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Cyclohexene ≥99 %, for synthesis

article number: **3451** Version: **GHS 2.0 en** Replaces version of: 2021-11-02 Version: (GHS 1)

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

1.1 Product identifier

CAS number

Identification of the substance Article number **Cyclohexene** ≥99 %, for synthesis 3451

110-83-8

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	2	Flam. Liq. 2	H225
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.10	Aspiration hazard	1	Asp. Tox. 1	H304

For full text of abbreviations: see SECTION 16

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The most important adverse physicochemical, human health and environmental effects The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS08



Hazard statements

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways

Precautionary statements

Precautionary statements - prevention

Precautionary statements - response						
P233	Keep container tightly closed					
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking					

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician P301+P310 Do NOT induce vomiting P331

P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction

Precautionary statements - storage

P403+P235 Store in a well-ventilated place. Keep cool

Precautionary statements - disposal

P501 Dispose of contents/container to industrial combustion plant

2.3 **Other hazards**

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	Cyclohexene
Molecular formula	C ₆ H ₁₀
Molar mass	82.15 ^g / _{mol}
CAS No	110-83-8

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To stabilise:

Name of substance	Identifier	Wt%
Butylated hydroxytoluene	CAS No 128-37-0	0.01

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In all cases of doubt, or when symptoms persist, seek medical advice.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth with water (only if the person is conscious). Call a physician immediately. Call a doctor. Observe aspiration hazard if vomiting occurs.

4.2 Most important symptoms and effects, both acute and delayed

Aspiration hazard, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings! water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

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5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapourair mixture. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapours are heavier than air, spread along floors and form explosive mixtures with air. Vapours may form explosive mixtures with air.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

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Take precautionary measures against static discharge. Due to danger of explosion, prevent leakage

of vapours into cellars, flues and ditches.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ground/bond container and receiving equipment.

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
AU	cyclohexene	110-83-8	WES	300	1,010						WES

Notation

STEL TWA

Ceiling-C Ceiling value is a limit value above which exposure should not occur

Short-term exposure limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Relevant DNELs of components						
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time
Butylated hydroxy- toluene	128-37-0	DNEL	19 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects

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Relevant DNELs of components							
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time	
Butylated hydroxy- toluene	128-37-0	DNEL	18 mg/m ³	human, inhalat- ory	worker (industry)	acute - systemic effects	
Butylated hydroxy- toluene	128-37-0	DNEL	3.5 mg/m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects	
Butylated hydroxy- toluene	128-37-0	DNEL	0.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects	

Environmental values

Relevant PNECs and other threshold levels						
End- point	Threshold level	Organism	Environmental com- partment	Exposure time		
PNEC	7.4 ^{µg} / _l	aquatic organisms	freshwater	short-term (single instance)		

Relevant PNECs of components

	_					
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
Butylated hydroxy- toluene	128-37-0	PNEC	8.33 ^{mg} / _{kg}	aquatic organ- isms	water	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	1.99 ^{µg} / _l	aquatic organ- isms	water	intermittent re- lease
Butylated hydroxy- toluene	128-37-0	PNEC	0.199 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	0.02 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	0.17 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	99.6 ^{µg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	9.96 ^{µg} / _{kg}	aquatic organ- isms	marine sediment	short-term (single instance)
Butylated hydroxy- toluene	128-37-0	PNEC	47.69 ^{µg} / _{kg}	terrestrial organ- isms	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

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Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

material thickness

≥0,3 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• Splash protection - Protective gloves

- type of material: NBR (Nitrile rubber)
- material thickness: >0,11 mm
- breakthrough times of the glove material:

>30 minutes (permeation: level 2)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Flame-retardant protective clothing.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 $^{\circ}$ C, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	clear - colourless
Odour	characteristic
Odour threshold	2.05 – 3,494 ppm
Melting point/freezing point	-103.5 °C (ECHA)



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	Boiling point or initial boiling point and boiling range	83 °C at 1,013 hPa (ECHA)
	Flammability	flammable liquid in accordance with GHS criteria
	Lower and upper explosion limit	1.1 vol% (LEL) - 7.7 vol% (UEL)
	Flash point	-12 °C at 1,013 hPa (c.c.) (ECHA)
	Auto-ignition temperature	276 °C at 1,014 hPa (ECHA) (auto-ignition temper- ature (liquids and gases))
	Decomposition temperature	not relevant
	pH (value)	7 – 8 (20 °C)
	Kinematic viscosity	not determined
	Dynamic viscosity	0.625 mPa s at 25 °C
	Solubility(ioc)	
	<u>Solubility(ies)</u> Water solubility	0.16 ^g / _l at 25 °C (ECHA)
	water solubility	
	Partition coefficient	
	Partition coefficient n-octanol/water (log value):	2.99 (25 °C) (ECHA)
	Vapour pressure	119 hPa at 25 °C
	Density and/or relative density	
	Density	0.81 ^g / _{cm³} at 20 °C (ECHA)
	Relative vapour density	2.8 (air = 1)
	Particle characteristics	not relevant (liquid)
	Other safety parameters	
	Oxidising properties	none
9.2	Other information	
	Information with regard to physical hazard classes:	There is no additional information.
	Other safety characteristics:	There is no additional information.
CEC	TION 10: Stability and reactivity	

SECTION 10: Stability and reactivity

10.1 Reactivity

It's a reactive substance. Risk of ignition. Vapours may form explosive mixtures with air. May form explosive peroxides.

If heated

Risk of ignition.

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10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

Rubber articles, different plastics

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5. Peroxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Classification acc. to GHS

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4. May be harmful if inhaled.

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>1,000 - <2,000 ^{mg} / _{kg}	rat		ECHA

Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Butylated hydroxytoluene	128-37-0	oral	LD50	>6,000 ^{mg} / _{kg}	rat
Butylated hydroxytoluene	128-37-0	dermal	LD50	>2,000 ^{mg} / _{kg}	rat

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

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Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

aspiration hazard

• If in eyes

Data are not available.

• If inhaled

vertigo, dizziness, headache

• If on skin

Frequently or prolonged contact with skin may cause dermal irritation

Other information

none

11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0,1\%$.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)							
Endpoint	nt Value Species Source		Source	Exposure time			
LC50	5.8 ^{mg} / _l	fish	ECHA	96 h			
EC50	2.1 ^{mg} / _l	aquatic invertebrates	ECHA	48 h			
ErC50	≥18 ^{mg} / _l	algae	ECHA	72 h			

Aquatic toxicity (acute) of components

Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time
Butylated hydroxy- toluene	128-37-0	LC50	>0.57 ^{mg} / _l	fish	96 h
Butylated hydroxy- toluene	128-37-0	EC50	0.48 ^{mg} / _l	aquatic invertebrates	48 h

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Name of sub- stance	CAS No	End	point	Value	Species	Exposur time		
Butylated hydroxy- toluene	128-37-0	Er	C50	>0.4 ^{mg} / _l	algae	72 h		
Aquatic toxicity (chronic)								
Endpoint	Value		S	pecies	Source	Exposure time		
LC50	1.4 ^{mg} / _l		aquatic	invertebrates	ECHA	21 d		
	1 ^{mg} /ı		aquatic	invertebrates	ECHA	21 d		

Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time
Butylated hydroxy- toluene	128-37-0	EC50	0.096 ^{mg} / _l	aquatic invertebrates	21 d

12.2 Persistence and degradability

Theoretical Oxygen Demand: 3.311 ^{mg}/_{mg} Theoretical Carbon Dioxide: 3.214 ^{mg}/_{mg}

Degradabilit						
Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source
Butylated hy- droxytoluene	128-37-0	biotic/abiotic	<10 %	20 d		

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

Bioaccumulative potential of components	
BCF	>12 – <38 (ECHA)
n-octanol/water (log KOW)	2.99 (25 °C) (ECHA)

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Butylated hydroxytoluene	128-37-0	598.4	5.1	

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\ge 0,1\%$.

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12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H3 Flammable liquids

H11 Toxic (Delayed or chronic)

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

SECTION 14: Transport information

14.1	UN	num	ber
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	UN RTDG	UN 2256
	IMDG-Code	UN 2256
	ICAO-TI	UN 2256
14.2	UN proper shipping name	
	UN RTDG	CYCLOHEXENE
	IMDG-Code	CYCLOHEXENE
	ICAO-TI	Cyclohexene
14.3	Transport hazard class(es)	
	UN RTDG	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	
	UN RTDG	II
	IMDG-Code	II

Safety data sheet Safety data sheet acc. to Safe Work Australia - Code of Practice

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	ICAO-TI	II
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	Special precautions for user	
	There is no additional information.	
14.7	Transport in bulk according to IMO instruments	5
	The cargo is not intended to be carried in bulk.	
14.8	Information for each of the UN Model Regulation	ons
	Transport informationNational regulationsAdd	itional information(UN RTDG)
	UN number	2256
	Class	3
	Environmental hazards	Yes Hazardous to the aquatic environment
	Packing group	II
	Danger label(s)	3 Fish and tree
	Special provisions (SP)	- UN RTDG
	Excepted quantities (EQ)	E2 UN RTDG
	Limited quantities (LQ)	1 L UN RTDG
	Emergency Action Code	3YE
	International Maritime Dangerous Goods Code (IMDG) - Additional information	
	Proper shipping name	CYCLOHEXENE
	Particulars in the shipper's declaration	UN2256, CYCLOHEXENE, 3, II, -12°C c.c., MARINE POLLUTANT
	Marine pollutant	Yes (hazardous to the aquatic environment)
	Danger label(s)	3, "Fish and tree"
	Special provisions (SP)	-
	Excepted quantities (EQ)	E2
	Limited quantities (LQ)	1 L
	EmS	F-E, S-D
	Stowage category	E

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International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information		
Proper shipping name	Cyclohexene	
Particulars in the shipper's declaration	UN2256, Cyclohexene, 3, II	
Environmental hazards	Yes (hazardous to the aquatic environment)	
Danger label(s)	3	
Excepted quantities (EQ)	E2	
Limited quantities (LQ)	1 L	

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is listed.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

AIIC CSCL-ENCS DSL ECSI IECSC INSQ

Australian Inventory of Industrial Chemicals List of Existing and New Chemical Substances (CSCL-ENCS) Domestic Substances List (DSL) EC Substance Inventory (EINECS, ELINCS, NLP) Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances

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Legend	
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
14.8		Emergency Action Code: 3YE	yes
15.1		National inventories: change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)

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Abbr.	Descriptions of used abbreviations
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
STEL	Short-term exposure limit
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.