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Silicone oil TT 2, 2 cSt, low viscosity, dried

article number: **1965** Version: **2.0 en** Replaces version of: 07.04.2021 Version: (1)

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

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205-492-2

141-63-9

## 1.1 Product identifier

Identification of the substance Article number Registration number (REACH)

EC number

CAS number

Alternative name(s)

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

Relevant identified uses:

Laboratory and analytical use Laboratory chemical

Dodecamethylpentasiloxane

01-2119970218-33-xxxx

Uses advised against:

Do not use for private purposes (household). Food, drink and animal feedingstuffs.

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## **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

# **SECTION 2: Hazards identification**

# 2.1 Classification of the substance or mixture

# Classification according to Regulation (EC) No 1272/2008 (CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/ 2008/EC.

# 2.2 Label elements

# Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

# 2.3 Other hazards

This material is combustible, but will not ignite readily.



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## 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	Silicone oil
Molecular formula	$C_{12}H_{36}O_4Si_5$
Molar mass	384,8 <sup>g</sup> / <sub>mol</sub>
REACH Reg. No	01-2119970218-33-xxxx
CAS No	141-63-9
EC No	205-492-2

### Impurities/additives/constituents:

Name of substance	Identifier	Wt%
Dodecamethylcyclohexasiloxane	CAS No 540-97-6	<1
	EC No 208-762-8	

#### 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

Wash with plenty of soap and water.

#### 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. Call a doctor if you feel unwell.



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- **4.2 Most important symptoms and effects, both acute and delayed** Symptoms and effects are not known to date.
- **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 (CO<sub>2</sub>)

## Unsuitable extinguishing media

water jet

## 5.2 Special hazards arising from the substance or mixture

Combustible.

# 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

Special danger of slipping by leaking/spilling product.

## 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.

### 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.



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# **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.

# Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

# Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

## 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)**

This information is not available.

### Human health values

# **Relevant DNELs and other threshold levels**

Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	102 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	102 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	1.449 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
DNEL	1.449 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		
Dodecamethylcyclo- hexasiloxane	540-97-6	DNEL	11 mg/m³	human, inhalat- ory	worker (industry)	chronic - systemic effects		
Dodecamethylcyclo- hexasiloxane	540-97-6	DNEL	1,22 mg/ m <sup>3</sup>	human, inhalat- ory	worker (industry)	chronic - local ef- fects		
Dodecamethylcyclo- hexasiloxane	540-97-6	DNEL	6,1 mg/m³	human, inhalat- ory	worker (industry)	acute - local ef- fects		

## **Environmental values**

Relevant PNECs and other threshold levels							
End- point	Threshold level	Organism	Environmental com- partment	Exposure time			
PNEC	1 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)			
PNEC	3,77 <sup>mg</sup> / <sub>kg</sub>	terrestrial organisms	soil	short-term (single instance)			

# **Relevant PNECs of components**

Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
Dodecamethylcyclo- hexasiloxane	540-97-6	PNEC	1 <sup>mg</sup> / <sub>l</sub>	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Dodecamethylcyclo- hexasiloxane	540-97-6	PNEC	13 <sup>mg</sup> / <sub>kg</sub>	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
Dodecamethylcyclo- hexasiloxane	540-97-6	PNEC	1,3 <sup>mg</sup> / <sub>kg</sub>	aquatic organ- isms	marine sediment	short-term (single instance)
Dodecamethylcyclo- hexasiloxane	540-97-6	PNEC	3,77 <sup>mg</sup> / <sub>kg</sub>	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.

Skin protection





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## hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

### • type of material

NBR (Nitrile rubber)

#### material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### other protection measures

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

#### **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). Usually no personal respirative protection necessary.

#### **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	colourless
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	87 °C (c.c.)
Auto-ignition temperature	350 °C at 101,3 kPa (ECHA)
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	1,8 – 2,2 <sup>mm²</sup> / <sub>s</sub> at 25 °C
Solubility(ies)	
Water solubility	(insoluble (< 1 mg/l))



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Partition coefficient	
Partition coefficient n-octanol/water (log value):	9,268 – 9,508 (ECHA)
Soil organic carbon/water (log KOC)	6,3 (ECHA)
Vapour pressure	7,8 Pa at 25 °C
Density and/or relative density	
Density and/or relative density	
Density	0,872 <sup>g</sup> / <sub>cm³</sub> at 25 °C
Relative vapour density	Information on this property is not available.
Particle characteristics	not relevant (liquid)
Other safety parameters	
Oxidising properties	none
Other information	
Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	
Temperature class (EU, acc. to ATEX)	T2 Maximum permissible surface temperature on the equipment: 300°C

# **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

9.2

This material is not reactive under normal ambient conditions.

### If heated

Vapours may form explosive mixtures with air.

# 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

There are no specific conditions known which have to be avoided.

## **10.5** Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.



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# **SECTION 11: Toxicological information**

# 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

# Classification according to GHS (1272/2008/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/ 2008/EC.

## Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity							
Exposure route	Endpoint	Value	Species	Method	Source		
oral	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA		
dermal	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rat		ECHA		

## Acute toxicity of components

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
Dodecamethylcyclohexasiloxane	540-97-6	oral	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	rat
Dodecamethylcyclohexasiloxane	540-97-6	dermal	LD50	>2.000 <sup>mg</sup> / <sub>kg</sub>	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.

### **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**

Shall not be classified as presenting an aspiration hazard.

# Symptoms related to the physical, chemical and toxicological characteristics



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If swallowed

Data are not available.

• If in eyes

Data are not available.

• If inhaled

Data are not available.

• If on skin

Data are not available.

## • Other information

Health effects are not known.

# **11.2 Endocrine disrupting properties**

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

# 11.3 Information on other hazards

There is no additional information.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute) of components									
Name of sub- stance	CAS No	End	point	Value	Species	Exposure time			
Dodecamethylcyclo- hexasiloxane	540-97-6 Er		C50	>2 <sup>µg</sup> /I	algae	72 h			
Aquatic toxicity (chronic)									
Endpoint Value Species Source Exposur									
EC50	>100 <sup>mg</sup> / <sub>l</sub>		microorganisms		ECHA	3 h			

# Aquatic toxicity (chronic) of components

Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time
Dodecamethylcyclo- hexasiloxane	540-97-6	EC50	>100 <sup>mg</sup> / <sub>l</sub>	microorganisms	3 h

# 12.2 Persistence and degradability

Theoretical Oxygen Demand: 1,58 <sup>mg</sup>/<sub>mg</sub> Theoretical Carbon Dioxide: 1,372 <sup>mg</sup>/<sub>mg</sub>



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Process of degradability			
Process	Degradation rate	Time	
carbon dioxide generation	0 %	28 d	

# Degradability of components

Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source
Dodecamethyl- cyclohexasilox- ane	540-97-6	carbon dioxide generation	4,47 %	28 d		ECHA

# 12.3 Bioaccumulative potential

The substance fulfils the very bioaccumulative criterion.

n-octanol/water (log KOW)	9,268 – 9,508 (ECHA)
BCF	1.430 (ECHA)

# **Bioaccumulative potential of components**

Name of substance	CAS No	BCF	Log KOW	BOD5/COD
Dodecamethylcyclohexasiloxane	540-97-6	1.160	8,87 (23,6 °C)	

# 12.4 Mobility in soil

The Organic Carbon normalised adsorption coefficient	6,3 (ECHA)
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# 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  $\ge 0,1\%$ .

12.7 Other adverse effects

Data are not available.

# **SECTION 13: Disposal considerations**

# 13.1 Waste treatment methods



Consult the appropriate local waste disposal expert about waste disposal.

### Sewage disposal-relevant information

Do not empty into drains.



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## Waste treatment of containers/packagings

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### 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 number or ID number

14.2 UN proper shipping name

14.3 Transport hazard class(es)

14.4 Packing group

14.5 Environmental hazards

not subject to transport regulations

not assigned

none

not assigned

non-environmentally hazardous acc. to the dangerous goods regulations

- **14.6** Special precautions for user There is no additional information.
- **14.7** Maritime 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

**International Maritime Dangerous Goods Code (IMDG) - Additional information** Not subject to IMDG.

**International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information** Not subject to ICAO-IATA.

# **SECTION 15: Regulatory information**

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

Relevant provisions of the European Union (EU)

**Restrictions according to REACH, Annex XVII** not listed

**List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list** Not listed.



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Seveso	Seveso Directive					
2012/18/EU (Seveso III)						
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements	Notes			
	not assigned					

#### **Deco-Paint Directive**

VOC content	100 %
VOC content	872 <sup>g</sup> /l

### **Industrial Emissions Directive (IED)**

VOC content	0 %
VOC content	0 <sup>g</sup> / <sub>l</sub>

# Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

# Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

### Water Framework Directive (WFD)

not listed

### Regulation on the marketing and use of explosives precursors

not listed

### **Regulation on drug precursors**

not listed

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### **Regulation concerning the export and import of hazardous chemicals (PIC)**

not listed

## **Regulation on persistent organic pollutants (POP)**

not 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.



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National i	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			
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

A.U.C.	
AIIC	Australian Inventory of Industrial Chemicals
CSCL-ENCS	List of Existing and New Chemical Substances (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
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

According to REACH, Article 14 (1) a chemical safety assessment has been carried out for this substance or components of this mixture when the substance has been registered in quantities of 10 tonnes or more per year per registrant.

# **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	Results of PBT and vPvB assessment: Containing a PBT-/vPvB-substance in a concentration of $\geq$ 0,1%.	Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
14.8	Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional in- formation: not assigned		yes



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Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
15.1	VOC content: 100 % 872 <sup>g</sup> / <sub>l</sub>	VOC content: 100 %	yes
15.1		VOC content: 872 <sup>g</sup> / <sub>l</sub>	yes
15.1		Regulation on persistent organic pollutants (POP): not listed	yes
15.1		Other information: Directive 94/33/EC on the protection of young people at work. Observe employment restric- tions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.	yes
15.1		National inventories: change in the listing (table)	yes
15.2	Chemical Safety Assessment: No Chemical Safety Assessment has been car- ried out for this substance.	Chemical safety assessment: According to REACH, Article 14 (1) a chemical safety assessment has been carried out for this substance or components of this mixture when the substance has been registered in quantities of 10 tonnes or more per year per registrant.	yes

# Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road)
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
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
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union)
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
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



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Abbr.	Descriptions of used abbreviations
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
SVHC	Substance of Very High Concern
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

## Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### Disclaimer

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