

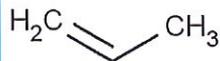
## Propene

### Substance identity

EC / List no.: 204-062-1

CAS no.: 115-07-1

Mol. formula: C<sub>3</sub>H<sub>6</sub>



### Hazard classification & labelling



**Danger!** According to the **harmonised classification and labelling** (CLP00) approved by the European Union, this substance is an extremely flammable gas.

### About this substance

This substance is manufactured and/or imported in the European Economic Area in 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. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

### Article service life

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment. ECHA has no public registered data indicating whether or into which articles the substance might have been processed.

### Widespread uses by professional workers

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

### Formulation or re-packing

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

### Uses at industrial sites

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

### Manufacture

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

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: 26/01/2018



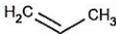
The Brief Profile summarizes the non-confidential data on substances as it is held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The Brief Profile is automatically generated; note that it does not currently distinguish between harmonised classification 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.

## Propene

Brief Profile - Last updated: 14/02/2018

### Substance Description

#### Substance identity

	EC / List name: Propene	SMILES: CC=C
	IUPAC name: prop-1-ene	InChI: InChI=1S/C3H6/c1-3-2/h3H,1H2,2H3 AuxInfo=1/0/N:1,3,2/rA:3CCC/rB:d1;s2;rC:1.3467,-.7786,0,2.6667,-.0161,0,
	Other names	Type of substance: Mono constituent substance
EC / List no.: 204-062-1	Origin: Organic	Registered compositions: 55
CAS no.: 115-07-1	Of which contain: 31 impurities relevant for classification 0 additives relevant for classification	Substance Listed: EINECS (European Inventory of Existing Commercial chemical Substances) List
Index number: 601-011-00-9		
Molecular formula: C3H6		

#### Hazard classification & labelling



**Danger!** According to the harmonised classification and labelling (CLP00) approved by the European Union, this substance is an extremely flammable gas.

**Breakdown of all 850 C&L notifications submitted to ECHA**

Flam. Gas 1	H220	✓	█
Eye Dam. 1	H318		█
Not Classified			█
STOT SE 3	H336		█
Press. Gas		✓	█

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Harmonised Classification  
 REACH registration dossiers notifications  
 CLP notifications

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

#### Properties of concern

#### Regulatory activities

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)	Classification Labelling & Packaging (CLP)
<p><b>Registration</b></p> <p><b>Pre-registration:</b> Substance pre-registered under REACH.</p> <p><b>Registration:</b> This substance has 232 active registrations under REACH, 1 Joint Submission(s) and 0 Individual Submission(s).</p>	<p><b>Harmonised C&amp;L:</b> A European Union Harmonised Classification &amp; Labelling has been assigned to this substance.</p> <p><b>Notification:</b> Classification &amp; Labelling has been notified by industry to ECHA for this substance.</p>
<p><b>Evaluation</b></p> <p><b>Dossier Evaluation:</b> Registration dossiers submitted to ECHA for this substance have been evaluated under REACH.</p> <p>Substance Evaluation:</p>	<p><b>Biocidal Products Regulation (BPR)</b></p> <p>Active Substance:</p> <p>Biocidal Products:</p>
<p><b>Authorisation</b></p> <p>Candidate List:</p> <p>Annex XIV (Authorisation List):</p>	<p><b>Prior Informed Consent (PIC)</b></p> <p>Annex I:</p> <p>Annex V:</p>
<p><b>Restriction</b></p> <p>Annex XVII (Restriction List):</p>	

## About this substance

### General

This substance is manufactured and/or imported in the European Economic Area in 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

This substance is used in the following products: fuels, adhesives and sealants, air care products, anti-freeze products, biocides (e.g. disinfectants, pest control products), coating products, lubricants and greases, plant protection products, perfumes and fragrances, polishes and waxes, washing & cleaning products and cosmetics and personal care products.

Other release to the environment of this substance is likely to occur from: outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and brake fluids), indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), outdoor use, indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), 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).

### 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: in the production of articles.

This substance can be found in products with material based on: plastic (e.g. food packaging and storage, toys, mobile phones).

### Widespread uses by professional workers

This substance is used in the following products: laboratory chemicals, fuels, lubricants and greases, perfumes and fragrances and cosmetics and personal care products.

This substance is used for the manufacture of: chemicals.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed batch processing in synthesis or formulation, closed processes with no likelihood of exposure, closed, continuous processes with occasional controlled exposure, non-industrial spraying, mixing in open batch processes, in materials as fuel sources, with limited exposure to unburned product to be expected, transfer of substance into small containers, production of mixtures or articles by tableting, compression, extrusion or pelletisation and batch processing in synthesis or formulation with opportunity for exposure.

Other release to the environment of this substance is likely to occur from: outdoor use in close systems with minimal release (e.g. hydraulic liquids in automotive suspension, lubricants in motor oil and brake fluids), outdoor use, indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters), indoor use (e.g. machine wash liquids/detergents, automotive care products, paints and coating or adhesives, fragrances and air fresheners), 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).

### Formulation or re-packing

This substance is used in the following products: laboratory chemicals, polymers, fuels and lubricants and greases.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed batch processing in synthesis or formulation, closed, continuous processes with occasional controlled exposure, closed processes with no likelihood of exposure, batch processing in synthesis or formulation with opportunity for exposure, transfer of substance into small containers, laboratory work, production of mixtures or articles by tableting, compression, extrusion or pelletisation and mixing in open batch processes.

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

### Uses at industrial sites

This substance is used in the following products: fuels. This substance has an industrial use resulting in manufacture of another substance (use of intermediates).

This substance is used in the following areas: formulation of mixtures and/or re-packaging. This substance is used for the manufacture of: chemicals.

This substance is used in the following activities or processes at workplace: transfer of chemicals, closed batch processing in synthesis or formulation, closed, continuous processes with occasional controlled exposure, closed processes with no likelihood of exposure, batch processing in synthesis or formulation with opportunity for exposure and laboratory work.

Release to the environment of this substance can occur from industrial use: as an intermediate step in further manufacturing of another substance (use of intermediates), of substances in closed systems with minimal release, in processing aids at industrial sites and for thermoplastic manufacture.

### Manufacture

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, laboratory work and batch processing in synthesis or formulation with opportunity for exposure.

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

### 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: keep away from heat, sparks, open flames and/or hot surfaces – No smoking.

#### Response statements

In case of incident: In case of leakage eliminate all ignition sources. In case of leaking gas fire do not extinguish unless leak can be stopped safely.

#### Storage statements

Store this substance in a well-ventilated place.

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

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# Propene

Brief Profile - Last updated: 30/01/2018

## Substance Description

## 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		Type of Study provided		Summaries
Study results	2 studies submitted 1 study processed			0 summaries submitted 0 summaries processed
<b>C</b> Physical state at 20°C and 1013 hPa Gaseous (100%) [1]		Studies with data	1	Data waiving no waivers
<b>C</b> Form Not specified (100%) [1]		Key study	1	
<b>C</b> Odour Odourless (100%) [1]		Supporting study	1	
<b>C</b> Substance type Organic (100%) [1]				

Melting/freezing point		Type of Study provided		Summaries
Study results	2 studies submitted 1 study processed			0 summaries submitted 0 summaries processed
<b>R</b> Melting / freezing point -185 °C @ 101.3 kPa [1]		Studies with data	1	Data waiving no waivers
		Key study	1	
		Supporting study	1	

Boiling point		Type of Study provided		Summaries
Study results	2 studies submitted 1 study processed			0 summaries submitted 0 summaries processed
<b>R</b> Boiling point -48 °C @ 101.325 kPa [1]		Studies with data	1	Data waiving no waivers
		Key study	1	
		Supporting study	1	

Density		Type of Study provided		Summaries
Study results	1 study submitted 0 studies processed			0 summaries submitted 0 summaries processed
⚠ No automatically processable data submitted		Studies with data	1	Data waiving Other 1

Vapour pressure		Type of Study provided		Summaries
Study results	1 study submitted 0 studies processed			0 summaries submitted 0 summaries processed
⚠ No automatically processable data submitted		Studies with data	1	Data waiving Not feasible 1

Partition coefficient				
Study results	2 studies submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>R</b> Log Pow 1.77 @ 20 °C and pH 7 [1]		Studies with data Key study 1 Supporting study 1	Data waiving	No data available
			no waivers	

Water solubility				
Study results	2 studies submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>R</b> Water solubility (mass/vol.) 200 mg/L @ 25 °C and pH 7 [1]		Studies with data Key study 1 Supporting study 1	Data waiving	No data available
			no waivers	

Solubility in organic solvents / fat solubility Data not provided by the registrant

Surface tension				
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 Other 1	Data waiving	No data available

Flash point				
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 Sci. unjustified 1	Data waiving	No data available

Auto flammability				
Study results	2 studies submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>R</b> Autoflammability / self-ignition 455 °C @ 101.3 kPa [1]		Studies with data Key study 1 Supporting study 1	Data waiving	No data available
			no waivers	

Flammability				
Study results	2 studies submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>C</b> Interpretation of results Extremely flammable (100%) [1]		Studies with data Key study 1 Supporting study 1	Data waiving	No data available
			no waivers	

Explosiveness				
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 Other 1	Data waiving	No data available

Oxidising				
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 Other 1	Data waiving	No data available

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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Sci. unjustified <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Not feasible <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

### Environmental fate and pathways

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Phototransformation in air									
Study results	3 studies submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed					
Ⓡ Dissipation half life (DT50) 14.6 h [1]		Studies with data <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving no waivers	⚠ No data available
⚠	📄	📊	📑	⚠					
		Key study	1						
		Supporting study	1						
		Other		1					

Hydrolysis											
Study results	1 study 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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Sci. unjustified <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

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	Summaries	0 summaries submitted 0 summaries processed					
Ⓢ Interpretation of results Readily biodegradable (100%) [2]		Studies with data <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving no waivers	⚠ No data available
⚠	📄	📊	📑	⚠					
		Weight of evidence	2	2					

Biodegradation in water & sediment - simulation tests ⚠ Data not provided by the registrant

Biodegradation in soil											
Study results	1 study 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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Other <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

Bioaccumulation: aquatic / sediment											
Study results	1 study 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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Other <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

Bioaccumulation: terrestrial ⚠ Data not provided by the registrant

Adsorption/desorption											
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 <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>📑</td> <td>⚠</td> </tr> </table>	⚠	📄	📊	📑	⚠	Data waiving Other <table border="1"> <tr> <td></td> <td>1</td> </tr> </table>		1	⚠ No data available
⚠	📄	📊	📑	⚠							
	1										

Henry's law constant (H)				
Study results	1 study submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>R</b> H - (pressure) m <sup>3</sup> /mol 15 500 - 16 000 Pa m <sup>3</sup> /mol @ 25 °C [2]	Studies with data		Data waiving	No data available
	Key study		no waivers	
				1

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)																																	
<b>R</b> Summaries	1 summary submitted 1 summary processed																																
<p>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.</p>																																	
<table border="1"> <thead> <tr> <th colspan="2">Hazard for Aquatic Organisms</th> <th colspan="2">Hazard for Air</th> </tr> </thead> <tbody> <tr> <td>Freshwater</td> <td>No hazard identified (1)</td> <td>Air</td> <td>No hazard identified (1)</td> </tr> <tr> <td>Intermittent releases (freshwater)</td> <td>No hazard identified (1)</td> <td colspan="2">Hazard for Terrestrial Organism</td> </tr> <tr> <td>Marine water</td> <td>No hazard identified (1)</td> <td>Soil</td> <td>No hazard identified (1)</td> </tr> <tr> <td>Intermittent releases (marine water)</td> <td>No hazard identified (1)</td> <td colspan="2">Hazard for Predators</td> </tr> <tr> <td>Sewage treatment plant (STP)</td> <td>No hazard identified (1)</td> <td>Secondary poisoning</td> <td>No potential for bioaccumulation (1)</td> </tr> <tr> <td>Sediment (freshwater)</td> <td>No hazard identified (1)</td> <td></td> <td></td> </tr> <tr> <td>Sediment (marine water)</td> <td>No hazard identified (1)</td> <td></td> <td></td> </tr> </tbody> </table>		Hazard for Aquatic Organisms		Hazard for Air		Freshwater	No hazard identified (1)	Air	No hazard identified (1)	Intermittent releases (freshwater)	No hazard identified (1)	Hazard for Terrestrial Organism		Marine water	No hazard identified (1)	Soil	No hazard identified (1)	Intermittent releases (marine water)	No hazard identified (1)	Hazard for Predators		Sewage treatment plant (STP)	No hazard identified (1)	Secondary poisoning	No potential for bioaccumulation (1)	Sediment (freshwater)	No hazard identified (1)			Sediment (marine water)	No hazard identified (1)		
Hazard for Aquatic Organisms		Hazard for Air																															
Freshwater	No hazard identified (1)	Air	No hazard identified (1)																														
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Sediment (freshwater)	No hazard identified (1)																																
Sediment (marine water)	No hazard identified (1)																																

Short-term toxicity to fish				
Study results	1 study submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>P/R</b> Results LC50 (4 days) 51.7 mg/L [1]	Studies with data		Data waiving	No data available
	Key study		no waivers	
				1

Long-term toxicity to fish				
Study results	2 studies 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	No data available
	Supporting study		Other	1

Short-term toxicity to aquatic invertebrates				
Study results	1 study submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>P/R</b> Results LC50 (48 h) 28.2 mg/L [1]	Studies with data		Data waiving	No data available
	Key study		no waivers	
				1

Long-term toxicity to aquatic invertebrates				
Study results	2 studies 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	No data available
	Supporting study		Other	1

Toxicity to aquatic algae and cyanobacteria				
Study results	1 study submitted 1 study processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<b>P/R</b> Results EC50 (4 days) 12.1 mg/L [1]	Studies with data		Data waiving	No data available
	Key study		no waivers	
				1

Toxicity to aquatic plants other than algae  Data not provided by the registrant

Toxicity to microorganisms				
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	⚠ No data available
		Other	Other	1

Sediment toxicity				
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	⚠ No data available
		Other	Other	1

Endocrine disrupter testing in aquatic vertebrates – in vivo ⚠ Data not provided by the registrant

Toxicity to terrestrial macroorganisms except arthropods				
Study results	2 studies 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	⚠ No data available
		Key study	Other	1

Toxicity to terrestrial arthropods				
Study results	2 studies 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	⚠ No data available
		Other	Other	2

Toxicity to terrestrial plants				
Study results	3 studies 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	⚠ No data available
		Supporting study	Other	2

Toxicity to soil microorganisms				
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	⚠ No data available
		Other	Other	1

Toxicity to birds				
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	⚠ No data available
		Other	Other	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			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			Data for the GENERAL POPULATION			
INHALATION Exposure	Threshold	Most sensitive study	INHALATION Exposure	Threshold	Most sensitive study	
<b>Systemic Effects</b>			<b>Systemic Effects</b>			
Long-term:	No hazard identified		Long-term:	No hazard identified		
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified		
<b>Local Effects</b>			<b>Local Effects</b>			
Long-term:	No hazard identified		Long-term:	No hazard identified		
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified		
DERMAL Exposure	Threshold	Most sensitive study	DERMAL Exposure	Threshold	Most sensitive study	
<b>Systemic Effects</b>			<b>Systemic Effects</b>			
Long-term:	No hazard identified		Long-term:	No hazard identified		
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified		
<b>Local Effects</b>			<b>Local Effects</b>			
Long-term:	No hazard identified		Long-term:	No hazard identified		
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified		
EYE Exposure	Threshold	Most sensitive study	ORAL Exposure	Threshold	Most sensitive study	
No hazard identified			<b>Systemic Effects</b>			
			Long-term:	No hazard identified		
			Acute /short term:	No hazard identified		
			<b>EYE Exposure</b>			
			No hazard identified			

Toxicokinetics, metabolism, and distribution																					
Study results	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed																		
Study data: basic toxicokinetics 6 studies submitted 6 studies processed	Study data: basic toxicokinetics	⚠ No data available																			
⚠ Study data not processed for brief profile	<table border="1"> <thead> <tr> <th>Studies with data</th> <th>⚠</th> <th>📄</th> <th>📊</th> <th>⚠</th> <th>Data waiving</th> </tr> </thead> <tbody> <tr> <td>Key study</td> <td>3</td> <td></td> <td></td> <td></td> <td>no waivers</td> </tr> <tr> <td>Supporting study</td> <td>3</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Studies with data	⚠	📄	📊	⚠	Data waiving	Key study	3				no waivers	Supporting study	3						
Studies with data	⚠	📄	📊	⚠	Data waiving																
Key study	3				no waivers																
Supporting study	3																				
Study data: derm. absorption 4 studies submitted 0 studies processed	Study data: dermal absorption																				
⚠ Study data not processed for brief profile	<table border="1"> <thead> <tr> <th>Studies with data</th> <th>⚠</th> <th>📄</th> <th>📊</th> <th>⚠</th> <th>Data waiving</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>no waivers</td> </tr> </tbody> </table>	Studies with data	⚠	📄	📊	⚠	Data waiving						no waivers								
Studies with data	⚠	📄	📊	⚠	Data waiving																
					no waivers																

Acute toxicity		Type of Study provided	Summaries				
Study results			0 summaries submitted 0 summaries processed				
oral	1 study submitted 0 studies processed	oral	⚠ No data available				
⚠ No automatically processable data submitted		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> Not feasible 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				
inhalation	8 studies submitted 0 studies processed	inhalation					
⚠ No automatically processable data submitted		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Weight of evidence</b> 7 <b>Data waiving</b> Sci. unjustified 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				
dermal	1 study submitted 0 studies processed	dermal					
⚠ No automatically processable data submitted		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> Not feasible 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				
other routes	0 studies submitted 0 studies processed	other routes					
⚠ No data available		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> no waivers	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				

Irritation / corrosion		Type of Study provided	Summaries				
Study results			0 summaries submitted 0 summaries processed				
Study data: skin	1 study submitted 0 studies processed	Study data: skin	⚠ No data available				
⚠ Study data not processed for brief profile		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> Not feasible 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				
Study data: eye	1 study submitted 0 studies processed	Study data: eye					
⚠ Study data not processed for brief profile		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> Not feasible 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				

Sensitisation		Type of Study provided	Summaries				
Study results			0 summaries submitted 0 summaries processed				
Study data: skin	1 study submitted 0 studies processed	Study data: skin	⚠ No data available				
⚠ Study data not processed for brief profile		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> Not feasible 1	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				
Study data: respiratory	0 studies submitted 0 studies processed	Study data: respiratory					
⚠ Study data not processed for brief profile		<b>Studies with data</b> <table border="1"> <tr> <td>⚠</td> <td>📄</td> <td>📊</td> <td>⚠</td> </tr> </table> <b>Data waiving</b> no waivers	⚠	📄	📊	⚠	
⚠	📄	📊	⚠				

Repeated dose toxicity							
Study results	Type of Study provided	Summaries					
<b>Study data: oral</b> 1 study submitted 0 studies processed  ⚠ No automatically processable data submitted	<b>Study data: oral</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Not feasible</td> <td>1</td> </tr> </table>	Studies with data	Data waiving	Not feasible	1	0 summaries submitted 0 summaries processed  ⚠ No data available	
Studies with data	Data waiving						
Not feasible	1						
<b>Study data: inhalation</b> 8 studies submitted 8 studies processed  <b>P/R</b> Results NOAEC (rat): 10 000 ppm [2] NOAEC (mouse): 10 000 ppm [2] LOAEC (rat): 5 000 ppm [1] LOAEC (mouse): 5 000 ppm [1] LOEC (rat): 5 000 ppm [1]	<b>Study data: inhalation</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Key study: 8</td> <td>no waivers</td> </tr> </table>	Studies with data	Data waiving	Key study: 8	no waivers		
Studies with data	Data waiving						
Key study: 8	no waivers						
<b>Study data: dermal</b> 1 study submitted 0 studies processed  ⚠ No automatically processable data submitted	<b>Study data: dermal</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Not feasible</td> <td>1</td> </tr> </table>	Studies with data	Data waiving	Not feasible	1		
Studies with data	Data waiving						
Not feasible	1						

Genetic toxicity							
Study results	Type of Study provided	Summaries					
<b>Study data: in vitro</b> 4 studies submitted 6 studies processed  ⚠ Study data not processed for brief profile	<b>Study data: in vitro</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Key study: 2 Supporting study: 1</td> <td>Other: 1</td> </tr> </table>	Studies with data	Data waiving	Key study: 2 Supporting study: 1	Other: 1	0 summaries submitted 0 summaries processed  ⚠ No data available	
Studies with data	Data waiving						
Key study: 2 Supporting study: 1	Other: 1						
<b>Study data: in vivo</b> 2 studies submitted 6 studies processed  ⚠ Study data not processed for brief profile	<b>Study data: in vivo</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Key study: 2</td> <td>no waivers</td> </tr> </table>	Studies with data	Data waiving	Key study: 2	no waivers		
Studies with data	Data waiving						
Key study: 2	no waivers						

Carcinogenicity							
Study results	Type of Study provided	Summaries					
<b>Study data: in vitro</b> 4 studies submitted 0 studies processed  ⚠ Study data not processed for brief profile	<b>Study data: in vitro</b>  <table border="1"> <tr> <th>Studies with data</th> <th>Data waiving</th> </tr> <tr> <td>Key study: 2 Supporting study: 2</td> <td>no waivers</td> </tr> </table>	Studies with data	Data waiving	Key study: 2 Supporting study: 2	no waivers	0 summaries submitted 0 summaries processed  ⚠ No data available	
Studies with data	Data waiving						
Key study: 2 Supporting study: 2	no waivers						

Toxicity to reproduction		Type of Study provided	Summaries												
Study results			0 summaries submitted 0 summaries processed												
study data: reproduction	7 studies submitted 0 studies processed	Study data: reproduction	⚠ No data available												
⚠ Study data not processed for brief profile		<table border="1"> <thead> <tr> <th>Studies with data</th> <th>⚠</th> <th>📄</th> <th>📊</th> <th>📌</th> <th>Data waiving</th> </tr> </thead> <tbody> <tr> <td>Weight of evidence</td> <td>2</td> <td></td> <td></td> <td>5</td> <td>no waivers</td> </tr> </tbody> </table>	Studies with data	⚠	📄	📊	📌	Data waiving	Weight of evidence	2			5	no waivers	
Studies with data	⚠	📄	📊	📌	Data waiving										
Weight of evidence	2			5	no waivers										
study data: developmental	2 studies submitted 0 studies processed	Study data: developmental													
⚠ Study data not processed for brief profile		<table border="1"> <thead> <tr> <th>Studies with data</th> <th>⚠</th> <th>📄</th> <th>📊</th> <th>📌</th> <th>Data waiving</th> </tr> </thead> <tbody> <tr> <td>Key study</td> <td>1</td> <td></td> <td></td> <td></td> <td>Sci. unjustified 1</td> </tr> </tbody> </table>	Studies with data	⚠	📄	📊	📌	Data waiving	Key study	1				Sci. unjustified 1	
Studies with data	⚠	📄	📊	📌	Data waiving										
Key study	1				Sci. unjustified 1										
study data: other studies	0 studies submitted 0 studies processed	Study data: other studies													
⚠ Study data not processed for brief profile		<table border="1"> <thead> <tr> <th>Studies with data</th> <th>⚠</th> <th>📄</th> <th>📊</th> <th>📌</th> <th>Data waiving</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>no waivers</td> </tr> </tbody> </table>	Studies with data	⚠	📄	📊	📌	Data waiving						no waivers	
Studies with data	⚠	📄	📊	📌	Data waiving										
					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													

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

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