

# Calcium carbonate

## Substance identity

EC / List no.: 207-439-9

CAS no.: 471-34-1, 7440-70-

2

Mol. formula:  $\text{CaCO}_3$  $\text{Ca}^{2+}$ 

## Hazard classification & labelling



**Danger!** According to the classification provided by companies to ECHA in REACH registrations this substance causes serious eye damage, causes skin irritation and may cause respiratory irritation.

At least one company has indicated that the substance classification is affected by impurities or additives.

## About this substance

This substance is manufactured and/or imported in the European Economic Area in 1 000 000 - 10 000 000 tonnes per year.

This substance is used in the following products: pH regulators and water treatment products, lubricants and greases, hydraulic fluids, adhesives and sealants, coating products, fertilisers, adsorbents, fillers, putties, plasters, modelling clay, heat transfer fluids, paper chemicals and dyes, polymers, metal working fluids, biocides (e.g. disinfectants, pest control products), laboratory chemicals, cosmetics and personal care products, metals, metal surface treatment products, textile treatment products and dyes, water treatment chemicals, air care products, anti-freeze products, finger paints, non-metal-surface treatment products, leather treatment products, plant protection products, photo-chemicals, polishes and waxes, semiconductors, washing & cleaning products, water softeners, inks and toners, extraction agents, welding & soldering products, explosives, perfumes and fragrances, pharmaceuticals and fuels. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following areas: mining, agriculture, forestry and fishing, formulation of mixtures and/or re-packaging, building & construction work, health services, municipal supply (e.g. electricity, steam, gas, water) and sewage treatment, printing and recorded media reproduction and scientific research and development. This substance is used for the manufacture of: chemicals, mineral products (e.g. plasters, cement), pulp, paper and paper products, textile, leather or fur, rubber products, plastic products, food products, wood and wood products, metals, fabricated metal products, furniture, electrical, electronic and optical equipment and machinery and vehicles.

Release to the environment of this substance can occur from industrial use: in processing aids at industrial sites, manufacturing of the substance, of substances in closed systems with minimal release, formulation of mixtures, formulation in materials, as an intermediate step in further manufacturing of another substance (use of intermediates), as processing aid, industrial abrasion processing with low release rate (e.g. cutting of textile, cutting, machining or grinding of metal), industrial abrasion processing with high release rate (e.g. sanding operations or paint stripping by shot-blasting), in the production of articles, as processing aid and for thermoplastic manufacture. 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, indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment), outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)), indoor use in long-life materials with high release rate (e.g. release from fabrics, textiles during washing, removal of indoor paints), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters) and outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids).

This substance can be found in complex articles, with no release intended: vehicles, machinery, mechanical appliances and electrical/electronic products (e.g. computers, cameras, lamps, refrigerators, washing machines) and electrical batteries and accumulators. This substance can be found in products with material based on: stone, plaster, cement, glass or ceramic (e.g. dishes, pots/pans, food storage containers, construction and isolation material), wood (e.g. floors, furniture, toys), plastic (e.g. food packaging and storage, toys, mobile phones), paper (e.g. tissues, feminine hygiene products, nappies, books, magazines, wallpaper), leather (e.g. gloves, shoes, purses, furniture), rubber (e.g. tyres, shoes, toys), fabrics, textiles and apparel (e.g. clothing, mattress, curtains or carpets, textile toys) and metal (e.g. cutlery, pots, toys, jewellery). This substance is intended to be released from scented: clothes, toys, paper products, CDs and eraser. This substance is intended to be released from: packaging material for metal parts (releasing grease/corrosion inhibitors).

The InfoCard summarises the non-confidential data on substances as held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The InfoCard is automatically generated. Information requirements under different legislative frameworks may therefore not be up-to-date or complete. Substance manufacturers and importers are responsible for consulting official publications. This InfoCard is covered by the ECHA Legal Disclaimer.



about INFOCARD - Last updated: 16/11/2017



About this substance

General

This substance is manufactured and/or imported in the European Economic Area in 1 000 000 - 10 000 000 tonnes per year.

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

Consumer Uses

ECHA has no public registered data indicating whether or in which chemical products the substance might be used.

Release to the environment of this substance can occur from industrial use: manufacturing of the substance, formulation of mixtures, formulation in materials, in processing aids at industrial sites and of substances in closed systems with minimal release. 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, indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)), indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment) and indoor use in long-life materials with high release rate (e.g. release from fabrics, textiles during washing, removal of indoor paints).

Article service life

This substance is used in the following activities or processes at workplace: the low energy manipulation of substances bound in materials or articles, open transfer and processing with minerals/metals at elevated temperature, production of mixtures or articles by tableting, compression, extrusion or pelletisation, hot work operations with metals (e.g. welding, soldering, gouging, brazing, flame cutting), high energy work-up of substances bound in materials or articles (e.g. hot rolling/forming, grinding, mechanical cutting, drilling or sanding) and potentially closed industrial processing with minerals/metals at elevated temperature (e.g. smelters, furnaces, refineries, coke ovens).

Other release to the environment of this substance is likely to occur from: outdoor use, indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)) and indoor use in long-life materials with high release rate (e.g. release from fabrics, textiles during washing, removal of indoor paints).

This substance can be found in complex articles, with no release intended: vehicles, machinery, mechanical appliances and electrical/electronic products (e.g. computers, cameras, lamps, refrigerators, washing machines) and electrical batteries and accumulators. This substance can be found in products with material based on: stone, plaster, cement, glass or ceramic (e.g. dishes, pots/pans, food storage containers, construction and isolation material), wood (e.g. floors, furniture, toys), plastic (e.g. food packaging and storage, toys, mobile phones), paper (e.g. tissues, feminine hygiene products, nappies, books, magazines, wallpaper), leather (e.g. gloves, shoes, purses, furniture), rubber (e.g. tyres, shoes, toys), metal (e.g. cutlery, pots, toys, jewellery) and fabrics, textiles and apparel (e.g. clothing, mattress, curtains or carpets, textile toys). This substance is intended to be released from scented: clothes, toys, paper products, CDs and eraser. This substance is intended to be released from: packaging material for metal parts (releasing grease/corrosion inhibitors).

Widespread uses by professional workers

ECHA has no public registered data indicating whether or in which chemical products the substance might be used.

This substance is used in the following areas: mining. This substance is used for the manufacture of: chemicals.

This substance is used in the following activities or processes at workplace: transfer of chemicals.

Release to the environment of this substance can occur from industrial use: manufacturing of the substance, formulation of mixtures, formulation in materials, in processing aids at industrial sites and of substances in closed systems with minimal release. 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, indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and break fluids), outdoor use in long-life materials with low release rate (e.g. metal, wooden and plastic construction and building materials), outdoor use in long-life materials with high release rate (e.g. tyres, treated wooden products, treated textile and fabric, brake pads in trucks or cars, sanding of buildings (bridges, facades) or vehicles (ships)), indoor use in long-life materials with low release rate (e.g. flooring, furniture, toys, construction materials, curtains, foot-wear, leather products, paper and cardboard products, electronic equipment) and indoor use in long-life materials with high release rate (e.g. release from fabrics, textiles during washing, removal of indoor paints).

Formulation or re-packing

ECHA has no public registered data indicating whether or in which chemical products the substance might be used.

This substance is used in the following activities or processes at workplace: transfer of chemicals.

Other release to the environment of this substance is likely to occur from: outdoor use and indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners).

Uses at industrial sites

ECHA has no public registered data indicating whether or in which chemical products the substance might be used.

This substance is used in the following areas: mining. This substance is used for the manufacture of: chemicals.

This substance is used in the following activities or processes at workplace: transfer of chemicals.

Release to the environment of this substance can occur from industrial use: in processing aids at industrial sites and as an intermediate step in further manufacturing of another substance (use of intermediates). Other release to the environment of this substance is likely to occur from: outdoor use and indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners).

Manufacture

This substance is used in the following activities or processes at workplace: transfer of chemicals.

Other release to the environment of this substance is likely to occur from: outdoor use and indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners).

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: 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: Call a poison center or doctor/physician if you feel unwell. If in eyes: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. If on skin: wash with soap and water.

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

- 3M Belgium BVBA/SPRL, Hermeslaan 7 1831 Diegem Belgium
- Ahlstrom-Munksjö Aspa Bruk AB, Fabriksvägen SE-696 80 Aspabruk Sweden
- AlzChem Trostberg GmbH, Dr.-Albert-Frank-Straße 32 83308 Trostberg Bayern Germany
- Anström-Munksjö Aspa Bruk AB, Fabriksvägen SE-696 80 Aspabruk Sweden
- Ashland Services BV (0311), Marten Meesweg 8-10 3068 AV Rotterdam Netherlands
- AVR-Afvalverwerking BV, Professor Gerbrandyweg 10 3197 KK Rotterdam-Botlek Netherlands
- B-Lands Consulting (8111115-9), World Trade Center, 5 Place Robert Schuman - BP 1516 38025 Grenoble France France
- B-Lands Consulting (811385-0), World Trade Center, 5 Place Robert Schuman - BP 1516 38025 Grenoble France France
- BASF SE, Carl-Bosch-Str. 38 67056 Ludwigshafen am Rhein Rheinland-Pfalz Germany
- BillerudKorsnäs Skog & Industri Aktiebolag, Korsnäsverken SE 801 81 Gävle Sweden



## Other names

### IUPAC names

- 
- 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecan-1-oate
- 2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate
- 2-ethylhexyl 2-[[[(2-ethylhexyl)oxyl-2-oxoethyl)sulfanyl]dioctylstannyl)sulfanyl]acetate
- 8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 10-ethyl-4,4-dioctyl-7-oxo-, 2-ethylhexyl ester
- Di-n-octylzinn-bis-(2-ethylhexylthioglykolat)
- Dioctyltinbis(2-ethylhexyl mercaptoacetate)
- DOTe, DOT(EHMA)2, Dioctyltin bis(2-ethylhexyl mercaptoacetate)

### Regulatory processes names

- 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate
- 2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTe)
- 8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 10-ethyl-4,4-dioctyl-7-oxo-, 2-ethylhexyl ester

### Trade names

- 10-éthyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate de 2-éthylhexyle
- 2-Ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate
- 8-Oxa-3,5-dithia-4-stannatetradecanoic acid, 10-ethyl-4,4-dioctyl-7-oxo-, 2-ethylhexyl ester
- Thermolite 890

### Other names

- DOTe

## 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]		Studies with data	Data waiving	Physical state at 20°C and 1013 hPa Liquid (100%)
C Form Not specified (100%) [1]		Key study	no waivers	
C Odour Other (100%) [1]		Supporting study		
C Substance type Organometallic (100%) [1]		Weight of evidence		
		Other		

### Melting/freezing point

Study results	3 studies submitted 0 studies processed	Type of Study provided	R Summaries	1 summary submitted 1 summary processed
Δ No automatically processable data submitted		Studies with data	Data waiving	Melting / freezing point at 101 325 Pa -39 °C
		Key study	Not feasible	
		Supporting study	Sci. unjustified	
		Weight of evidence	Exposure cons.	
		Other	Other	1

### Boiling point

Study results	2 studies submitted 0 studies processed	Type of Study provided	R Summaries	1 summary submitted 1 summary processed
Δ No automatically processable data submitted		Studies with data	Data waiving	Boiling point at 101 325 Pa 275 °C
		Key study	no waivers	
		Supporting study		
		Weight of evidence		
		Other		

### Density

Study results	4 studies submitted 0 studies processed	Type of Study provided	R Summaries	1 summary submitted 1 summary processed
Δ No automatically processable data submitted		Studies with data	Data waiving	Relative density at 20°C 1.07
		Key study	no waivers	
		Supporting study		
		Weight of evidence		
		Other		

**Explosiveness**

Study results 2 studies submitted  
0 studies processed

**Type of Study provided**

**C Summaries** 3 summaries submitted  
3 summaries processed

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📊	📈	Data waiving
Key study					Not feasible
Supporting study					Sci. unjustified 2
Weight of evidence					Exposure cons.
Other					Other

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

**Oxidising**

Study results 2 studies submitted  
0 studies processed

**Type of Study provided**

**C Summaries** 3 summaries submitted  
3 summaries processed

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📊	📈	Data waiving
Key study					Not feasible
Supporting study					Sci. unjustified 2
Weight of evidence					Exposure cons.
Other					Other

**Oxidising**  
Non oxidising (100%)

**Oxidation reduction potential**

⚠ Data not provided by the registrant

**pH**

⚠ Data not provided by the registrant

**Dissociation constant**

Study results 1 study submitted  
0 studies processed

**Type of Study provided**

**Summaries** 0 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📊	📈	Data waiving
Key study					Not feasible 1
Supporting study					Sci. unjustified
Weight of evidence					Exposure cons.
Other					Other

⚠ No data available

**Viscosity**

Study results 1 study submitted  
0 studies processed

**Type of Study provided**

**Summaries** 0 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📊	📈	Data waiving
Key study					Not feasible
Supporting study					Sci. unjustified 1
Weight of evidence					Exposure cons.
Other					Other

⚠ No data available

## 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**

⚠ Data not provided by the registrant

**Hydrolysis**

Study results 2 studies submitted  
0 studies processed

**Type of Study provided**

**Summaries** 0 summaries submitted  
0 summaries processed

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📊	📈	Data waiving
Key study					Not feasible
Supporting study					Sci. unjustified 2
Weight of evidence					Exposure cons.
Other					Other

⚠ No data available

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

2 studies submitted  
1 study processed

Type of Study provided

**C** Summaries

3 summaries submitted  
1 summary processed

**C** Interpretation of results  
Readily biodegradable (100%) [1]

Studies with data	⚠	📄	📊	📈
Key study	1			
Supporting study				
Weight of evidence				
Other				

Data waiving	
Not feasible	
Sci. unjustified	
Exposure cons.	
Other	1

Biodegradation in water  
Readily biodegradable (100%)

#### 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	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

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	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving	
Not feasible	1
Sci. unjustified	
Exposure cons.	
Other	

⚠ 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	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving	
Not feasible	
Sci. unjustified	
Exposure cons.	
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

Summaries

1 summary submitted  
0 summaries processed

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving	
Not feasible	2
Sci. unjustified	
Exposure cons.	
Other	

⚠ No automatically processable data submitted

Henry's law constant (H)

⚠ 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

3 summaries submitted  
3 summaries 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	No hazard identified (3)
Intermittent releases (freshwater)	No hazard identified (3)
Marine water	No hazard identified (3)
Intermittent releases (marine water)	No hazard identified (3)
Sewage treatment plant (STP)	100 mg/L (3)
Sediment (freshwater)	No hazard identified (3)
Sediment (marine water)	No hazard identified (3)

## Hazard for Air

Air	No hazard identified (3)
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## Hazard for Terrestrial Organism

Soil	No hazard identified (3)
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## Hazard for Predators

Secondary poisoning	No potential for bioaccumulation (3)
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## Short-term toxicity to fish

Study results

3 studies submitted  
0 studies processed

## Type of Study provided

Summaries

3 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Studies with data

Key study

1

2

Supporting study

Weight of evidence

Other

## Data waiving

no waivers

⚠ No automatically processable data submitted

## Long-term toxicity to fish

Study results

2 studies submitted  
0 studies processed

## Type of Study provided

Summaries

2 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Studies with data

Key study

Supporting study

1

Weight of evidence

Other

## Data waiving

Not feasible

Sci. unjustified

Exposure cons.

Other

1

⚠ No automatically processable data submitted

## Short-term toxicity to aquatic invertebrates

Study results

3 studies submitted  
0 studies processed

## Type of Study provided

Summaries

3 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Studies with data

Key study

1

2

Supporting study

Weight of evidence

Other

## 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

2 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Studies with data

Key study

Supporting study

Weight of evidence

Other

## Data waiving

Not feasible

Sci. unjustified

Exposure cons.

Other

1

⚠ No automatically processable data submitted

### Toxicity to aquatic algae and cyanobacteria

#### Study results

3 studies submitted  
1 study processed

#### Type of Study provided

#### Summaries

3 summaries submitted  
0 summaries processed

#### P/R Results

EC50 (72 h) 14 mg/L [1]  
NOEC (72 h) 14 mg/L [1]  
EC10 (72 h) 14 mg/L [1]  
EC20 (72 h) 14 mg/L [1]

#### Studies with data

Key study	2	1		
Supporting study				
Weight of evidence				
Other				

#### Data waiving

no waivers

⚠ No automatically processable data submitted

Toxicity to aquatic plants other than algae

⚠ Data not provided by the registrant

### Toxicity to microorganisms

#### Study results

3 studies submitted  
1 study processed

#### Type of Study provided

#### Summaries

3 summaries submitted  
0 summaries processed

#### P/R Results

EC50 (3 h) 1 g/L [1]  
NOEC (3 h) 1 g/L [1]

#### Studies with data

Key study	1	2		
Supporting study				
Weight of evidence				
Other				

#### Data waiving

no waivers

⚠ No automatically processable data submitted

### Sediment toxicity

#### Study results

1 study submitted  
0 studies processed

#### Type of Study provided

#### Summaries

2 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data

Key study				
Supporting study				
Weight of evidence				
Other				

#### Data waiving

Not feasible  
Sci. unjustified 1  
Exposure cons.  
Other

⚠ 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

3 studies submitted  
1 study processed

#### Type of Study provided

#### Summaries

2 summaries submitted  
0 summaries processed

#### P/R Results

NOEC (14 days) 1 g/kg soil dw [1]  
LC50 (14 days) 1 g/kg soil dw [1]

#### Studies with data

Key study	1	1		
Supporting study				
Weight of evidence				
Other				

#### Data waiving

Not feasible  
Sci. unjustified 1  
Exposure cons.  
Other

⚠ No automatically processable data submitted

### Toxicity to terrestrial arthropods

#### Study results

2 studies submitted  
0 studies processed

#### Type of Study provided

#### Summaries

2 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

#### Studies with data

Key study				
Supporting study				
Weight of evidence				
Other				

#### Data waiving

Not feasible  
Sci. unjustified 2  
Exposure cons.  
Other

⚠ No automatically processable data submitted



Toxicity to terrestrial plants				
Study results	3 studies submitted 1 study processed	Type of Study provided		Summaries 2 summaries submitted 0 summaries processed
<b>P/R</b> Results NOEC (21 days) 1 g/kg soil dw [1] EC50 (21 days) 1 g/kg soil dw [2]		Studies with data Key study Supporting study Weight of evidence Other	Data waiving Not feasible Sci. unjustified Exposure cons. Other	No automatically processable data submitted 1

Toxicity to soil microorganisms				
Study results	2 studies submitted 1 study processed	Type of Study provided		Summaries 2 summaries submitted 0 summaries processed
<b>P/R</b> Results NOEC (28 days) 1 g/kg soil dw [1] EC50 (28 days) 1 g/kg soil dw [1]		Studies with data Key study Supporting study Weight of evidence Other	Data waiving no waivers	No automatically processable data submitted

Toxicity to birds				
Study results	3 studies submitted 0 studies processed	Type of Study provided		Summaries 2 summaries submitted 0 summaries processed
No automatically processable data submitted		Studies with data Key study Supporting study Weight of evidence Other	Data waiving Not feasible Sci. unjustified Exposure cons. Other	No automatically processable data submitted 1

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

3 summaries submitted  
3 summaries 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

Long-term: No hazard identified  
Acute /short term: No hazard identified

Long-term: (DNEL) 6.36 mg/m³ repeated dose toxicity  
Acute /short term: No hazard identified

DERMAL Exposure Threshold Most sensitive study

Long-term: No hazard identified  
Acute /short term: No hazard identified

Long-term: No hazard identified  
Acute /short term: No hazard identified

### EYE Exposure

No hazard identified

### Data for the GENERAL POPULATION

INHALATION Exposure Threshold Most sensitive study

Long-term: No hazard identified  
Acute /short term: No hazard identified

Long-term: (DNEL) 1.06 mg/m³ repeated dose toxicity  
Acute /short term: No hazard identified

DERMAL Exposure Threshold Most sensitive study

Long-term: No hazard identified  
Acute /short term: No hazard identified

Long-term: No hazard identified  
Acute /short term: No hazard identified

### ORAL Exposure Threshold Most sensitive study

Long-term: -  
Acute /short term: -

### EYE Exposure

No hazard identified

## Toxicokinetics, metabolism, and distribution

### Study results

### Type of Study provided

### Summaries

3 summaries submitted  
0 summaries processed

Study data: basic toxicokinetics 3 studies submitted  
0 studies processed

### Study data: basic toxicokinetics

⚠ No automatically processable data submitted

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📊	⚠
Key study				
Supporting study	1			
Weight of evidence	2			
Other				

Data waiving  
no waivers

Study data: dermal distribution 0 studies submitted  
0 studies processed

### Study data: dermal absorption

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📊	⚠
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving  
no waivers

Acute toxicity

Study results

oral

4 studies submitted  
1 study processed

P/R Results

LD50 2 000 mg/kg bw (rat) [1]  
LD0 2 000 mg/kg bw (rat) [1]

M/C Interpretations of results

Not classified [1]

Type of Study provided

oral

Studies with data

Key study

Supporting study

Weight of evidence

Other

Data waiving

no waivers

M/C Summaries

3 summaries submitted  
3 summaries processed

Oral route:

No adverse effect observed Discriminating dose 2 000 mg/kg bw

Inhalation route:

No adverse effect observed Discriminating conc. 3 000 mg/m³

Dermal route:

No adverse effect observed Discriminating dose 2 000 mg/kg bw

inhalation

3 studies submitted  
1 study processed

P/R Results

LC50 (4 h) 3 mg/L air (rat) [1]

M/C Interpretations of results

Not classified [1]

inhalation

Studies with data

Key study

Supporting study

Weight of evidence

Other

Data waiving

no waivers

dermal

3 studies submitted  
1 study processed

P/R Results

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

M/C Interpretations of results

Not classified [1]

dermal

Studies with data

Key study

Supporting study

Weight of evidence

Other

Data waiving

no waivers

other routes

0 studies submitted  
0 studies processed

No data available

other routes

Studies with data

Key study

Supporting study

Weight of evidence

Other

Data waiving

no waivers

## Irritation / corrosion

### Study results

Study data: skin

4 studies submitted  
0 studies processed

Study data not processed for brief profile

### Type of Study provided

Study data: skin

Studies with data

Key study

Supporting study

Weight of evidence

Other

2

1

Data waiving

Not feasible

Sci. unjustified

Exposure cons.

Other

1

M/C

Summaries

3 summaries submitted

3 summaries processed

Skin

No adverse effect observed (not irritating)

Eye

No adverse effect observed (not irritating)

Respiratory

No study available

Study data: eye

4 studies submitted  
0 studies processed

Study data not processed for brief profile

Study data: eye

Studies with data

Key study

Supporting study

Weight of evidence

Other

2

1

Data waiving

Not feasible

Sci. unjustified

Exposure cons.

Other

1



### Sensitisation

Study results

Study data: skin 4 studies submitted 0 studies processed

⚠ Study data not processed for brief profile

Type of Study provided

Study data: skin

Studies with data	⚠	📄	📊	📈
Key study	1	2		
Supporting study				
Weight of evidence				
Other				

Data waiving

Not feasible	
Sci. unjustified	1
Exposure cons.	
Other	

M/C Summaries 3 summaries submitted 3 summaries processed

**Skin sensitisation**  
No adverse effect observed (not sensitising)

**Respiratory sensitisation**  
No study available

Study data: respiratory 0 studies submitted 0 studies processed

⚠ Study data not processed for brief profile

Study data: respiratory

Studies with data	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving

no waivers	
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### Repeated dose toxicity

Study results

Study data: oral 9 studies submitted 1 study processed

P/R Results  
NOAEL (rat): 1 000 mg/kg bw/day [1]

Type of Study provided

Study data: oral

Studies with data	⚠	📄	📊	📈
Key study	1	2		
Supporting study	3	2		
Weight of evidence				
Other				

Data waiving

Not feasible	
Sci. unjustified	1
Exposure cons.	
Other	

M/C Summaries 3 summaries submitted 3 summaries processed

**Oral route - systemic effects:**  
No adverse effect observed NOAEL 1 000 mg/kg bw/day (subchronic, rat)

**Inhalation route - systemic effects:**  
No adverse effect observed NOAEC 399 mg/m³ (subchronic, rat)

**Inhalation route - local effects:**  
Adverse effect observed NOAEC 212 mg/m³ (subchronic, rat)

Study data: inhalation 8 studies submitted 1 study processed

P/R Results  
NOAEC (rat): 212 mg/m³ air [1]  
NOEC (rat): 399 mg/m³ air [1]

Study data: inhalation

Studies with data	⚠	📄	📊	📈
Key study	1	2		
Supporting study	2	2		
Weight of evidence				
Other				

Data waiving

Not feasible	
Sci. unjustified	
Exposure cons.	
Other	1

Study data: dermal 3 studies submitted 0 studies processed

⚠ No automatically processable data submitted

Study data: dermal

Studies with data	⚠	📄	📊	📈
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving

Not feasible	
Sci. unjustified	3
Exposure cons.	
Other	

## Genetic toxicity

### Study results

Study data: in vitro

9 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	6		
Supporting study				
Weight of evidence				
Other				

Data waiving  
no waivers

### M/C Summaries

3 summaries submitted  
3 summaries processed

#### Toxicity - InVitro

No adverse effect observed (negative)

#### Toxicity - InVivo

No study available

### Study data: in vivo

⚠ Study data not processed for brief profile

#### Study data: in vivo

Studies with data	⚠	📄	📊	⚠
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving  
no waivers

## Carcinogenicity

### Study results

1 study submitted  
0 studies processed

⚠ Study data not processed for brief profile

### Type of Study provided

Studies with data	⚠	📄	📊	⚠
Key study				
Supporting study				
Weight of evidence				
Other				

Data waiving  
Not feasible  
Sci. unjustified 1  
Exposure cons.  
Other

### Summaries

2 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

## Toxicity to reproduction

### Study results

Study data: in vitro

4 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

### Type of Study provided

#### Study data: reproduction

Studies with data	⚠	📄	📊	⚠
Key study	1	2		
Supporting study				
Weight of evidence				
Other				

Data waiving  
Not feasible  
Sci. unjustified 1  
Exposure cons.  
Other

### Summaries

3 summaries submitted  
0 summaries processed

⚠ No automatically processable data submitted

### Study data: developmental

7 studies submitted  
0 studies processed

⚠ Study data not processed for brief profile

#### Study data: developmental

Studies with data	⚠	📄	📊	⚠
Key study	1	2		
Supporting study	1	2		
Weight of evidence				
Other				

Data waiving  
Not feasible  
Sci. unjustified 1  
Exposure cons.  
Other

### Study data: other studies

1 study submitted  
0 studies processed

⚠ Study data not processed for brief profile

#### Study data: other studies

Studies with data	⚠	📄	📊	⚠
Key study				
Supporting study	1			
Weight of evidence				
Other				

Data waiving  
no waivers

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

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