

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

Leichtlauf High Tech 5W-40

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

Motor oil
 Sector of use (SU):
 SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
 SU21 - Consumer uses: Private households (=general public = consumers)
 SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 Chemical product category (PC):
 PC17 - Hydraulic fluids
 PC24 - Lubricants, greases, release products
 Process category (PROC):
 PROC 1 - Chemical production or refinery in dosed process without likelihood of exposure or processes with equivalent containment conditions.
 PROC 2 - Chemical production or refinery in dosed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities
 PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 PROC20 - Use of functional fluids in small devices
 Article Categories (AC):
 AC99 - Not required.
 Environmental Release Category (ERC):
 ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
 ERC 7 - Use of functional fluid at industrial site
 ERC 9a - Widespread use of functional fluid (indoor)
 ERC 9b - Widespread use of functional fluid (outdoor)
 Life cycle stages (LCS):
 LCS F - Formulation or re-packing
 LCS IS - Use at industrial sites
 LCS PW - Widespread use by professional workers
 LCS C - Consumer use
 Technical functions (TF):
 Lubricating agent
Uses advised against:
 No information available at present.

1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH
 Jerg-Vieland-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:

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 15.10.2020 / 0011
 Replacing version dated / version: 31.07.2019 / 0010
 Valid from: 15.10.2020
 PDF print date: 15.10.2020
 Leichtlauf High Tech 5W-40

Telephone number of the company in case of emergencies: +49 (0) 700 / 24 112 112 (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)

EUH208-Contains C14-16-18 Alkylphenol. May produce an allergic reaction.
 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 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Distillates (petroleum), hydrotreated heavy paraffinic	01-2119464627-25-XXXX
Index	649-467-00-8
Registration number (REACH)	265-157-1
EINECS, ELINCS, NLP	64742-54-7
CAS	20-40
content %	Asp. Tox. 1, H304
Classification according to Regulation (EC) 1272/2008 (CLP)	

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based

Registration number (REACH)	01-2119474889-13-XXXX
Index	649-463-00-5
EINECS, ELINCS, NLP	2767-38-4
CAS	72623-87-1
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

Registration number (REACH)	01-2119474878-16-XXXX
Index	649-462-00-X
EINECS, ELINCS, NLP	276-737-9
CAS	72623-86-0
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304

C14-16-18 Alkylphenol

Registration number (REACH)	01-2119469288-19-XXXX
Index	---
EINECS, ELINCS, NLP	931-468-2 (REACH-IT List-No.)
CAS	---

content %	0,1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1B, H317 STOT RE 2, H373 (liver)
Zinc bis[O-(6-methylheptyl)] bis(O-sec-butyl)] bis(dithiophosphate)	Substance with specific conc. limit(s) acc. to REACH-registration
Registration number (REACH)	01-2119548726-33-XXXX
Index	---
EINECS, ELINCS, NLP	298-577-9 93819-94-4
CAS	<2.5
content %	<2.5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.

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

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

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

Rinse the mouth thoroughly with water.

Call doctor immediately - have Data Sheet available.

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.

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

Irritation of the eyes

With long-term contact

Drying of the skin.

Dermatitis (skin inflammation)

With oil mist formation.

Irritation of the respiratory tract

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

CO₂

Foam

Dry extinguisher

Large fire:

Water jet spray / alcohol resistant foam

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
Oxides of nitrogen
Oxides of phosphorus
Toxic gases
5.3 Advice for firefighters
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

Avoid formation of oil mist.
 Remove possible causes of ignition - do not smoke.
 Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.
 Resolve leaks if this possible without risk.
 Prevent from entering drainage system.
 Prevent surface and ground-water infiltration, as well as ground penetration.
 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) and dispose of according to Section 13.
 Oil binder

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.
 Avoid contact with eyes.
 Avoid long lasting or intensive contact with skin.
 Do not heat to temperatures close to flash point.
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
 Do not carry cleaning cloths soaked in product in trouser pockets.
 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 feedingsuffs.
 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 at room temperature.

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	Content %:
WEL-TWA: 5 mg/m ³ (Mineral oil, excluding metal working fluids, ACGIH)	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Oil Mist 1/a (67 33 031)	
BMGV: ---	Other information: --	

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m ³	24h
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,58	mg/m ³	8h

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - oral	Long term, local effects	PNEC	9,33	mg/kg feed	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m ³	24h
	Human - inhalation	Long term, local effects	DNEL	5,4	mg/m ³	8h

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m ³	24h
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,74	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,4	mg/m ³	8h
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,97	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,73	mg/m ³	

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,004	mg/l	
	Environment - marine		PNEC	0,0046	mg/l	
	Environment - sediment, freshwater		PNEC	0,0116	mg/kg	
	Environment - sediment, marine		PNEC	0,00116	mg/kg	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - soil		PNEC	0,00528	mg/kg	
	Environment - oral (animal feed)		PNEC	10,67	mg/kg	

Consumer	Environment - water, sporadic (intermittent)	PNEC	21	µg/l
Consumer	Human - dermal	DNEL <td>0,29</td> <td>mg/kg</td>	0,29	mg/kg
Workers / employees	Human - oral	DNEL <td>0,24</td> <td>mg/kg</td>	0,24	mg/kg
Workers / employees	Human - inhalation	DNEL <td>8,31</td> <td>mg/m³</td>	8,31	mg/m ³
Workers / employees	Human - dermal	DNEL <td>0,58</td> <td>mg/kg</td>	0,58	mg/kg

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40, AGW = "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 0.02 mg Cd/g creatinine in urine (Directive 2004/37/CE), (13) = WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
 (6) = 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), (1) 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 repeated 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 with side protection (EN 166).

Skin protection - Hand protection:
 Protective gloves, oil resistant (EN 374).

If applicable
 Protective nitrile gloves (EN 374)

Permeation time (penetration time) in minutes:
 480

Minimum layer thickness in mm:
 0,4

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 garments),
 Respiratory protection:

Normally not necessary.
 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.

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
 Odour threshold: Not determined
 pH-value: Not determined
 Melting point/freezing point: Not determined
 Initial boiling point and boiling range: Not determined
 Flash point: 230 °C
 Evaporation rate: Not determined
 Flammability (solid, gas): Not determined
 Lower explosive limit: Not determined
 Upper explosive limit: Not determined
 Vapour pressure: Not determined
 Vapour density (air = 1): Not determined
 Density: 0.855 g/cm³
 Bulk density: Not determined
 Solubility(ies): Not determined
 Water solubility: Insoluble
 Partition coefficient (n-octanol/water): Not determined
 Auto-ignition temperature: Not determined
 Decomposition temperature: Not determined
 Viscosity: 70.0 mm²/s (40°C)
 Viscosity: 12.9 mm²/s (100°C)
 Oxidising properties: Not determined
 Not determined

9.2 Other information

Miscibility: Not determined
 Fat solubility / solvent: Not determined
 Conductivity: Not determined
 Surface tension: Not determined
 Solvents content: Not determined

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

Protect from humidity.

Open flame, ignition sources

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

10.6 Hazardous decomposition products

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Leichtlauf High Tech 5W-40	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 - Five 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
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:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative, Analogous conclusion

Carcinogenicity:		Mouse	OECD 451 (Carcinogenicity Studies)	Negative, Analogous conclusion
Reproductive toxicity:		Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	Negative, Analogous conclusion
Reproductive toxicity (Developmental toxicity):		Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Aspiration hazard:				Yes
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	LOAEL	mg/kg	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	mg/kg	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	mg/l		Dust, Mist, Analogous conclusion

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based				
Toxicity / effect	Endpoint	Value	Unit	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	
Acute toxicity, by inhalation:	LC50	>5.53	mg/l/4h	
Skin corrosion/irritation:				Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Not irritant
Respiratory or skin sensitisation:				No (skin contact)
Germ cell mutagenicity:				Negative
Germ cell mutagenicity:				Negative
Germ cell mutagenicity:				Negative
Germ cell mutagenicity:				Negative
Germ cell mutagenicity:				Negative
Germ cell mutagenicity:				Negative
Carcinogenicity:				Negative
Carcinogenicity:				Negative
Reproductive toxicity:				Negative

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based				
Toxicity / effect	Endpoint	Value	Unit	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	
Acute toxicity, by inhalation:	LC50	>5.53	mg/m3/4h	
Skin corrosion/irritation:				Not irritant, Analogous conclusion
Serious eye damage/irritation:				Not irritant, Analogous conclusion
Respiratory or skin sensitisation:				Not irritant, Analogous conclusion
Germ cell mutagenicity:				Negative, Analogous conclusion
Germ cell mutagenicity:				Negative, Analogous conclusion
Reproductive toxicity:	NOAEL	>=1000	mg/kg/d	Negative
Aspiration hazard:				Yes
Aspiration hazard:				nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	125	mg/kg	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	30	mg/kg	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	~1000	mg/kg bw/d	Analogous conclusion

C14-16-18 Alkylphenol				
Toxicity / effect	Endpoint	Value	Unit	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	
Acute toxicity, by inhalation:	LC50	>5.53	mg/m3/4h	
Skin corrosion/irritation:				Not irritant, Analogous conclusion
Serious eye damage/irritation:				Not irritant, Analogous conclusion
Respiratory or skin sensitisation:				Not irritant, Analogous conclusion
Germ cell mutagenicity:				Negative, Analogous conclusion
Germ cell mutagenicity:				Negative, Analogous conclusion
Reproductive toxicity:	NOAEL	>=1000	mg/kg/d	Negative
Aspiration hazard:				Yes
Aspiration hazard:				nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	125	mg/kg	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	30	mg/kg	Analogous conclusion
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	~1000	mg/kg bw/d	Analogous conclusion

Page 11 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 15.10.2020 / 0011
 Replacing version dated / version: 31.07.2019 / 0010
 Valid from: 15.10.2020
 PDF print date: 15.10.2020
 Leichtlauf High Tech 5W-40

Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat	OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method)	Not irritant
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	Not irritant
Skin corrosion/irritation:					OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test (Method))	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Sensitising

Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)		Unit	Notes
Acute toxicity, by oral route:	LD50	2600	
Acute toxicity, by dermal route:	LD50	>3160	
Acute toxicity, by inhalation:	LC50	>2	Male
Skin corrosion/irritation:		>=6,25	Skin Irrit. 2, Analogous conclusion
Serious eye damage/irritation:		504	Eye Dam. 1, Analogous conclusion
Respiratory or skin sensitisation:			Eye Dam. 1, Analogous conclusion
Germ cell mutagenicity:			CFR 1500.42
			No (skin contact)
			Negative
			Analogous conclusion
			Negative
			Analogous conclusion
			Negative
			Analogous conclusion
Reproductive toxicity (Developmental toxicity):	NOAEL	160	

SECTION 12: Ecological information

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

Leichtlauf High Tech 5W-40		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. Other adverse effects:							n.d.a.

Page 12 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 15.10.2020 / 0011
 Replacing version dated / version: 31.07.2019 / 0010
 Valid from: 15.10.2020
 PDF print date: 15.10.2020
 Leichtlauf High Tech 5W-40

Distillates (petroleum), hydrotreated heavy paraffinic		Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:		28d	31	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable, Analogous conclusion
12.3. Bioaccumulative potential:		Log Pow	3,9-6				High
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	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	10	mg/l	Daphnia magna	QSAR	Analogous conclusion
12.1. Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EL50	48h	>100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	6	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Other information:							

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based		Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	96h	>=100	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LL50	96h	> 100	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	>10000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	10	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	>=100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EL50	48h	>100	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	46	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	

12.3. Bioaccumulative potential:	Log Kow	>6		A notable biological accumulation potential has to be expected (LogPow > 3). No PBT substance. No vPvB substance
12.5. Results of PBT and vPvB assessment				
Toxicity to bacteria:	NOEC/NOEL	10min	> 1.93 mg/l	DIN 38412 T.8

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to daphnia:	EL50	48h	> 10000	mg/l		Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to fish:	LL50	96h	> 100	mg/l		Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to fish:	NOEC/NOEL	14d	>=1000	mg/l		Oncorhynchus mykiss	QSAR	Analogous conclusion
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	>=100	mg/l		Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	Analogous conclusion
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	%			OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Inherent. Analogous conclusion
Other information:	Log Pow		6,1					

C14-16-18 Alkylphenol	Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	> 100	mg/l		Cyprinus caprio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	24h	> 100	mg/l		Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	> 100	mg/l		Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

Zinc bis[O-(6-methylheptyl)] bis[O-(sec-butyl)] bis(dithiophosphate)	Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	4,5	mg/l		Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EL50	48h	5,4	mg/l		Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	96h	2,1	mg/l		Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion

12.2. Persistence and degradability:	28d	1,5	%		OECD 307 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow	0,59-1,2			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
12.5. Results of PBT and vPvB assessment						No PBT substance. No vPvB substance
Toxicity to bacteria:		10	mg/l	activated sludge		

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. (2014/695/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. suitable incineration plant.
 Observe regulations for disposal of old oil/waste.

For contaminated packing material

Pay attention to local and national official regulations.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 15 01 01 paper and cardboard packaging
 15 01 02 plastic packaging
 15 01 04 metallic packaging

SECTION 14: Transport information

General statements

14.1. UN number: n.a.

Transport by road/by rail (ADR/RID)

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

Transport by sea (IMDG-code)

14.2. UN proper shipping name: n.a.
 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 Marine Pollutant: Not applicable
 14.5. Environmental hazards: Tunnel restriction code: Not applicable

Transport by air (IATA)

14.2. UN proper shipping name: Not applicable

Page 15 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 15.10.2020 / 0011
 Replacing version dated / version: 31.07.2019 / 0010
 Valid from: 15.10.2020
 PDF print date: 15.10.2020
 Leichtlauf High Tech 5W-40

- 14.3. Transport hazard class(es): n.a.
 14.4. Packing group: n.a.
 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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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 %

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 2, 3, 8, 9, 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).
 H317 May cause an allergic skin reaction.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H411 Toxic to aquatic life with long lasting effects.

- Asp. Tox. — Aspiration hazard
 Skin Sens. — Skin sensitization
 STOT RE — Specific target organ toxicity - repeated exposure
 Skin Irrit. — Skin irritation
 Eye Dam. — Serious eye damage
 Aquatic Chronic — Hazardous to the aquatic environment - chronic

Any abbreviations and acronyms used in this document:

- 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 organically 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)
 BSEF The International Bromine Council
 bw body weight
 CAS Chemical Abstracts Service

Page 16 of 17
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 15.10.2020 / 0011
 Replacing version dated / version: 31.07.2019 / 0010
 Valid from: 15.10.2020
 PDF print date: 15.10.2020
 Leichtlauf High Tech 5W-40

- CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
 CMR carcinogenic, mutagenic, reproductively toxic
 DMEL Derived Minimum Effect Level
 DNEL Derived No Effect Level
 dw dry weight
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
 EC European Community
 ECHA European Chemicals Agency
 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)
 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
 IARC International Agency for Research on Cancer
 IATA International Air Transport Association
 IBC (Code) International Maritime Code for Dangerous Goods
 IMDG-code International Maritime Code for Dangerous Goods
 incl. including, inclusive
 IUCLID International Union 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)
 LQ Limited Quantities
 MARPOL International Convention for the Prevention of Marine Pollution from Ships

- n.a. not applicable
 n.v. not available
 n.c. not checked
 n.d.a. no data available
 OECD Organisation for Economic Co-operation and Development
 org. organic
 PBT persistent, bioaccumulative and toxic
 PE Polyethylene
 PNEC Predicted No Effect Concentration
 ppm parts per million
 PVC Polyvinylchloride
 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 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
 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:

Chemical Check GmbH, Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

© by Chemical Check GmbH Gefahrstoffberatung. The copying or changing of this document is forbidden except with consent of the Chemical Check GmbH Gefahrstoffberatung.



Page 17 of 17

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

Revision date / version: 15.10.2020 / 0011

Replacing version dated / version: 31.07.2019 / 0010

Valid from: 15.10.2020

PDF print date: 15.10.2020

Leichtlauf High Tech 5W-40