

Page 1 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

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

Molygen 5W-50 1 L Art.: 2542

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

Lubricant

(GB)

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 - Use in closed process, no likelihood of exposure.

PROC 2 - Use in closed, continuous process with occasional controlled exposure

PROC 8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC 8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC 9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems

Article Categories [AC]: AC99 - Not required.

Environmental Release Category [ERC]:

ERC 4 - Industrial use of processing aids in processes and products, not becoming part of articles

ERC 7 - Industrial use of substances in closed systems

ERC 9a - Wide dispersive indoor use of substances in closed systems

ERC 9b - Wide dispersive outdoor use of substances in closed systems

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany Phone: (+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:

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).



Page 2 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

2.2 Label elements Labeling according to Regulation (EC) 1272/2008 (CLP)

EUH210-Safety data sheet available on request.

2.3 Other hazards

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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.

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

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a. 3.2 Mixture

649-467-00-8
265-157-1
64742-54-7
0-30
Asp. Tox. 1, H304
-
-
1-<10
Asp. Tox. 1, H304
01-2119488911-28-XXXX
253-249-4
36878-20-3
1-5
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	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 3.1/3.2 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



Page 3 of 12

(GB)

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

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

Rinse the mouth thoroughly with water. Do not induce vomiting. Consult doctor immediately. 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: Irritation of the eyes Irritation of the skin. Drying of the skin.

Dermatitis (skin inflammation)

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

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO2 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: Irritating vapours Oxides of carbon Oxides of nitrogen Oxides of sulphur Oxides of phosphorus Flammable vapour/air mixtures

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. Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air. Avoid formation of oil mist. Avoid inhalation, and contact with eyes or skin. Do not carry cleaning cloths soaked in product in trouser pockets. If applicable, caution - risk of slipping. **6.2 Environmental precautions**



Page 4 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

If leakage occurs, dam up.

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Resolve leaks if this possible without risk.

Prevent from entering drainage system.

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

6.3 Methods and material for containment and cleaning up

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

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

Ensure good ventilation.

Keep away from sources of ignition - Do not smoke.

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

Do not heat to temperatures close to flash point.

Take measures against electrostatic charging, if appropriate.

Observe directions on label and instructions for use. Use working methods according to operating instructions.

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	Content %:
WEL-TWA: 5 mg/m3 (ACGIH)	WEL-STEL: 10 mg/m3 (ACGIH)	-
Monitoring procedures:	 Draeger - Oil 10/a-P (67 28 371) 	
	 Draeger - Oil Mist 1/a (67 33 031) 	
BMGV:	Other information:	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

Bis(nonylphenyl)amine									
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note			
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	0,62	mg/kg bw/day				



Page 5 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

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Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	4,37	mg/m3
Consumer	Human - oral	Long term, systemic effects	DNEL	0,31	mg/kg bw/day
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,09	mg/m3
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,31	mg/kg bw/day
	Environment - freshwater		PNEC	0,1	mg/l
	Environment - marine		PNEC	0,01	mg/l
	Environment - water, sporadic (intermittent) release		PNEC	1	mg/l
	Environment - sewage treatment plant		PNEC	1	mg/l
	Environment - sediment, freshwater		PNEC	132000	mg/kg dry weight
	Environment - sediment, marine		PNEC	13200	mg/kg dry weight
	Environment - soil		DNEL	263000	mg/kg dw

Distillates (petroleum), hydrotreated heavy paraffinic										
Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note				
	Environmental									
	compartment									
Workers / employees	Human - inhalation	Long term, local effects	DNEL	5,4	mg/m3					
Consumer	Human - inhalation	Long term, local effects	DNEL	1,2	mg/m3					
	Environment - oral (animal		PNEC	9,33	mg/kg feed					
	feed)									

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.

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 projections.

Skin protection - Hand protection: Protective nitrile gloves (EN 374) Permeation time (penetration time) in minutes: >480

Minimum layer thickness in mm:

0,4 Protective hand cream recommended.

The breakthrough times determined in accordance with EN 374 Part 3 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: Normally not necessary. With oil mist formation: Filter A P2 (EN 14387), code colour brown, white



Page 6 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards: Not applicable

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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:	n.a.
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	230-240 °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:	0,85-0,866 g/ml
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	112-116 mm2/s (40°C)
Viscosity:	17,5-18,5 mm2/s (100°C)
Explosive properties:	Not determined
Oxidising properties:	No
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



Page 7 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

See also section 7. Open flame, ignition sources Protect from humidity.

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10.5 Incompatible materials

See also section 7. Avoid contact with strong oxidizing agents. Avoid contact with strong acids. Avoid contact with other chemicals.

10.6 Hazardous decomposition products

See also section 5.2 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).

Molygen 5W-50 1 L Art.: 2542 Endpoin Organism Toxicity / effect Value Unit Test method Notes t 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 n.d.a. single exposure (STOT-SE): Specific target organ toxicity n.d.a. repeated exposure (STOT-RE): Aspiration hazard: n.d.a. Symptoms: n.d.a. Other information: Classification according to calculation procedure.

Toxicity / effect	Endpoin t	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>5,53	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Aerosol, Analogous conclusion
Skin corrosion/irritation:						Not irritant
Skin corrosion/irritation:						Mild irritant, Analogous conclusion
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Respiratory or skin sensitisation:						Not sensitizising
Aspiration hazard:						Yes
Aspiration hazard:						Yes, Analogous conclusion
Aspiration hazard:						Yes
Symptoms:						coughing, respiratory distress, nausea and vomiting., diarrhoea



Page 8 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

Toxicity / effect	Endpoin t	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Mild irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising

SECTION 12: Ecological information

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

Molygen 5W-50 1 L							
Art.: 2542 Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	•				- U		n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and							Mechanical precipitation
degradability:							possible.
Bioaccumulative							n.d.a.
potential:							
Mobility in soil:							n.d.a.
Results of PBT and							n.d.a.
vPvB assessment							
Other adverse effects:							n.d.a.
Other information:							According to the recipe,
							contains no AOX.

Distillates (petroleum), hydrotreated heavy paraffinic									
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes		
Toxicity to fish:	NOEC/NO	96h	>100	mg/l	Pimephales	OECD 203 (Fish,			
	EL				promelas	Acute Toxicity			
						Test)			
Toxicity to daphnia:	LL50	96h	>10000	mg/l		OECD 202			
						(Daphnia sp.			
						Acute			
						Immobilisation			
						Test)			
Toxicity to algae:	NOEC/NO	72h	>=100	mg/l	Pseudokirchneriell	OECD 201			
	EL				a subcapitata	(Alga, Growth			
						Inhibition Test)			
Persistence and							Not readily biodegradable		
degradability:									
Water solubility:							Insoluble		

Bis(nonylphenyl)amine									
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes		
Toxicity to fish:	LC50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish,			
				-		Acute Toxicity			
						Test)			



Page 9 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

Toxicity to daphnia:	LC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to algae:	EC50	72h	600	mg/l	Pseudokirchneriell a subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	1	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
Bioaccumulative potential:	Log Pow		>7,6				
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

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)

07 06 99 wastes not otherwise specified

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

20 01 26 oil and fat other than those mentioned in 20 01 25

Recommendation:

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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.

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

SECTION 14: Transport information

General statements ^{UN number:} Transport by road/by rail (ADR/RID)	n.a.
UN proper shipping name:	
Transport hazard class(es):	n.a.
Packing group:	n.a.
Classification code:	n.a.
LQ (ADR 2015):	n.a.
Environmental hazards:	Not applicable
Tunnel restriction code:	
Transport by sea (IMDG-code)	



Page 10 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010

(GB)

Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542

UN proper shipping name: Transport hazard class(es): Packing group: Marine Pollutant: Environmental hazards:

Transport by air (IATA)

UN proper shipping name: Transport hazard class(es): Packing group: Environmental hazards:

Special precautions for user

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

Transport in bulk according to Annex II of MARPOL and the IBC Code

Non-dangerous material according to Transport Regulations.

SECTION 15: Regulatory information

n.a.

n.a.

n.a

n.a.

n.a.

Not applicable

Not applicable

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

n.a.

0%

For classification and labelling see Section 2. Observe restrictions: General hygiene measures for the handling of chemicals are applicable. Directive 2010/75/EU (VOC):

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

1 - 16

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.

 $\begin{array}{l} \mbox{Asp. Tox.} \mbox{ - Aspiration hazard} \\ \mbox{Aquatic Chronic - Hazardous to the aquatic environment - chronic} \end{array}$

Any abbreviations and acronyms used in this document:

AC **Article Categories** acc., acc. to according, according to ACGIH American Conference of Governmental Industrial Hygienists Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the ADR International Carriage of Dangerous Goods by Road) AOEL Acceptable Operator Exposure Level AOX Adsorbable organic halogen compounds approx. approximately Art., Art. no. Article number ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP) Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany) BAM BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany) BCF **Bioconcentration factor** Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation) BGV

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)



(GB) Page 11 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542 BMGV Biological monitoring guidance value (EH40, UK) BOD Biochemical oxygen demand Bromine Science and Environmental Forum BSEF body weight bw CAS **Chemical Abstracts Service** CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques CIPAC Collaborative International Pesticides Analytical Council Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and CLP mixtures) CMR carcinogenic, mutagenic, reproductive toxic COD Chemical oxygen demand CTFA Cosmetic, Toiletry, and Fragrance Association DMEL Derived Minimum Effect Level DNEL Derived No Effect Level DOC Dissolved organic carbon DT50 Dwell Time - 50% reduction of start concentration DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes) dw drv weight for example (abbreviation of Latin 'exempli gratia'), for instance e.g. EC European Community ECHA European Chemicals Agency EEA European Economic Area EEC European Economic Community EINECS European Inventory of Existing Commercial Chemical Substances ELINCS European List of Notified Chemical Substances ΕN European Norms United States Environmental Protection Agency (United States of America) EPA ERC **Environmental Release Categories** Exposure scenario ES etc. et cetera EU European Union EWC European Waste Catalogue Fax. Fax number general aen. GHS Globally Harmonized System of Classification and Labelling of Chemicals Global warming potential GWP HET-CAM Hen's Egg Test - Chorionallantoic Membrane HGWP Halocarbon Global Warming Potential IARC International Agency for Research on Cancer International Air Transport Association IATA Intermediate Bulk Container IBC IBC (Code) International Bulk Chemical (Code) IC Inhibitory concentration IMDG-code International Maritime Code for Dangerous Goods including, inclusive incl. IUCLID International Uniform ChemicaL Information Database LC lethal concentration LC50 lethal concentration 50 percent kill lowest published lethal concentration LCLo Lethal Dose of a chemical 1 D LD50 Lethal Dose, 50% kill LDLo Lethal Dose Low LOAEL Lowest Observed Adverse Effect Level LOEC Lowest Observed Effect Concentration LOEL Lowest Observed Effect Level LQ Limited Quantities MARPOL International Convention for the Prevention of Marine Pollution from Ships not applicable n.a. not available n.av. not checked n.c. n.d.a. no data available NIOSH National Institute of Occupational Safety and Health (United States of America) NOAEC No Observed Adverse Effective Concentration



(GB) Page 12 of 12 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 21.08.2015 / 0010 Replacing version dated / version: 28.11.2013 / 0009 Valid from: 21.08.2015 PDF print date: 21.08.2015 Molygen 5W-50 1 L Art.: 2542 NOAFL No Observed Adverse Effect Level NOEC No Observed Effect Concentration NOEL No Observed Effect Level **Ozone Depletion Potential** ODP OECD Organisation for Economic Co-operation and Development organic org. PAH polycyclic aromatic hydrocarbon PBT persistent, bioaccumulative and toxic Chemical product category PC ΡE Polyethylene PNEC Predicted No Effect Concentration POCP Photochemical ozone creation potential parts per million ppm PROC Process category PTFE Polytetrafluorethylene 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. Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International RID Carriage of Dangerous Goods by Rail) SADT Self-Accelerating Decomposition Temperature SAR Structure Activity Relationship SU Sector of use SVHC Substances of Very High Concern Telephone Tel. ThOD Theoretical oxygen demand Total organic carbon TOC TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances) United Nations Recommendations on the Transport of Dangerous Goods UN RTDG VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria)) VOC Volatile organic compounds vPvB very persistent and very bioaccumulative WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK). WHO World Health Organization wet weight wwt

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

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