Eye Dam.	: Serious eye damage
Flam. Liq.	: Flammable liquids
Skin Irrit.	: Skin irritation
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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



CIRCLE

Version 10.1 Revision Date: 04.01.2018 SDS Number: S1457830653 This version replaces all previous versions.

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; 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:

Flam. Liq. 3	H226
Eye Irrit. 2	H319
STOT SE 3	H335
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Based on product data or assessment
Calculation method
Calculation method

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