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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 27.10.2022 / 0004  
Replacing version dated / version: 01.11.2021 / 0003  
Valid from: 27.10.2022  
PDF print date: 08.05.2023  
Optimal New Generation 5W-40

## Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

#### 1.1 Product identifier

#### Optimal New Generation 5W-40

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

##### Relevant identified uses of the substance or mixture:

Hydraulic oil  
Lubricant

##### Uses advised against:

No information available at present.

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

LIQUI MOLY GmbH  
Jerg-Wieland-Str. 4  
89081 Ulm-Lehr  
Tel.: (+49) 0731-1420-0  
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

#### 1.4 Emergency telephone number

##### Emergency information services / official advisory body:

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##### Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)  
+1 872 5888271 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification according to Regulation (EC) 1272/2008 (CLP)

The mixture is not classified as dangerous in the terms of the Regulation (EC) 1272/2008 (CLP).

#### 2.2 Label elements

##### Labeling according to Regulation (EC) 1272/2008 (CLP)

EUH210-Safety data sheet available on request.

#### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

n.a.

### 3.2 Mixtures

Distillates (petroleum), hydrotreated heavy paraffinic	
Registration number (REACH)	01-2119484627-25-XXXX
Index	649-467-00-8
EINECS, ELINCS, NLP, REACH-IT List-No.	265-157-1
CAS	64742-54-7
content %	50-<75
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Asp. Tox. 1, H304

Baseoil - unspecified *	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	---
CAS	---
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Asp. Tox. 1, H304

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate	
Registration number (REACH)	01-0000015551-76-XXXX
Index	607-530-00-7
EINECS, ELINCS, NLP, REACH-IT List-No.	406-040-9
CAS	125643-61-0
content %	<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 4, H413

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.

\* The contained mineral oil can be described by one or more of the following numbers:

EINECS, ELINCS, NLP, REACH-IT List-No.	Registration number (REACH)	Chemical name
265-157-1	01-2119484627-25-XXXX	Distillates (petroleum), hydrotreated heavy paraffinic
265-169-7	01-2119471299-27-XXXX	Distillates (petroleum), solvent-dewaxed heavy paraffinic
265-158-7	01-2119487077-29-XXXX	Distillates (petroleum), hydrotreated light paraffinic
265-159-2	01-2119480132-48-XXXX	Distillates (petroleum), solvent-dewaxed light paraffinic

The substances named in this section are given with their actual, appropriate classification!

For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!

Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

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Rinse the mouth thoroughly with water.  
Do not induce vomiting. Consult doctor immediately.  
In case of vomiting, keep head low so that the stomach content does not reach the lungs.  
Danger of aspiration.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

The following may occur:

Repeated exposure may cause skin dryness or cracking.

On vapour formation:

Irritation of the respiratory tract

Ingestion:

Gastrointestinal disturbances

Nausea

Vomiting

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

Symptomatic treatment.

### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

CO<sub>2</sub>

Foam

Dry extinguisher

##### **Unsuitable extinguishing media**

High volume water jet

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

In case of fire the following can develop:

Oxides of carbon

Fume

Oxides of nitrogen

Soot

Oxides of sulphur

Oxides of phosphorus

Zinc oxide

Aldehydes

Calcium oxide

Toxic vapours

Irritating gases

Irritating vapours

#### **5.3 Advice for firefighters**

For personal protective equipment see Section 8.

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

### **SECTION 6: Accidental release measures**

#### **6.1 Personal precautions, protective equipment and emergency procedures**

##### **6.1.1 For non-emergency personnel**

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.

Ensure sufficient ventilation, remove sources of ignition.

Avoid dust formation with solid or powder products.

Leave the danger zone if possible, use existing emergency plans if necessary.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

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If applicable, caution - risk of slipping.

### 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

### 6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Oil binder

Do not wash away with water or watery cleaning agents.

### 6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Avoid formation of oil mist.

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

Avoid contact with eyes.

Avoid long lasting or intensive contact with skin.

Do not carry cleaning cloths soaked in product in trouser pockets.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

### 7.2 Conditions for safe storage, including any incompatibilities

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Protect against moisture and store closed.

Store cool.

### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Chemical Name	Oil mist, mineral		
WEL-TWA: 5 mg/m3 (Mineral oil, excluding metal working fluids, ACGIH)	WEL-STEL: ---	---	
Monitoring procedures: - Draeger - Oil Mist 1/a (67 33 031)			
BMGV: ---			Other information: ---

Distillates (petroleum), hydrotreated heavy paraffinic						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - oral (animal feed)		PNEC	9,33	mg/kg	

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Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,74	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,58	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,97	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,73	mg/m <sup>3</sup>	

Baseoil - unspecified						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - oral (animal feed)		PNEC	9,33	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	1,19	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,74	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,97	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,58	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,73	mg/m <sup>3</sup>	

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	0,37	mg/kg dw	
	Environment - sediment, marine		PNEC	0,037	mg/kg dw	
	Environment - soil		PNEC	10	mg/kg dw	
	Environment - freshwater		PNEC	0,018	mg/l	
	Environment - marine		PNEC	0,002	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,018	mg/l	
	Environment - oral (animal feed)		PNEC	41,33	mg/kg feed	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,74	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,83	mg/kg bw/d	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,93	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1,67	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	6,6	mg/m <sup>3</sup>	

Distillates (petroleum), hydrotreated heavy paraffinic						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - oral (animal feed)		PNEC	9,33	mg/kg feed	

"Arbeitsplatzgrenzwert" (workplace limit value, Germany).

(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

\*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

(13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.

EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles (EN 166) with side protection, with danger of splashes.

Skin protection - Hand protection:

Protective gloves, oil resistant (EN ISO 374).

If applicable

Protective nitrile gloves (EN ISO 374).

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

480

Protective hand cream recommended.

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

If OES or MEL is exceeded.

With oil mist formation:

Filter A2 P2 (EN 14387), code colour brown, white

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

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In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.  
 The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### 8.2.3 Environmental exposure controls

No information available at present.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	Flammable
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	230 °C
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	84 mm <sup>2</sup> /s (40°C)
Kinematic viscosity:	14 mm <sup>2</sup> /s (100°C)
Solubility:	Insoluble
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	0,85 g/ml
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

### 9.2 Other information

Explosives:	Product is not explosive.
Oxidising liquids:	No

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

### 10.4 Conditions to avoid

Open flame, ignition sources

Do not heat to temperatures close to flash point.

### 10.5 Incompatible materials

Oxidizing agents

Acids

Chlorates

Nitrates

Peroxides

### 10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

## SECTION 11: Toxicological information

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

Possibly more information on health effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Distillates (petroleum), hydrotreated heavy paraffinic						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 420 (Acute Oral toxicity - Fixe Dose Procedure)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>5,53	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Analogous conclusion
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Analogous conclusion
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant, Analogous conclusion
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact), Analogous conclusion
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative, Analogous conclusion Chinese hamster
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative, Analogous conclusion
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative, Analogous conclusion
Carcinogenicity:				Mouse	OECD 451 (Carcinogenicity Studies)	Negative, Analogous conclusion 78 weeks, dermal
Reproductive toxicity (Developmental toxicity):				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion dermal
Reproductive toxicity:				Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion oral
Aspiration hazard:						Asp. Tox. 1



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Specific target organ toxicity - repeated exposure (STOT-RE), oral:	LOAEL	125	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Analogous conclusion
Symptoms:						gastrointestinal disturbances, diarrhoea
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	1000	mg/kg	Rabbit	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	0,22	mg/l	Rat		Dust, Mist, Analogous conclusion 4 weeks

Baseoil - unspecified						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Respiratory or skin sensitisation:						Not sensitising, Analogous conclusion
Aspiration hazard:						Yes
Symptoms:						mucous membrane irritation

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	> 2000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	> 2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	NegativeChinese hamster
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	NegativeChinese hamster
Reproductive toxicity:	NOAEL	150-600	mg/kg bw/d	Mouse	OECD 415 (One-Generation Reproduction Toxicity Study)	
Carcinogenicity:				Rat		Negative, Analogous conclusion
Aspiration hazard:						Negative

## 11.2. Information on other hazards

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Endocrine disrupting properties:						Does not apply to mixtures.

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Other information:						No other relevant information available on adverse effects on health.
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## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.

Distillates (petroleum), hydrotreated heavy paraffinic							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	>100	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to fish:	NOEC/NOEL	28d	>1000	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	10	mg/l	Daphnia magna	QSAR	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	48h	>100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	>=100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	31	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable, Analogous conclusion
12.2. Persistence and degradability:		28d	6	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		3,9-6				High

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12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:	AOX		0	%			

Baseoil - unspecified							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Pimephales promelas		
12.1. Toxicity to daphnia:	EC50	48h	>10000	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>10	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Scenedesmus quadricauda		
12.2. Persistence and degradability:		28d	31	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable

Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>74	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	35d	0,001	mg/l	Brachydanio rerio	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>=1	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Water toxicology is above the water-solubility value.
12.1. Toxicity to algae:	EC50	72h	>3	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	2-4	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.2. Persistence and degradability:							Mechanical precipitation possible. Possible @ 20°C
12.3. Bioaccumulative potential:	Log Pow		9,2				
12.3. Bioaccumulative potential:	BCF	35d	260			OECD 305 (Bioconcentration - Flow-Through Fish Test)	Concentration in organisms possible. Oncorhynchus mykiss
12.4. Mobility in soil:							Adsorption in ground., To be expected
12.4. Mobility in soil:	Koc		7673-18432			OECD 106 (Adsorption/Desorption Using a Batch Equilibrium Method)	

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12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	IC50	3h	>100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other organisms:	NOEC/NOEL	28d	31,6	mg/kg		OECD 217 (Soil Microorganisms - Carbon Transformation Test)	
Other information:	EC50	19d	>100	mg/kg		OECD 208 (Terrestrial Plants, Growth Test)	Brassica rapa
Toxicity to annelids:	EC50	14d	>1000	mg/kg	Eisenia foetida	OECD 207 (Earthworm, Acute Toxicity Tests)	artificial soil
Toxicity to annelids:	NOEC/NOEL	56d	250	mg/kg	Eisenia foetida	OECD 222 (Earthworm Reproduction Test (Eisenia fetida/Eisenia andrei))	artificial soil
Water solubility:			0,5	µg/l			Insoluble

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### For the substance / mixture / residual amounts

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.  
 EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

13 02 05 mineral-based non-chlorinated engine, gear and lubricating oils

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

E.g. dispose at suitable refuse site.

E.g. suitable incineration plant.

Observe regulations for disposal of old oil/waste.

#### For contaminated packing material

Pay attention to local and national official regulations.

15 01 01 paper and cardboard packaging

15 01 02 plastic packaging

15 01 04 metallic packaging

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

## SECTION 14: Transport information

### General statements

#### Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:

Not applicable

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14.2. UN proper shipping name:  
 Not applicable  
 14.3. Transport hazard class(es):  
 Not applicable  
 14.4. Packing group:  
 Not applicable  
 14.5. Environmental hazards:  
 Not applicable  
 Tunnel restriction code:  
 Not applicable  
 Classification code:  
 Not applicable  
 LQ:  
 Not applicable  
 Transport category:  
 Not applicable

### Transport by sea (IMDG-code)

14.1. UN number or ID number:  
 Not applicable  
 14.2. UN proper shipping name:  
 Not applicable  
 14.3. Transport hazard class(es):  
 Not applicable  
 14.4. Packing group:  
 Not applicable  
 14.5. Environmental hazards:  
 Not applicable  
 Marine Pollutant:  
 Not applicable  
 EmS:  
 Not applicable

### Transport by air (IATA)

14.1. UN number or ID number:  
 Not applicable  
 14.2. UN proper shipping name:  
 Not applicable  
 14.3. Transport hazard class(es):  
 Not applicable  
 14.4. Packing group:  
 Not applicable  
 14.5. Environmental hazards:  
 Not applicable

### 14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

### 14.7. Maritime transport in bulk according to IMO instruments

Non-dangerous material according to Transport Regulations.

## SECTION 15: Regulatory information

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

Observe restrictions:  
 General hygiene measures for the handling of chemicals are applicable.

Directive 2010/75/EU (VOC): 0 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 3, 8, 11, 12, 15

### Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Not applicable

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H304 May be fatal if swallowed and enters airways.

H413 May cause long lasting harmful effects to aquatic life.

Asp. Tox. — Aspiration hazard

Aquatic Chronic — Hazardous to the aquatic environment - chronic

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## Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidelines for the preparation of safety data sheets as amended (ECHA).

Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets for the constituent substances.

ECHA Homepage - Information about chemicals.

GESTIS Substance Database (Germany).

German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).

EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.

National Lists of Occupational Exposure Limits for each country as amended.

Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

## Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

ATE Acute Toxicity Estimate

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EbCx, EyCx, Eblx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)

EC European Community

ECHA European Chemicals Agency

ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ErCx, EμCx, Erlx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)

etc. et cetera

EU European Union

EVAL Ethylene-vinyl alcohol copolymer

Fax. Fax number

gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

Koc Adsorption coefficient of organic carbon in the soil

Kow octanol-water partition coefficient

IARC International Agency for Research on Cancer

IATA International Air Transport Association

IBC (Code) International Bulk Chemical (Code)

IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

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IUCLID International Uniform Chemical Information Database  
IUPAC International Union for Pure Applied Chemistry  
LC50 Lethal Concentration to 50 % of a test population  
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
Log K<sub>oc</sub> Logarithm of adsorption coefficient of organic carbon in the soil  
Log K<sub>ow</sub>, Log P<sub>ow</sub> Logarithm of octanol-water partition coefficient  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available  
n.c. not checked  
n.d.a. no data available  
NIOSH National Institute for Occupational Safety and Health (USA)  
NLP No-longer-Polymer  
NOEC, NOEL No Observed Effect Concentration/Level  
OECD Organisation for Economic Co-operation and Development  
org. organic  
OSHA Occupational Safety and Health Administration (USA)  
PBT persistent, bioaccumulative and toxic  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
ppm parts per million  
PVC Polyvinylchloride  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SVHC Substances of Very High Concern  
Tel. Telephone  
TOC Total organic carbon  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

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