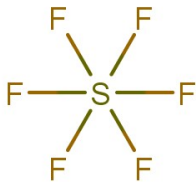


Sulphur hexafluoride






Brief Profile - Last updated: 17/12/2022

Substance Description

Substance identity

	EC / List name:	SMILES:	FS(F)(F)(F)F
	IUPAC name: sulphur hexafluoride	InChI:	InChI=1S/F6S/c1-7(2,3,4,5)6
Substance names and other identifiers		Type of substance:	Mono constituent substance
EC / List no.: 219-854-2		Origin:	Inorganic
CAS no.: 2551-62-4		Registered compositions:	7
Index number:		Of which contain:	0 impurities relevant for classification 0 additives relevant for classification
Molecular formula: F6S		Substance Listed:	EINECS (European INventory of Existing Commercial chemical Substances) List

Hazard classification & labelling

 <p>Warning! According to the classification provided by companies to ECHA in REACH registrations this substance contains gas under pressure and may explode if heated.</p>	Breakdown of all 236 C&L notifications submitted to ECHA <table border="1"> <thead> <tr> <th>Classification</th> <th>Code</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Press. Gas (Comp.)</td> <td>H280</td> <td>~45%</td> </tr> <tr> <td>Press. Gas (Liq.)</td> <td>H280</td> <td>~5%</td> </tr> <tr> <td>STOT SE 3</td> <td>H336</td> <td>~20%</td> </tr> <tr> <td>Eye Irrit. 2</td> <td>H319</td> <td>~10%</td> </tr> <tr> <td>Skin Irrit. 2</td> <td>H315</td> <td>~10%</td> </tr> <tr> <td>STOT SE 3</td> <td>H335</td> <td>~5%</td> </tr> </tbody> </table> <p>Legend:  Harmonised Classification  REACH registration dossiers notifications  CLP notifications</p>	Classification	Code	Percentage	Press. Gas (Comp.)	H280	~45%	Press. Gas (Liq.)	H280	~5%	STOT SE 3	H336	~20%	Eye Irrit. 2	H319	~10%	Skin Irrit. 2	H315	~10%	STOT SE 3	H335	~5%
Classification		Code	Percentage																			
Press. Gas (Comp.)	H280	~45%																				
Press. Gas (Liq.)	H280	~5%																				
STOT SE 3	H336	~20%																				
Eye Irrit. 2	H319	~10%																				
Skin Irrit. 2	H315	~10%																				
STOT SE 3	H335	~5%																				
 <p>Additionally, the classification provided by companies to ECHA in CLP notifications identifies that this substance may cause drowsiness or dizziness.</p>																						

Properties of concern

Regulatory context

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)	Classification Labelling & Packaging (CLP)
Registration Pre-registration: Substance <u>pre-registered</u> under REACH. Registration: This substance has 12 active <u>registrations</u> under REACH, 1 Joint Submission(s) and 0 Individual Submission(s).	Harmonised C&L: Seveso Annex I: Notified C&L: Classification & Labelling has been <u>notified by industry</u> to ECHA for this substance.
Evaluation Dossier Evaluation: Registration dossiers submitted to ECHA for this substance have been <u>evaluated under REACH</u> . Substance Evaluation:	Biocidal Products Regulation (BPR) Active Substance: Biocidal Products:
Authorisation Candidate List: Annex XIV (Authorisation List):	Prior Informed Consent (PIC) Annex I: Annex V:
Restriction Annex XVII (Restriction List): Persistent Organic Pollutants Regulation (POPs) List of substances subject to the POPs Regulation: List of substances proposed as POPs:	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 $\geq 10\ 000$ to $< 100\ 000$ tonnes per annum.

This substance is used 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 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.

ECHA has no public registered data indicating whether or into which articles the substance might have been processed.

Widespread uses by professional workers

This substance is used in the following products: laboratory chemicals.

This substance is used in the following areas: municipal supply (e.g. electricity, steam, gas, water) and sewage treatment and scientific research and development. This substance is used for the manufacture of: machinery and vehicles.

This substance is used in the following activities or processes at workplace: transfer of substance into small containers, laboratory work, transfer of chemicals at non-dedicated facilities, non-industrial spraying and manual maintenance (cleaning and repair) of machinery.

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 break fluids), indoor use in close systems with minimal release (e.g. cooling liquids in refrigerators, oil-based electric heaters) and indoor use as processing aid.

Formulation or re-packing

This substance is used in the following products: laboratory chemicals and semiconductors.

This substance is used in the following activities or processes at workplace: transfer of chemicals at dedicated facilities, closed batch processing in synthesis or formulation, transfer of substance into small containers, closed processes with no likelihood of exposure and closed, continuous processes with occasional controlled exposure.

Release to the environment of this substance can occur from industrial use: formulation of mixtures.

Uses at industrial sites

This substance is used in the following products: semiconductors, metal surface treatment products, non-metal-surface treatment products and laboratory chemicals.

This substance is used in the following areas: municipal supply (e.g. electricity, steam, gas, water) and sewage treatment and scientific research and development. This substance is used for the manufacture of: electrical, electronic and optical equipment, machinery and vehicles, fabricated metal products, metals and .

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, transfer of substance into small containers, laboratory work, potentially closed industrial processing with minerals/metals at elevated temperature (e.g. smelters, furnaces, refineries, coke ovens), open transfer and processing with minerals/metals at elevated temperature, manual maintenance (cleaning and repair) of machinery, industrial spraying and mixing in open batch processes.

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

Manufacture

This substance is used in the following activities or processes at workplace: closed processes with no likelihood of exposure, transfer of chemicals at dedicated facilities and transfer of substance into small containers.

Release to the environment of this substance can occur from industrial use: manufacturing of the substance.

Precautionary Measures and safe use

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

Storage statements

Store this substance protected from sunlight and in a well-ventilated place.

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

Registrants/suppliers

Active

- Air Liquide Deutschland GmbH, Luise-Rainer-Straße 5 D-40235 Düsseldorf Germany
- BOC Gases Ireland Ltd, John F Kennedy Drive Bluebell D12 PP63 Dublin Ireland
- CHEMICAL INSPECTION & REGULATION SERVICE LIMITED(Chengdu Kemeite Special Gas Co., Ltd.), Room 002, Regus Harcourt Centre D02 HW77 Dublin Ireland
- Linde Gas Italia srl, Via Guido Rossa, 3 20010 Arluno (MI) Italy
- Linde GmbH Gases Division, Seitnerstrasse 70 DE-82049 Pullach Germany
- Nippon Gases Belgium nv, Metropoolstraat 17 2900 Schoten Antwerpen Belgium
- Siemens AG, Wittelsbacher Platz 2 80333 München Germany
- Siemens Gas and Power GmbH & Co. KG, Werner-von-Siemens-Straße 1 c/o Siemens Aktiengesellschaft 80333 München Germany
- Solvay Fluor GmbH, Hans-Boeckler-Allee 20 30173 HANNOVER Germany
- Synecom Srl, Via Circonvallazione Ovest, 27 24040 Stezzano (BG) Italy
- Uralchem Assist, Johannsenstrasse 10 30159 Hannover Germany

Inactive

Substance names and other identifiers			
Regulatory process names			
Sulphur hexafluoride	EC Inventory, REACH pre-registration, Other, Construction Product Regulation - Annex I (3) - Hazardous Substances, Inland Transport of Dangerous Goods Directive, Annex I - ADR, Inland Transport of Dangerous Goods Directive, Annex II - RID	SULPHUR HEXAFLUORIDE	REACH pre-registration, Other, Construction Product Regulation - Annex I (3) - Hazardous Substances, Inland Transport of Dangerous Goods Directive, Annex III - ADN, Inland Transport of Dangerous Goods Directive, Annex I - ADR, Inland Transport of Dangerous Goods Directive, Annex II - RID
Translated names			
CAS names			
Sulfur fluoride (SF6), (OC-6-11)-	Other		
IUPAC names			
hexafluoro-lambda6-sulfane	Other	sulphur hexafluoride	C&L Inventory, Registration dossier
hexafluoro-λ ⁶ -sulfane	Registration dossier, Other	sulpphur hexafluoride	Registration dossier
Sulfur hexafluoride	C&L Inventory	Suphur hexafluoride	C&L Inventory
Sulphur Hexafluoride	C&L Inventory, Registration dossier		
Trade names			
Other names			
Other identifiers			
2551-62-4	CAS number	EC Inventory, C&L Inventory, Registration dossier, REACH pre-registration, Other, Construction Product Regulation - Annex I (3) - Hazardous Substances, Inland Transport of Dangerous Goods Directive, Annex III - ADN, Inland Transport of Dangerous Goods Directive, Annex I - ADR, Inland Transport of Dangerous Goods Directive, Annex II - RID	29267-82-1 CAS number Other 29267-82-1 Deleted CAS number Other 36575-03-8 CAS number Other 36575-03-8 Deleted CAS number Other 59109-69-2 CAS number Other 59109-69-2 Deleted 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	2 studies submitted 2 studies processed	Type of Study provided	Summaries 0 summaries submitted 0 summaries processed
<input type="checkbox"/> Physical state at 20°C and 1013 hPa Gaseous (100%) [2]	Studies with data Key study	2 no waivers	<input type="checkbox"/> No data available
<input type="checkbox"/> Odour Odourless (100%) [1]			
<input type="checkbox"/> Substance type Inorganic (100%) [2]			





Melting/freezing point			
Study results	5 studies submitted 1 study processed	Type of Study provided	<input checked="" type="checkbox"/> Summaries 1 summary submitted 1 summary processed
<input checked="" type="checkbox"/> Melting / freezing point -50.8 °C [1]	Studies with data Key study Supporting study	2 2	<input checked="" type="checkbox"/> Melting / freezing point at 101 325 Pa -63.8 °C
		Data waiving Other	1

Boiling point			
Study results	2 studies submitted 0 studies processed	Type of Study provided	Summaries 0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted	Studies with data		<input type="checkbox"/> No data available
		Data waiving Not feasible Other	1 1





Density			
Study results	3 studies submitted 1 study processed	Type of Study provided	<input checked="" type="checkbox"/> Summaries 1 summary submitted 1 summary processed
<input checked="" type="checkbox"/> Density 0.007 g/cm ³ @ 20 °C [1]	Studies with data Key study Supporting study	1 1	<input checked="" type="checkbox"/> Relative density at 20°C 5
		Data waiving Other	1





Vapour pressure			
Study results	5 studies submitted 2 studies processed	Type of Study provided	R Summaries 1 summary submitted 1 summary processed
R Vapour pressure 2.367 kPa @ 25 °C [2]		Studies with data     Key study 2 Supporting study 2	Data waiving Other 1
			Vapour pressure 2.367 kPa @ 25 °C





Partition coefficient			
Study results	4 studies submitted 1 study processed	Type of Study provided	R Summaries 1 summary submitted 1 summary processed
R Log Pow 1.68 @ 20 °C and pH 7 [1]		Studies with data     Key study 1 Supporting study 1 1	Data waiving Other 1
			Log Kow (Log Pow) 1.68 @ 20 °C





Water solubility			
Study results	4 studies submitted 2 studies processed	Type of Study provided	R Summaries 1 summary submitted 1 summary processed
R Water solubility (mass/vol.) 31 mg/L @ 25 °C and pH 7 [2]		Studies with data     Key study 1 2 Supporting study 1	Data waiving no waivers
			Water solubility 31 mg/L @ 25 °C





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





Surface tension			
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     Key study 1 Supporting study 1	Data waiving Other 1
			⚠ No data available

Flash point			
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     Key study 1 Supporting study 1	Data waiving Not feasible 1 Other 1
			⚠ No data available

Auto flammability			
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     Key study 1 Supporting study 1	Data waiving Sci. unjustified 1 Other 1
			⚠ No data available

Flammability			
Study results	3 studies submitted 1 study processed	Type of Study provided	C Summaries 1 summary submitted 1 summary processed
C Interpretation of results Not classified based on GHS criteria (100%) [1]		Studies with data     Key study 1	Data waiving Not feasible 1 Other 1
			Flammability Non flammable (100%)

Explosiveness			
Study results	2 studies submitted 0 studies processed	Type of Study provided	C Summaries 1 summary submitted 1 summary processed
⚠ No automatically processable data submitted		Studies with data     Key study 1	Data waiving Not feasible 1 Sci. unjustified 1
			Explosiveness Non-explosive (100%)

Oxidising			
Study results	2 studies submitted 0 studies processed	Type of Study provided	C Summaries 1 summary submitted 1 summary processed
⚠ No automatically processable data submitted		Studies with data     Key study 1	Data waiving Not feasible 1 Other 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 0 studies processed	Type of Study provided	Summaries 0 summaries submitted 0 summaries processed
⚠ No automatically processable data submitted		Studies with data	Data waiving
		Other	1

Viscosity			
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
		Supporting study	1
		Other	1

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	2 studies submitted 1 study processed	Type of Study provided	Summaries 1 summary submitted 0 summaries processed
R Dissipation half life (DT50) 2.441 years [1]		Studies with data	Data waiving
		Key study	1
		Supporting study	1
		no waivers	
			⚠ No automatically processable data submitted

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
			Not feasible
			1
			Sci. unjustified
			1

Phototransformation in water	⚠ Data not provided by the registrant
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Phototransformation in soil	⚠ Data not provided by the registrant
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Biodegradation in water - screening tests			
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
			Not feasible
			1
			Other
			1

Biodegradation in water & sediment - simulation tests	⚠ Data not provided by the registrant
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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	Data waiving
			Other
			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	Data waiving
			Other
			1

Bioaccumulation: terrestrial			
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	Data waiving
			Other
			1

Adsorption/desorption			
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
			Other
			2

Henry's law constant (H)			
Study results	1 study submitted 0 studies processed	Type of Study provided	R Summaries 1 summary submitted 1 summary processed
<p>⚠ No automatically processable data submitted</p>		Studies with data Supporting study 1	Data waiving no waivers Henry's law constant 185 Pa.m ³ .mol ⁻¹ @ 25 °C

Distribution modelling			
Study results	1 study submitted 0 studies processed	Type of Study provided	⚠ No summary exists for this scientific endpoint
<p>⚠ No automatically processable data submitted</p>		Studies with data Supporting study 1	Data waiving no waivers

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			2 summaries submitted 2 summaries 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>			
Hazard for Aquatic Organisms		Hazard for Air	
Freshwater	150 µg/L (2)	Air	No hazard identified (2)
Intermittent releases (freshwater)	1.5 mg/L (2)	Hazard for Terrestrial Organism	
Marine water	No hazard identified (2)	Soil	No hazard identified (2)
Intermittent releases (marine water)	No hazard identified (2)	Hazard for Predators	
Sewage treatment plant (STP)	No hazard identified (2)	Secondary poisoning	No potential for bioaccumulation (2)
Sediment (freshwater)	No hazard identified (2)		
Sediment (marine water)	No hazard identified (2)		

Short-term toxicity to fish			
Study results	2 studies submitted 2 studies processed	Type of Study provided	Summaries 2 summaries submitted 0 summaries processed
<p>P/R Results LC50 (4 days) 236 mg/L [2]</p>		Studies with data Key study 2	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 0 summaries submitted 0 summaries processed
<p>⚠ No automatically processable data submitted</p>		Studies with data Other 1	Data waiving Other 1 ⚠ No data available





Short-term toxicity to aquatic invertebrates			
Study results	2 studies submitted 2 studies processed	Type of Study provided	Summaries 2 summaries submitted 0 summaries processed
<p>P/R Results LC50 (48 h) 247 mg/L [2]</p>		Studies with data Key study 2	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 0 summaries submitted 0 summaries processed
<p>⚠ No automatically processable data submitted</p>		Studies with data Other 1	Data waiving Other 1 ⚠ No data available





Toxicity to aquatic algae and cyanobacteria			
Study results	2 studies submitted 2 studies processed	Type of Study provided	R Summaries 2 summaries submitted 2 summaries processed
<p>P/R Results EC50 (4 days) 151 mg/L [2]</p>		Studies with data Key study 2	Data waiving no waivers EC50 for freshwater algae 151 mg/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 0 summaries submitted 0 summaries processed
<p>⚠ No automatically processable data submitted</p>		Studies with data	Data waiving ⚠ No data available





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 Other 1	⚠ No data available





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 0 summaries submitted 0 summaries processed	
⚠ No automatically processable data submitted		Studies with data    	Data waiving Other 1	⚠ No data available

Toxicity to terrestrial arthropods				
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 Other 1	⚠ No data available

Toxicity to terrestrial plants				
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 Other 1	⚠ No data available

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 Other 1	⚠ No data available

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 Other 1	⚠ No data available





Toxicity to mammals				
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 Other 1	⚠ No data available



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)			Data for the GENERAL POPULATION		
<p>Derived No- or Minimal Effect Level (DN(M)EL)</p> <p>M/C Summaries 2 summaries submitted 2 summaries processed</p> <p>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.</p> <p>Data for WORKERS</p>			<p>Data for the GENERAL POPULATION</p>		
INHALATION Exposure	Threshold	Most sensitive study	INHALATION Exposure	Threshold	Most sensitive study
<i>Systemic Effects</i>			<i>Systemic Effects</i>		
Long-term:	(DNEL) 6 074 mg/m³	repeated dose toxicity	Long-term:	(DNEL) 1 511 mg/m³	repeated dose toxicity
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified	
<i>Local Effects</i>			<i>Local Effects</i>		
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
<i>Systemic Effects</i>			<i>Systemic Effects</i>		
Long-term:	No hazard identified		Long-term:	No hazard identified	
Acute /short term:	No hazard identified		Acute /short term:	No hazard identified	
<i>Local Effects</i>			<i>Local Effects</i>		
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			<i>Systemic Effects</i>		
			Long-term:	No hazard identified	
			Acute /short term:	No hazard identified	
			<i>EYE Exposure</i>		
			No hazard identified		

Toxicokinetics, metabolism, and distribution			M/C Summaries 1 summary submitted 1 summary processed	
Study results		Type of Study provided		
Study data: basic toxicokinetics	6 studies submitted 0 studies processed	Study data: basic toxicokinetics		Bioaccumulation potential: No bioaccumulation potential
⚠ Study data not processed for brief profile		Studies with data	Data waiving	
		Key study 2	3	no waivers
		Supporting study 1		
Study data: dermal absorption	0 studies submitted 0 studies processed	Study data: dermal absorption		
⚠ Study data not processed for brief profile		Studies with data	Data waiving	
			no waivers	

Acute toxicity			
Study results	Type of Study provided	Summaries	1 summary submitted 0 summaries processed
oral 2 studies submitted 0 studies processed ⚠ No automatically processable data submitted	oral Studies with data  Data waiving Sci. unjustified 1 Other 1	⚠ No automatically processable data submitted	
inhalation 7 studies submitted 0 studies processed ⚠ No automatically processable data submitted	inhalation Studies with data  Key study 3 Weight of evidence 3 Data waiving Sci. unjustified 1		
dermal 2 studies submitted 0 studies processed ⚠ No automatically processable data submitted	dermal Studies with data  Data waiving Sci. unjustified 1 Other 1		
other routes 0 studies submitted 0 studies processed ⚠ No data available	other routes Studies with data  Data waiving no waivers		

Irritation / corrosion			
Study results	Type of Study provided	M/C Summaries	2 summaries submitted 2 summaries processed
Study data: skin 2 studies submitted 0 studies processed ⚠ Study data not processed for brief profile	Study data: skin Studies with data  Data waiving Not feasible 1 Other 1	Skin No adverse effect observed (not irritating)	
Study data: eye 2 studies submitted 0 studies processed ⚠ Study data not processed for brief profile	Study data: eye Studies with data  Data waiving Not feasible 1 Other 1	Eye No adverse effect observed (not irritating)	
		Respiratory No adverse effect observed (not irritating)	

Sensitisation			
Study results	Type of Study provided	M/C Summaries	2 summaries submitted 2 summaries processed
Study data: skin 2 studies submitted 0 studies processed ⚠ Study data not processed for brief profile	Study data: skin Studies with data  Data waiving Not feasible 2	Skin sensitisation No adverse effect observed (not sensitising)	
Study data: respiratory 0 studies submitted 0 studies processed ⚠ Study data not processed for brief profile	Study data: respiratory Studies with data  Data waiving no waivers	Respiratory sensitisation No adverse effect observed (not sensitising)	





Repeated dose toxicity											
Study results		Type of Study provided	M/C Summaries 1 summary submitted 1 summary processed								
Study data: oral	2 studies submitted 0 studies processed	Study data: oral	Inhalation route - systemic effects: No adverse effect observed NOAEC 120 870 mg/m ³ (subchronic, rat)								
⚠ No automatically processable data submitted		Studies with data <table border="1"> <tr> <td>Key study</td> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td>Supporting study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	2	1	1	Supporting study	1			Data waiving Other 2
Key study	2	1	1								
Supporting study	1										
Study data: inhalation	4 studies submitted 3 studies processed	Study data: inhalation									
P/R Results NOAEC (rat): 302.687 mg/L air [2] NOAEC (rat): 20 052 ppm [1]		Studies with data <table border="1"> <tr> <td>Key study</td> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td>Supporting study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	2	1	1	Supporting study	1			Data waiving no waivers
Key study	2	1	1								
Supporting study	1										
Study data: dermal	2 studies submitted 0 studies processed	Study data: dermal									
⚠ No automatically processable data submitted		Studies with data <table border="1"> <tr> <td>Key study</td> <td>2</td> <td>1</td> <td>1</td> </tr> <tr> <td>Supporting study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	2	1	1	Supporting study	1			Data waiving Other 2
Key study	2	1	1								
Supporting study	1										

Genetic toxicity											
Study results		Type of Study provided	M/C Summaries 1 summary submitted 1 summary processed								
Study data: in vitro	5 studies submitted 0 studies processed	Study data: in vitro	Toxicity - InVitro No adverse effect observed (negative)								
⚠ Study data not processed for brief profile		Studies with data <table border="1"> <tr> <td>Key study</td> <td>2</td> <td>2</td> <td>2</td> </tr> </table>	Key study	2	2	2	Data waiving Sci. unjustified 1				
Key study	2	2	2								
Study data: in vivo	2 studies submitted 0 studies processed	Study data: in vivo									
⚠ Study data not processed for brief profile		Studies with data <table border="1"> <tr> <td>Key study</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>Supporting study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	1			Supporting study	1			Data waiving no waivers
Key study	1										
Supporting study	1										

Carcinogenicity							
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 <table border="1"> <tr> <td>Key study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	1			Data waiving Other 1
Key study	1						

Toxicity to reproduction											
Study results		Type of Study provided	M/C Summaries 1 summary submitted 1 summary processed								
Study data: reproduction	6 studies submitted 0 studies processed	Study data: reproduction	Effect on fertility Inhalation route: No adverse effect observed NOAEC 50 000 ppm (subacute, rat)								
⚠ Study data not processed for brief profile		Studies with data <table border="1"> <tr> <td>Key study</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>Supporting study</td> <td>3</td> <td></td> <td></td> </tr> </table>	Key study	1	1	1	Supporting study	3			Data waiving Other 1
Key study	1	1	1								
Supporting study	3										
Study data: developmental	5 studies submitted 0 studies processed	Study data: developmental	Effect on developmental toxicity Inhalation route: No adverse effect observed NOAEC 20 000 ppm (subacute, rat)								
⚠ Study data not processed for brief profile		Studies with data <table border="1"> <tr> <td>Key study</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>Supporting study</td> <td>3</td> <td></td> <td></td> </tr> </table>	Key study	1			Supporting study	3			Data waiving Other 1
Key study	1										
Supporting study	3										
Study data: other studies	0 studies submitted 0 studies processed	Study data: other studies									
⚠ Study data not processed for brief profile		Studies with data <table border="1"> <tr> <td>Key study</td> <td>1</td> <td></td> <td></td> </tr> </table>	Key study	1			Data waiving no waivers				
Key study	1										

Neurotoxicity			
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries 1 summary submitted 0 summaries processed

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

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