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### Tetrahydrofuran ROTISOLV® HPLC, Non-stabilised

article number: 7344 date of compilation: 2016-03-09 Version: GHS 8.0 en Revision: 2024-03-04

Replaces version of: 2022-12-21

Version: (GHS 7)

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

#### **Product identifier** 1.1

Identification of the substance Tetrahydrofuran ROTISOLV® HPLC, Non-stabil-

ised

Article number 7344

CAS number 109-99-9

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: Do not use for products which come into contact

with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-

stuffs.

#### Details of the supplier of the safety data sheet 1.3

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			131126	

## **SECTION 2: Hazards identification**

#### Classification of the substance or mixture 2.1

#### 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
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.6	Carcinogenicity	2	Carc. 2	H351

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.8R	Specific target organ toxicity - single exposure (respiratory tract irritation)	3	STOT SE 3	H335
3.8D	Specific target organ toxicity - single exposure (narcotic effects, drowsiness)		STOT SE 3	H336

## **Supplemental hazard information**

Code	Supplemental hazard information
AUH019	may form explosive peroxides

For full text of abbreviations: see SECTION 16

#### 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**

GHS02, GHS07, GHS08







## **Hazard statements**

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer

### **Precautionary statements**

#### **Precautionary statements - prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P261 Avoid breathing dust/fume/gas/mist/vapours/spray

#### **Precautionary statements - response**

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P312 Call a POISON CENTER or doctor/physician if you feel unwell

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

# **Precautionary statements - storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed

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

## **Precautionary statements - disposal**

P501 Dispose of contents/container to industrial combustion plant

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For professional users only

## **Supplemental hazard information**

AUH019 May form explosive peroxides.

#### 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  $\geq$  0,1%.

# **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Name of substance Tetrahydrofuran

Molecular formula C₄H<sub>8</sub>O

Molar mass  $72.11 \,^{9}/_{mol}$  CAS No 109-99-9

## **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.

## Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

## 4.2 Most important symptoms and effects, both acute and delayed

Following inhalation: Cough, Dyspnoea, Headache, Vertigo, Drowsiness, Dizziness, Narcosis, Following skin contact: Localised redness, oedema, pruritis and/or pain,

After eye contact: Irritation,

Following ingestion: Nausea, Vomiting

# 4.3 Indication of any immediate medical attention and special treatment needed

none

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# **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings! water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

### Unsuitable extinguishing media

water jet

#### 5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air 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 (CO<sub>2</sub>)

#### 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

Use personal protective equipment as required. 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.

## 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.

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#### 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. Avoid exposure.

## Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

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.

## Protect against external exposure, such as

high temperatures, UV-radiation/sunlight, contact with air/oxygen

#### 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.

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# SECTION 8: Exposure controls/personal protection

#### **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 [PP]	STEL [mg/ m³]	Ceil ing- [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
AU	tetrahydrofuran	109-99-9	WES	100	295					Н	WES

#### Notation

Ceiling-C

Ceiling value is a limit value above which exposure should not occur Absorbed through the skin

STEL

Short-term exposure limit: a 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 TWA

hours time-weighted average (unless otherwise specified)

#### **Human health values**

#### Relevant DNELs and other threshold levels **Threshold Endpoint** Protection goal, **Used in Exposure time** route of exposure level 72.4 mg/m<sup>3</sup> DNEL human, inhalatory worker (industry) chronic - systemic effects DNFI 96 mg/m<sup>3</sup> human, inhalatory acute - systemic effects worker (industry) DNEL 150 mg/m<sup>3</sup> human, inhalatory worker (industry) chronic - local effects DNEL 300 mg/m<sup>3</sup> acute - local effects human, inhalatory worker (industry) **DNEL** 12.6 mg/kg bw/ human, dermal worker (industry) chronic - systemic effects

#### **Environmental values**

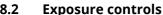
#### **Relevant PNECs and other threshold levels** Threshold End-**Organism Environmental com-Exposure time** point level partment 4.32 mg/<sub>I</sub> **PNEC** aquatic organisms freshwater short-term (single instance) 0.432 mg/I **PNEC** aquatic organisms marine water short-term (single instance) 4.6 mg/<sub>I</sub> **PNEC** aquatic organisms sewage treatment plant short-term (single instance) (STP) 23.3 <sup>mg</sup>/<sub>kg</sub> **PNEC** aquatic organisms freshwater sediment short-term (single instance) 2.33 <sup>mg</sup>/<sub>kg</sub> **PNEC** aquatic organisms marine sediment short-term (single instance) **PNEC** 2.13 <sup>mg</sup>/<sub>kg</sub> terrestrial organisms soil short-term (single instance)

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Individual protection measures (personal protective equipment)

#### **Eye/face protection**





Use safety goggle with side protection.

#### 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 considerable 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.

#### Splash protection - Protective gloves

• type of material: Butyl caoutchouc (butyl rubber)

material thickness: 0,7mm

• breakthrough times of the glove material: >10 minutes (permeation: level 1)

#### 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 °C, colour code: Brown).

#### **Environmental exposure controls**

Keep away from drains, surface and ground water.

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## 8.2

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# **SECTION 9: Physical and chemical properties**

#### 9.1 Information on basic physical and chemical properties

Physical state liquid

Colour colourless
Odour like ether
Melting point/freezing point -108.5 °C

Boiling point or initial boiling point and boiling 65 °C at 1,013 hPa (ECHA)

range

Flammability flammable liquid in accordance with GHS criteria

Lower and upper explosion limit 1.5 vol% (LEL) - 12.4 vol% (UEL) Flash point -21.2 °C at 1,013 hPa (ECHA)

Auto-ignition temperature 215 °C (DIN 51794)

Decomposition temperature not relevant pH (value)  $7-8 (20 \degree C)$ 

Kinematic viscosity not determined

Dynamic viscosity 0.48 mPa s at 20 °C

Solubility(ies)

Water solubility miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value): 0.45 (pH value: 7, 25 °C) (ECHA)

Vapour pressure 170 hPa at 20 °C

Density and/or relative density

Density  $0.883 \, {}^{9}/_{cm^3}$  at 25 °C (ECHA)

Relative vapour density 2.49 (air = 1)

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

classes:

Information with regard to physical hazard There is no additional information.

Other safety characteristics:

Miscibility completely miscible with water

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# **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.

## 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, Alkali hydroxide (caustic alkali), Acids

#### 10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. UV-radiation/sunlight.

#### 10.5 Incompatible materials

Rubber articles, different plastics, tin

## 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 in contact with skin.

## **Acute toxicity**

Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	1,650 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA
dermal	LD50	>2,000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA

## Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

## 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.

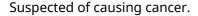
#### Carcinogenicity

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## **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

## Specific target organ toxicity - single exposure

May cause respiratory irritation. May cause drowsiness or dizziness.

## Specific target organ toxicity - repeated exposure

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

#### **Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

#### If swallowed

vomiting, nausea

#### If in eyes

Causes serious eye irritation

#### If inhaled

Irritation to respiratory tract, cough, Dyspnoea, headache, vertigo, drowsiness, dizziness, narcosis

#### • If on skin

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc

#### 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

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)					
Endpoint	Value	Species	Source	Exposure time	
LC50	2,160 <sup>mg</sup> / <sub>l</sub>	fish	ECHA	96 h	
EC50	1,930 <sup>mg</sup> / <sub>l</sub>	fish	ECHA	96 h	

## 12.2 Persistence and degradability

Theoretical Oxygen Demand: 2.441  $^{\rm mg}$ / $_{\rm mg}$  Theoretical Carbon Dioxide: 2.441  $^{\rm mg}$ / $_{\rm mg}$ 

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## **Process of degradability**

Process	Degradation rate	Time
biotic/abiotic	39 %	28 d
oxygen depletion	39 %	28 d

#### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	0.45 (pH value: 7, 25 °C) (ECHA)
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#### 12.4 Mobility in soil

Data are not available.

#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Endocrine disrupting properties

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

#### 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.

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# **SECTION 14: Transport information**

#### 14.1 UN number

UN 2056
IMDG-Code UN 2056
ICAO-TI UN 2056

14.2 UN proper shipping name

UN RTDGTETRAHYDROFURANIMDG-CodeTETRAHYDROFURANICAO-TITetrahydrofuran

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
ICAO-TI II

**14.5 Environmental hazards** non-environmentally hazardous acc. to the dan-

gerous goods regulations

14.6 Special precautions for user

There is no additional information.

## 14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

## 14.8 Information for each of the UN Model Regulations

## Transport informationNational regulationsAdditional information(UN RTDG)

UN number 2056
Class 3
Packing group II
Danger label(s) 3



Special provisions (SP)

**UN RTDG** 

Excepted quantities (EQ)

UN RTDG

Limited quantities (LQ) 1 L

**UN RTDG** 

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Emergency Action Code

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name TETRAHYDROFURAN

Particulars in the shipper's declaration UN2056, TETRAHYDROFURAN, 3, II, -21.2°C c.c.

2YE

Marine pollutant Danger label(s) 3

3

Special provisions (SP)

Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L

EmS F-E, S-D

Stowage category E

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name Tetrahydrofuran

Particulars in the shipper's declaration UN2056, Tetrahydrofuran, 3, II

Danger label(s) 3



Excepted quantities (EQ) E2
Limited quantities (LQ) 1 L

# **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

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Country	Inventory	Status
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
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

Legend

AIIC Australian Inventory of Industrial Chemicals
CICR Chemical Inventory and Control Regulation
CSCL-ENCS DSL Domestic Substances List (DSL)
ECSI EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC Inventory of Existing Chemical Substances Produced or Imported in China INSQ National Inventory of Chemical Substances
KECI Korea Existing Chemical Substances
KECI Korea Existing Chemicals Inventory
NCI National Chemical Inventory
NZIOC Philippine Inventory of Chemicals
PICCS Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg. REACH registered substances
TCSI Taiwan Chemical Substance Inventory

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
2.1		Supplemental hazard information: change in the listing (table)	yes
2.2		Supplemental hazard information	yes
2.2		Supplemental hazard information: change in the listing (table)	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
15.1		National inventories: change in the listing (table)	yes

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## **Abbreviations and acronyms**

Abbr.	Descriptions of used abbreviations	
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)	
Ceiling-C	Ceiling value	
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	
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations	
IATA	International Air Transport Association	
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)	
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)	
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).

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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.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.

#### **Disclaimer**

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

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