

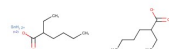
The Brief Profile summarizes the non-confidential data on substances as it is held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The Brief Profile is automatically generated; note that it does not currently distinguish between harmonised classification and minimum classification; information requirements under different legislative frameworks may therefore not be fully up to date or complete. For accuracy reasons, substance manufacturers and imports have the responsibility to consult official sources, e.g. the electronic edition of the Official Journal of the European Union. This Brief Profile is covered by the ECHA Legal Notice.

## Tin bis(2-ethylhexanoate)

Brief Profile - Last updated: 15/01/2021

### Substance Description

#### Substance identity



EC / List name:

IUPAC name: tin(2+) bis(2-ethylhexanoate)

Substance names and other identifiers

SMILES: [SnH2++].CCCCC(CC)C([O-])=O.CCCCC(CC)C([O-])=O

InChI: InChI=1/2C8H16O2.Sn.2H/c2\*1-3-5-6-7(4-2)8(9)10///h2\*7H,3-6H2,1-2H3,(H,9,10)///q;+2;;/p-2

Type of substance: Mono constituent substance

Origin: Other

Registered compositions: 6

Of which contain: 1 impurities relevant for classification

0 additives relevant for classification

Substance Listed: EINECS (European Inventory of Existing Commercial chemical Substances) List

EC / List no.: 206-108-6

CAS no.: 301-10-0

Index number:

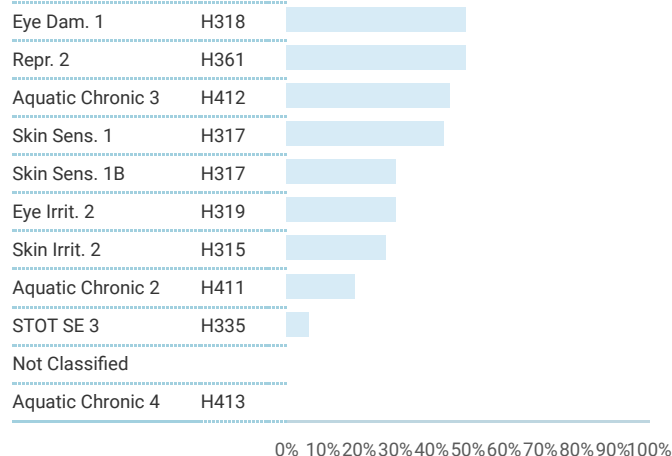
Molecular formula: C16H32O4Sn

#### Hazard classification & labelling



**Danger!** According to the classification provided by companies to ECHA in **CLP notifications** this substance is toxic to aquatic life with long lasting effects, causes serious eye damage, is suspected of damaging fertility or the unborn child, may cause an allergic skin reaction, causes skin irritation and may cause respiratory irritation.

#### Breakdown of all 900 C&L notifications submitted to ECHA



- ✓ Harmonised Classification
- REACH registration dossiers notifications
- CLP notifications

At least one notifier has indicated that an impurity or an additive present in the substance impacts the notified classification.

## Properties of concern

Ss

There is broad agreement in that a majority of data submitters agree this substance is Skin sensitising (73.44% of CLP notifications).

## Regulatory context

### Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)

#### Registration

**Pre-registration:** Substance pre-registered under REACH.

**Registration:** This substance has 8 active registrations under REACH, 1 Joint Submission(s) and 0 Individual Submission(s).

#### Evaluation

**Dossier Evaluation:** Registration dossiers submitted to ECHA for this substance have been evaluated under REACH.

**Substance Evaluation:**

#### Authorisation

**Candidate List:**

**Annex XIV (Authorisation List):**

#### Restriction

**Annex XVII (Restriction List):**

### Persistent Organic Pollutants Regulation (POPs)

**List of substances subject to the POPs Regulation:**

**List of substances proposed as POPs:**

### Classification Labelling & Packaging (CLP)

**Harmonised C&L:**

**Seveso Annex I:**

**Notified C&L:** Classification & Labelling has been notified by industry to ECHA for this substance.

### Biocidal Products Regulation (BPR)

**Active Substance:**

**Biocidal Products:**

**Prior Informed Consent (PIC)**

**Annex I:**

**Annex V:**

### European Union Observatory for Nanomaterials (EUON)

**EUON:**

## About this substance

### General

This substance is registered under the REACH Regulation and is manufactured in and / or imported to the European Economic Area, at  $\geq 1\,000$  to  $< 10\,000$  per annum.

This substance is used by consumers, in articles, by professional workers (widespread uses), in formulation or re-packing and at industrial sites.

### Consumer Uses

This substance is used in the following products: adhesives and sealants, coating products, fillers, putties, plasters, modelling clay and polymers. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

Other release to the environment of this substance is likely to occur from: indoor use and outdoor use resulting in inclusion into or onto a materials (e.g. binding agent in paints and coatings or adhesives).

### Article service life

This substance is used in the following activities or processes at workplace: production of mixtures or articles by tableting, compression, extrusion or pelletisation and the low energy manipulation of substances bound in materials or articles.

Release to the environment of this substance can occur from industrial use: formulation of mixtures, formulation in materials, as processing aid, in processing aids at industrial sites, in the production of articles, as an intermediate step in further manufacturing of another substance (use of intermediates) and as processing aid. Other release to the environment of this substance is likely to occur from: indoor use and outdoor use resulting in inclusion into or onto a materials (e.g. binding agent in paints and coatings or adhesives).

This substance can be found in complex articles, with no release intended: vehicles and machinery, mechanical appliances and electrical/electronic products (e.g. computers, cameras, lamps, refrigerators, washing machines). This substance can be found in products with material based on: plastic (e.g. food packaging and storage, toys, mobile phones), fabrics, textiles and apparel (e.g. clothing, mattress, curtains or carpets, textile toys) and rubber (e.g. tyres, shoes, toys).

### Widespread uses by professional workers

This substance is used in the following products: adhesives and sealants, coating products, fillers, putties, plasters, modelling clay and polymers. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following areas: mining, formulation of mixtures and/or re-packaging and building & construction work. This substance is used for the manufacture of: plastic products.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed processes with no likelihood of exposure, closed, continuous processes with occasional controlled exposure, non-industrial spraying, closed batch processing in synthesis or formulation, batch processing in synthesis or formulation with opportunity for exposure, mixing in open batch processes, roller or brushing applications, treatment of articles by dipping and pouring, hand mixing with intimate contact only with personal protective equipment available, manual maintenance (cleaning and repair) of machinery, transfer of substance into small containers, calendaring operations, production of mixtures or articles by tableting, compression, extrusion or pelletisation and laboratory work.

Release to the environment of this substance can occur from industrial use: formulation of mixtures, formulation in materials and as processing aid. Other release to the environment of this substance is likely to occur from: indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), outdoor use and indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters).

### Formulation or re-packing

This substance is used in the following products: polymers, adhesives and sealants, coating products, fillers, putties, plasters, modelling clay and pH regulators and water treatment products. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed processes with no likelihood of exposure, closed, continuous processes with occasional controlled exposure, closed batch processing in synthesis or formulation, transfer of substance into small containers, batch processing in synthesis or formulation with opportunity for exposure, mixing in open batch processes, laboratory work, production of mixtures or articles by tableting, compression, extrusion or pelletisation, calendaring operations, industrial spraying, roller or brushing applications, treatment of articles by dipping and pouring, the low energy manipulation of substances bound in materials or articles and manual maintenance (cleaning and repair) of machinery.

Release to the environment of this substance can occur from industrial use: formulation of mixtures, formulation in materials, in processing aids at industrial sites, in the production of articles, as an intermediate step in further manufacturing of another substance (use of intermediates), as processing aid and as processing aid.

### Uses at industrial sites

This substance is used in the following products: polymers, pH regulators and water treatment products, adhesives and sealants, coating products and fillers, putties, plasters, modelling clay. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following areas: mining, building & construction work, formulation of mixtures and/or re-packaging and scientific research and development. This substance is used for the manufacture of: plastic products, chemicals and furniture.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed processes with no likelihood of exposure, closed, continuous processes with occasional controlled exposure, closed batch processing in synthesis or formulation, batch processing in synthesis or formulation with opportunity for exposure, mixing in open batch processes, production of mixtures or articles by tableting, compression, extrusion or pelletisation, treatment of articles by dipping and pouring, laboratory work, calendaring operations, industrial spraying, transfer of substance into small containers, roller or brushing applications, manual maintenance (cleaning and repair) of machinery and the low energy manipulation of substances bound in materials or articles.

Release to the environment of this substance can occur from industrial use: in processing aids at industrial sites, as processing aid, as processing aid, in the production of articles, formulation of mixtures, formulation in materials and as an intermediate step in further manufacturing of another substance (use of intermediates).

### Manufacture

ECHA has no public registered data on the use of this substance in activities or processes at the workplace.

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

### Precautionary Measures and safe use

Precautions for using this substance have been recommended by its registrants under REACH, as follows:

#### Prevention statements

When handling this substance: avoid release to the environment; wear protective gloves and/or clothing, and eye and/or face protection as specified by manufacturer/supplier; avoid breathing the dust, fume, gas, mist, vapours or spray.

#### Response statements

In case of incident: If exposed or concerned: get medical advice/attention. If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water or shower. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

#### Disposal statements

The substance must be disposed in accordance with local/regional/national/international regulation.

Guidance on the safe use of the substance provided by manufacturers and importers of this substance.

### Registrants/suppliers

#### Active

- Evonik Operations GmbH, Rellinghauser Straße 1-11 45128 Essen Germany
- Galata Chemicals GmbH, Chemiestrasse 22 68623 Lampertheim 06 Germany
- REACHLaw Ltd., Vänrikinkuja 3 JK 21 FI-02600 ESPOO Helsinki Finland
- Reaxis BV, Siriusdreef 17 - 27 2132 WT Hoofddorp Netherlands
- Schill+Seilacher "Struktol" GmbH Hamburg, Moorfleeter Straße 28 22113 Hamburg Germany
- Shekoy Chemicals Europe B.V., Kromme Spieringweg 431 2141 AH Vijfhuizen Netherlands
- TIB Chemicals AG, Muelheimer Str. 16-22 68219 Mannheim Germany
- Umicore Specialty Materials Brugge, Kleine Pathoekeweg 82 8000 Brugge Belgium

#### Inactive

- DOW BENELUX B.V., Postbus 48 4530 AA Terneuzen Netherlands
- DOW BENELUX B.V. OR-3, Postbus 48 4530 AA Terneuzen Netherlands

## Substance names and other identifiers

### Regulatory process names

Tin bis(2-ethylhexanoate) EC Inventory, REACH pre-registration, Other

### Translated names

### CAS names

Hexanoic acid, 2-ethyl-, tin(2+) salt (2:1) Other

### IUPAC names

2-ethylhexanoate; tin(+2) cation C&L Inventory  
 2-ethylhexanoate; tin(2+) C&L Inventory  
 2-ethylhexanoate; tin(2+) Other  
 Bis(2-ethylhexanoate) di stagno C&L Inventory  
 Hexanoic acid, 2-ethyl-, tin(2+) salt C&L Inventory  
 Hexanoic acid, 2-ethyl-, tin(2[plus]) salt C&L Inventory

### Trade names

2-Ethylhexanoic acid, tin(II) salt Registration dossier  
 Bis(2-ethylhexanoate)tin Registration dossier  
 Ethylhexanoic acid tin(2+) salt Registration dossier  
 FASCAT 2003 CATALYST C&L Inventory  
 Hexanoic acid, 2-ethyl, tin salt Registration dossier  
 Metatin(TM) Catalyst S-26 Registration dossier

### Other names

### Other identifiers

301-10-0 CAS number EC Inventory, C&L Inventory, Registration dossier, REACH pre-registration, Other

Hexanoic acid, 2-ethyl-, tin(2+) salt C&L Inventory  
 Stannous 2-ethylhexanoate C&L Inventory  
 Stannous Hexanoate C&L Inventory  
 Stannous octoate Registration dossier  
 tin(2+) bis(2-ethylhexanoate) Registration dossier, Other  
 Tin(II) 2-Ethylhexanoate C&L Inventory  
 Tin(II) octoate C&L Inventory

Stannous ethylhexanoate Registration dossier  
 Stannous-2-ethyl hexanoate Registration dossier  
 Tin 2-ethylhexanoate Registration dossier  
 Tin II octoate Registration dossier  
 Tin(II) bis(2-ethylhexanoate) Registration dossier  
 Tin(II) ethylhexanoate Registration dossier

75831-41-3 CAS number Other

## Scientific properties

### Physical and chemical properties

This section provides physicochemical information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

## Appearance/physical state / colour

### Study results

1 study submitted  
1 study processed

### Type of Study provided

**C** Summaries

1 summary submitted  
1 summary processed

#### **C** Physical state at 20°C and 1013 hPa

Liquid (100%) [1]

#### **C** Form

Viscous (100%) [1]

#### **C** Odour

Other (100%) [1]

#### **C** Substance type

Organometallic (100%) [1]

#### Studies with data



Key study

1

#### Data waiving

no waivers

#### Physical state at 20°C and 1013 hPa

Liquid (100%)

## Melting/freezing point

### Study results

1 study submitted  
1 study processed

### Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

#### **R** Melting / freezing point

9 °C @ 101.3 kPa [1]

#### Studies with data



Key study

1

#### Data waiving

no waivers

#### Melting / freezing point at 101 325 Pa

9 °C

## Boiling point

### Study results

1 study submitted  
0 studies processed

### Type of Study provided

### Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data



#### Data waiving

Other 1

⚠ No automatically processable data submitted

## Density

### Study results

1 study submitted  
1 study processed

### Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

#### **R** Relative density

1.26 @ 20 °C [1]

#### Studies with data



Key study

1

#### Data waiving

no waivers

#### Relative density at 20°C

1.26

## Vapour pressure

### Study results

1 study submitted  
1 study processed

### Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

#### **R** Vapour pressure

0.3 Pa @ 25 °C [1]

#### Studies with data



Key study

1

#### Data waiving

no waivers

#### Vapour pressure

0.3 Pa @ 20 °C

### Partition coefficient

Study results

2 studies submitted  
0 studies processed

Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**⚠** No automatically processable data submitted

Studies  
with data

			
Supporting study	1		

Data waiving  
Other

1

Log Kow (Log Pow)  
2.64 @ 25 °C

### Water solubility

Study results

3 studies submitted  
1 studies processed

Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**R** Water solubility (mass/vol.)  
238 - 4 585 mg/L @ 20 °C and pH 4 - 9 [3]

Studies  
with data

			
Key study	1		
Supporting study	2		

Data waiving  
no waivers

Water solubility  
4.5 g/L @ 20 °C

Solubility in organic solvents / fat solubility

**⚠** Data not provided by the registrant

### Surface tension

Study results

1 study submitted  
1 study processed




Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**R** Surface tension  
55.9 mN/m @ 1 g/L and 20.5 °C [1]

Studies  
with data

			
Key study	1		

Data waiving  
no waivers

Surface tension at 20 °C  
55.9 mN/m @ 1 mg/L

### Flash point

Study results

1 study submitted  
1 study processed


Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**R** Flash point  
137 °C @ 101.3 kPa [1]

Studies  
with data

			
Key study	1		

Data waiving  
no waivers

Flash point at 101 325 Pa  
137 °C

### Auto flammability

Study results

1 study submitted  
1 study processed

Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**R** Autoflammability / self-ignition  
400 °C @ 101.05 - 101.11 kPa [1]

Studies  
with data

			
Key study	1		

Data waiving  
no waivers

Autoflammability / self-ignition at 101 325 Pa  
400 °C

### Flammability

Study results

1 study submitted  
1 study processed

Type of Study provided

**C** Summaries

1 summary submitted  
1 summary processed

**C** Interpretation of results  
Non flammable (100%) [1]

Studies  
with data

			
Key study	1		

Data waiving  
no waivers

Flammability  
Non flammable (100%)

## Explosiveness

Study results

1 study submitted  
0 studies processed

Type of Study provided

☐ C Summaries

1 summary submitted  
1 summary processed

 No automatically processable data submitted

Studies  
with data



Data waiving  
Other

1

**Explosiveness**  
Non-explosive (100%)

## Oxidising

Study results

1 study submitted  
0 studies processed

Type of Study provided

☐ C Summaries

1 summary submitted  
1 summary processed

 No automatically processable data submitted

Studies  
with data



Data waiving  
no waivers

Key study

1

**Oxidising**  
No (100%)

Oxidation reduction potential

 Data not provided by the registrant

pH

 Data not provided by the registrant

## Dissociation constant

Study results

1 study submitted  
1 study processed

Type of Study provided

☐ R Summaries

1 summary submitted  
1 summary processed

☐ C **Dissociating properties**  
Yes (100%) [1]

☐ R **Dissociation constant**  
5.09 @ 20 °C [1]

Studies  
with data



Data waiving  
no waivers

Key study

1

**pKa at 20 °C**  
5.09

## Viscosity

Study results

1 study submitted  
1 study processed

Type of Study provided

☐ R Summaries

1 summary submitted  
1 summary processed

☐ R **kinematic viscosity (in mm<sup>2</sup>/s)**  
88.6 - 306 [2]

Studies  
with data



Data waiving  
no waivers

Key study

1

**Static viscosity at 20 °C**  
306 mm<sup>2</sup>/s

## Environmental fate and pathways

This section provides environmental fate and pathways information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

## Phototransformation in air

Study results

1 study submitted  
0 studies processed

Type of Study provided

☐ R Summaries

1 summary submitted  
1 summary processed

 No automatically processable data submitted

Studies  
with data



Data waiving  
no waivers

Supporting  
study

1

**Half life in air**  
38.9 h



## Hydrolysis

Study results

1 study submitted  
0 studies processed

Type of Study provided

Summaries

1 summary submitted  
0 summaries processed

⚠ Study data not processed for brief profile

Studies  
with data



Data waiving

Other

1

⚠ No automatically processable data submitted

Phototransformation in water

⚠ Data not provided by the registrant

Phototransformation in soil

⚠ Data not provided by the registrant

## Biodegradation in water - screening tests

Study results

4 studies submitted  
2 studies processed

Type of Study provided

☒ C Summaries

1 summary submitted  
1 summary processed

☒ C Interpretation of results

Readily biodegradable (100%) [2]

Studies  
with data



Data waiving

Other

1

Biodegradation in water

Readily biodegradable (100%)

Key study

1

1

Supporting  
study

1

## Biodegradation in water & sediment - simulation tests

Study results

0 studies submitted  
0 studies processed

Type of Study provided

Summaries

1 summary submitted  
0 summaries processed

⚠ Study data not processed for brief profile

Studies  
with data



Data waiving

no waivers

⚠ No automatically processable data submitted

## Biodegradation in soil

Study results

1 study submitted  
0 studies processed

Type of Study provided

Summaries

1 summary submitted  
0 summaries processed

⚠ Study data not processed for brief profile

Studies  
with data



Data waiving

Other

1

⚠ No automatically processable data submitted

## Bioaccumulation: aquatic / sediment

Study results

1 study submitted  
0 studies processed

Type of Study provided

Summaries

1 summary submitted  
0 summaries processed

⚠ Study data not processed for brief profile

Studies  
with data



Data waiving

Other

1

⚠ No automatically processable data submitted

Bioaccumulation: terrestrial

⚠ Data not provided by the registrant

## Adsorption/desorption

### Study results

2 studies submitted  
0 studies processed

### Type of Study provided

**R** Summaries

1 summary submitted  
1 summary processed

**⚠** No automatically processable data submitted

### Studies with data



Other

1

### Data waiving

Other

1

**Koc at 20°C**  
41.3

Henry's law constant (H)

**⚠** Data not provided by the registrant

Distribution modelling

**⚠** Data not provided by the registrant

## Ecotoxicological information

This section provides ecotoxicological information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

## Predicted No-Effect Concentration (PNEC)

**R** Summaries

1 summary submitted  
1 summary processed

The Predicted No-Effect Concentration (PNEC) value is the concentration of a substance below which adverse effects in the environment are not expected to occur. Please note that when more than one summary is provided, PNEC values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.

### Hazard for Aquatic Organisms

Freshwater	6.9 µg/L (1)
Intermittent releases (freshwater)	69 µg/L (1)
Marine water	690 ng/L (1)
Intermittent releases (marine water)	-
Sewage treatment plant (STP)	6.5 mg/L (1)
Sediment (freshwater)	53 µg/kg sediment dw (1)
Sediment (marine water)	5 µg/kg sediment dw (1)

### Hazard for Air

Air	No hazard identified (1)
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### Hazard for Terrestrial Organism

Soil	6 µg/kg soil dw (1)
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### Hazard for Predators

Secondary poisoning	No potential for bioaccumulation (1)
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## Short-term toxicity to fish

### Study results

1 study submitted  
1 study processed

### Type of Study provided

### Summaries

1 summary submitted  
0 summaries processed

**P/R** Results

LC50 (4 days) 116 mg/L [1]  
NOEC (4 days) 68 mg/L [1]

### Studies with data



Key study

1

### Data waiving

no waivers

**⚠** No automatically processable data submitted

## Long-term toxicity to fish

### Study results

1 study submitted  
0 studies processed

### Type of Study provided

### Summaries

1 summary submitted  
0 summaries processed

**⚠** No automatically processable data submitted

### Studies with data



### Data waiving

Exposure cons.

1

**⚠** No automatically processable data submitted

### Short-term toxicity to aquatic invertebrates

#### Study results

1 study submitted  
1 study processed

#### Type of Study provided

#### Summaries

1 summary submitted  
0 summaries processed

#### P/R Results

EC50 (48 h) 100 mg/L [1]  
EC50 (24 h) 100 mg/L [1]  
NOEC (48 h) 100 mg/L [1]

#### Studies with data



Key study

1

#### Data waiving

no waivers

⚠ No automatically processable data submitted

### Long-term toxicity to aquatic invertebrates

#### Study results

1 study submitted  
0 studies processed

#### Type of Study provided

#### Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data



Key study

1

#### Data waiving

Exposure cons. 1

⚠ No automatically processable data submitted

### Toxicity to aquatic algae and cyanobacteria

#### Study results

1 study submitted  
1 study processed

#### Type of Study provided

#### R Summaries

1 summary submitted  
1 summary processed

#### P/R Results

EC50 (72 h) 6.9 mg/L [1]  
NOEC (72 h) 220 - 540 µg/L [2]

#### Studies with data



Key study

1

#### Data waiving

no waivers

EC50 for freshwater algae  
6.9 mg/L

EC10 or NOEC for freshwater algae  
540 µg/L

### Toxicity to aquatic plants other than algae

⚠ Data not provided by the registrant

### Toxicity to microorganisms

#### Study results

2 studies submitted  
0 studies processed

#### Type of Study provided

#### Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data



Supporting study

1

#### Data waiving

Other 1

⚠ No automatically processable data submitted

### Sediment toxicity

#### Study results

1 study submitted  
0 studies processed

#### Type of Study provided

#### Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data



Key study

1

#### Data waiving





Exposure cons. 1

⚠ No automatically processable data submitted





### Endocrine disrupter testing in aquatic vertebrates – in vivo

⚠ Data not provided by the registrant





### Toxicity to terrestrial macroorganisms except arthropods

Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
⚠ No automatically processable data submitted		<b>Studies with data</b>    	<b>Data waiving</b> Exposure cons.	1
			⚠ No automatically processable data submitted	





### Toxicity to terrestrial arthropods

Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
⚠ No automatically processable data submitted		<b>Studies with data</b>    	<b>Data waiving</b> Exposure cons.	1
			⚠ No automatically processable data submitted	





### Toxicity to terrestrial plants

Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
⚠ No automatically processable data submitted		<b>Studies with data</b>    	<b>Data waiving</b> Exposure cons.	1
			⚠ No automatically processable data submitted	

### Toxicity to soil microorganisms

Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
⚠ No automatically processable data submitted		<b>Studies with data</b>    	<b>Data waiving</b> Exposure cons.	1
			⚠ No automatically processable data submitted	

### Toxicity to birds

Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
⚠ No automatically processable data submitted		<b>Studies with data</b>    	<b>Data waiving</b> Other	1
			⚠ No automatically processable data submitted	

### Toxicity to mammals

⚠ Data not provided by the registrant

## Toxicological information

This section provides toxicological information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

## Derived No- or Minimal Effect Level (DN(M)EL)

M/C Summaries

1 summary submitted  
1 summary processed

The derived no- or minimum effect level (DN(M)EL) is the level of exposure above which a human should not be exposed to a substance. Please note that when more than one summary is provided, DN(M)EL values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.

### Data for WORKERS

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 8 mg/m³	developmental toxicity / teratogenicity
Acute /short term:	No hazard identified	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	
DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(Medium hazard (no threshold derived))	-
Acute /short term:	(Medium hazard (no threshold derived))	-
Local Effects		
Long-term:	(Medium hazard (no threshold derived))	-
Acute /short term:	(Medium hazard (no threshold derived))	-
EYE Exposure		
High hazard (no threshold derived)		

### Data for the GENERAL POPULATION

INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 4.8 mg/m³	developmental toxicity / teratogenicity
Acute /short term:	No hazard identified	
Local Effects		
Long-term:	No hazard identified	
Acute /short term:	No hazard identified	
DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(Medium hazard (no threshold derived))	-
Acute /short term:	(Medium hazard (no threshold derived))	-
Local Effects		
Long-term:	(Medium hazard (no threshold derived))	-
Acute /short term:	(Medium hazard (no threshold derived))	-
ORAL Exposure	Threshold	Most sensitive study
Systemic Effects		
Long-term:	(DNEL) 900 µg/kg bw/day	developmental toxicity / teratogenicity
Acute /short term:	No hazard identified	
EYE Exposure		
High hazard (no threshold derived)		

Toxicokinetics, metabolism, and distribution



Study results

Study data: basic toxicokinetics 6 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

Type of Study provided

Study data: basic toxicokinetics

Studies with data				
Key study	2	2		
Supporting study		2		

Data waiving

no waivers

M/C

Summaries

1 summary submitted  
1 summary processed

Bioaccumulation potential:

Low bioaccumulation potential

Study data: dermal absorption 0 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

Study data: dermal absorption

Studies with data				

Data waiving

no waivers

## Acute toxicity

### Study results

oral 2 studies submitted  
1 study processed

#### P/R Results

LD50 5 870 mg/kg bw (rat) [1]

#### M/C Interpretations of results

Practically nontoxic [1]

inhalation 1 study submitted  
0 studies processed

⚠ No automatically processable data submitted

dermal 2 studies submitted  
1 study processed

#### P/R Results

LD50 2 000 mg/kg bw (rat) [1]

#### M/C Interpretations of results

Not classified [1]

other routes 0 studies submitted  
0 studies processed

⚠ No data available

### Type of Study provided

oral

#### Studies with data

Key study

1

Supporting study

1

#### Data waiving

no waivers

inhalation

#### Studies with data

#### Data waiving

Other

1

dermal

#### Studies with data

Key study

1

Supporting study

1

#### Data waiving

no waivers

other routes

#### Studies with data

#### Data waiving

no waivers

### Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Irritation / corrosion

### Study results

Study data: skin 3 studies submitted  
0 studies processed





⚠ Study data not processed for brief profile

Study data: eye 5 studies submitted  
0 studies processed




⚠ Study data not processed for brief profile

### Type of Study provided

#### Study data: skin

Studies with data						Data waiving
						
Key study	1					Sci. unjustified 1
Supporting study	1					

#### Study data: eye

Studies with data						Data waiving
						
Key study	1					Sci. unjustified 1
Supporting study	2			1		

M/C Summaries

1 summary submitted  
1 summary processed

#### Skin

No adverse effect observed (not irritating)

#### Eye

Adverse effect observed (irreversible damage)

#### Respiratory

No study available

## Sensitisation

### Study results

Study data: skin 3 studies submitted  
0 studies processed





⚠ Study data not processed for brief profile

Study data: respiratory 0 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

### Type of Study provided

#### Study data: skin

Studies with data						Data waiving
						
Key study	1					Sci. unjustified 1
Supporting study	1					

#### Study data: respiratory

Studies with data						Data waiving
						
						no waivers

M/C Summaries

1 summary submitted  
1 summary processed

#### Skin sensitisation

Adverse effect observed (sensitising)

#### Respiratory sensitisation

No study available



## Repeated dose toxicity

### Study results

Study data: oral 11 studies submitted  
4 studies processed

#### P/R Results

NOAEL (rat): 303 - 360 mg/kg bw/day [4]  
NOEL (rat): 71 - 187 mg/kg bw/day [4]  
NOEL (rat): 1 900 ppm [2]

### Type of Study provided

Study data: oral

#### Studies with data

Key study	2	2		
Supporting study	1	6		

#### Data waiving

no waivers

M/C

Summaries

1 summary submitted  
1 summary processed

### Oral route - systemic effects:

Adverse effect observed NOAEL 300 mg/kg bw/day (subchronic, rat)

Study data: inhalation 1 study submitted  
0 studies processed

⚠ No automatically processable data submitted

Study data: inhalation

#### Studies with data

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#### Data waiving

Other 1

Study data: dermal 1 study submitted  
0 studies processed

⚠ No automatically processable data submitted

Study data: dermal

#### Studies with data

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#### Data waiving

Other 1

## Genetic toxicity

### Study results

Study data: in vitro 3 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

### Type of Study provided

Study data: in vitro

#### Studies with data

Key study	3			
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#### Data waiving

no waivers

M/C

Summaries

1 summary submitted  
1 summary processed

### Toxicity - InVitro

No adverse effect observed (negative)

### Toxicity - InVivo

No study available

Study data: in vivo 0 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

Study data: in vivo

#### Studies with data

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#### Data waiving

no waivers

Carcinogenicity				
Study results	5 studies submitted 0 studies processed	Type of Study provided		Summaries 1 summary submitted 0 summaries processed
⚠ Study data not processed for brief profile		<div> <b>Studies with data</b> <div> <div></div> <div></div> <div></div> <div></div> </div> </div>		<b>Data waiving</b> no waivers
		Supporting study 3 2		⚠ No automatically processable data submitted

Toxicity to reproduction				
Study results		Type of Study provided		Summaries 1 summary submitted 0 summaries processed
Study data: reproduction 2 studies submitted 0 studies processed		Study data: reproduction		⚠ No automatically processable data submitted
⚠ Study data not processed for brief profile		<div> <b>Studies with data</b> <div> <div></div> <div></div> <div></div> <div></div> </div> </div>		<b>Data waiving</b> no waivers
		Key study 1 1		
Study data: developmental 8 studies submitted 0 studies processed		Study data: developmental		
⚠ Study data not processed for brief profile		<div> <b>Studies with data</b> <div> <div></div> <div></div> <div></div> <div></div> </div> </div>		<b>Data waiving</b> no waivers
		Key study 2 2		
		Supporting study 1 3		
Study data: other studies 0 studies submitted 0 studies processed		Study data: other studies		
⚠ Study data not processed for brief profile		<div> <b>Studies with data</b> <div> <div></div> <div></div> <div></div> <div></div> </div> </div>		<b>Data waiving</b> no waivers

Neurotoxicity	⚠ Data not provided by the registrant
Immunotoxicity	⚠ Data not provided by the registrant
Endocrine disrupter mammalian screening - in vivo	⚠ Data not provided by the registrant

Type of study	Type of aggregation
 Experimental results	<input type="checkbox"/> C Concatenated distinct values
Read across based on grouping of substance (category approach) or	<input type="checkbox"/> R Range of values
 Read-across from supporting substance (structural analogue or surrogate)	<input type="checkbox"/> P/R Prioritisation (Eco)Toxicology AND Range of values
 Estimated by calculation or (Q)SAR	<input type="checkbox"/> M/C Most Conservative of values
Experimental study planned, other or unspecified	

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