

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

Revision date / version: 21.08.2015 / 0010

Replacing version dated / version: 03.12.2013 / 0009

Valid from: 21.08.2015 PDF print date: 22.08.2015 Synthoil Premium 5 L

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

1.1 Product identifier

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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 - 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.

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).



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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.

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

Product can compose a film on the water surface, which can prevent oxygen exchange.

Hazardous to drinking water, on escape of even small quantities.

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a. 3.2 Mixture

0.2	
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	
Registration number (REACH)	01-2119474889-13-XXXX
Index	649-483-00-5
EINECS, ELINCS, NLP	276-738-4
CAS	72623-87-1
content %	60-80
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1. H304

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 3.1/3.2 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

Inhalation

Remove person from danger area.

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

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

Eve 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.

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.

Drying of the skin.

Dermatitis (skin inflammation)

Allergic reaction possible.

On vapour formation:

Irritation of the respiratory tract

Ingestion:



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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

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:

Oxides of carbon

Hydrogen sulphide

Oxides of nitrogen

Oxides of sulphur

Toxic pyrolysis products.

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.

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

Ensure sufficient supply of air.

Avoid formation of oil mist.

Avoid inhalation, and 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, 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.



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Ensure good ventilation.

Keep away from sources of ignition - Do not smoke. Do not heat to temperatures close to flash point.

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.

Impermeable floor.

Protect against moisture and store closed.

Protect from direct sunlight and warming.

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.

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 gloves, oil resistant (EN 374)

If applicable

Protective nitrile gloves (EN 374)

Minimum layer thickness in mm:

0,4

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



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Permeation time (penetration time) in minutes:

> 480

Protective PVC gloves (EN 374)

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.

Protective hand cream recommended.

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 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

n.a.

Insoluble

Not determined

Not determined

Not determined

Not determined

88 mm2/s (40°C)

14,5 mm2/s (100°C)

Product is not explosive.

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: 234 °C Not determined Evaporation rate: Not determined Flammability (solid, gas): Lower explosive limit: Not determined Upper explosive limit: Not determined Vapour pressure: Not determined Not determined 0,856 g/ml

Vapour density (air = 1): Density: Bulk density:

Solubility(ies):

Water solubility: Partition coefficient (n-octanol/water):

Auto-ignition temperature: Decomposition temperature:

Viscosity: Viscosity: Explosive properties:

Oxidising properties:

9.2 Other information

Miscibility: Not determined Fat solubility / solvent: Not determined Conductivity: Not determined



(B)

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Surface tension:

Solvents content:

Not determined

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

See also section 7.

Heating, open flame, ignition sources

Protect from humidity.

10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

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).

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Toxicity / effect	Endpoin	Value	Unit	Organism	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	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>5,53	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	



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Skin corrosion/irritation:	OECD 404 (Acute Not irritant, Repeated
	Dermal exposure may cause s
	Irritation/Corrosion) dryness or cracking.
Skin corrosion/irritation:	OECD 404 (Acute Not irritant
	Dermal
	Irritation/Corrosion)
Serious eye damage/irritation:	OECD 405 (Acute Eye Not irritant
, , ,	Irritation/Corrosion)
Respiratory or skin sensitisation:	OECD 406 (Skin Not sensitizising
	Sensitisation)
Respiratory or skin sensitisation:	OECD 406 (Skin No (skin contact)
	Sensitisation)
Germ cell mutagenicity:	OECD 471 (Bacterial Negative
,	Reverse Mutation Test)
Carcinogenicity:	OECD 451 Negative
	(Carcinogenicity
	Studies)
Carcinogenicity:	OECD 453 (Combined Negative
	Chronic
	Toxicity/Carcinogenicity
	Studies)
Carcinogenicity:	OECD 451 Negative
	(Carcinogenicity
	Studies)
Reproductive toxicity:	OECD 414 (Prenatal Negative
	Developmental
	Toxicity Study)
Reproductive toxicity:	OECD 421 Negative
	(Reproduction/Develop
	mental Toxicity
	Screening Test)
Reproductive toxicity:	OECD 414 (Prenatal Negative
	Developmental
	Toxicity Study)
Reproductive toxicity:	OECD 421 Negative
, , , , , , , , , , , , , , , , , , , ,	(Reproduction/Develop
	mental Toxicity
	Screening Test)
Specific target organ toxicity -	No indications of such
single exposure (STOT-SE):	effect.
Specific target organ toxicity -	No indications of such
repeated exposure (STOT-RE):	effect.
Aspiration hazard:	Asp. Tox. 1

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
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and							Not readily biodegradable
degradability:							
Bioaccumulative							Concentration in
potential:							organisms possible.
Mobility in soil:							n.d.a.
Results of PBT and							n.d.a.
vPvB assessment							
Other adverse effects:							nda

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



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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 fish:	LL50	96h	> 100	mg/l	Pimephales	OECD 203 (Fish,	
,					promelas	Acute Toxicity	
					'	Test)	
Toxicity to daphnia:	NOEC/NO	48h	>10000	mg/l	Daphnia magna	OECD 202	
	EL					(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
Toxicity to daphnia:	NOEC/NO	21d	10	mg/l	Daphnia magna	OECD 211	
Toxiony to daprima.	EL	210	10	1119/1	Baprilla magna	(Daphnia magna	
						Reproduction	
						Test)	
Toxicity to daphnia:	EL50	48h	>10000	mg/l	Daphnia magna	OECD 202	
Toxicity to daprillia.	LLJU	4011	>10000	ilig/i	Daprillia Illaglia	(Daphnia sp.	
						Acute	
						Immobilisation	
						Test)	
Toxicity to algor	NOEC/NO	72h	>=100	m a/l	Pseudokirchneriell	OECD 201	
Toxicity to algae:		/2n	>=100	mg/l			
	EL				a subcapitata	(Alga, Growth	
						Inhibition Test)	N. C. W. L.
Persistence and						OECD 301 B	Not readily biodegradable
degradability:						(Ready	
						Biodegradability -	
						Co2 Evolution	
						Test)	
Persistence and		28d	46	%		OEĆD 301 B	
degradability:						(Ready	
						Biodegradability -	
						Co2 Evolution	
						Test)	
Bioaccumulative	Log Kow		>6				A notable biological
potential:							accumulation potential
							has to be expected
							(LogPow > 3).
Results of PBT and							No PBT substance, No
vPvB assessment							vPvB substance
Toxicity to bacteria:	NOEC/NO	10min	>1,93	mg/l		DIN 38412 T.8	
•	EL						

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.

For contaminated packing material

Pay attention to local and national official regulations.

15 01 01 paper and cardboard packaging



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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

UN number: n.a.

Transport by road/by rail (ADR/RID)

UN proper shipping name:

Transport hazard class(es):

Packing group:

Classification code:

LQ (ADR 2015):

n.a.

n.a.

Environmental hazards: Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

UN proper shipping name:

Transport hazard class(es):

Packing group:

Marine Pollutant:

n.a.

Environmental hazards: Not applicable

Transport by air (IATA)

UN proper shipping name:

Transport hazard class(es):

Packing group:

n.a.

n.a.

Environmental hazards: Not applicable

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

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

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

For classification and labelling see Section 2.

Observe restrictions:

General hygiene measures for the handling of chemicals are applicable.

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.

Asp. Tox. — Aspiration hazard



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Any abbreviations and acronyms used in this document:

AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the

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)

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

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol) BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

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

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

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 dry weight

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

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

EN European Norms

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

ERC Environmental Release Categories

ES Exposure scenario

etc. et cetera

EU European Union

EWC European Waste Catalogue

Fax. Fax number gen. general

GHS Globally Harmonized System of Classification and Labelling of Chemicals

GWP Global warming potential

HET-CAM Hen's Egg Test - Chorionallantoic Membrane

HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container

IBC (Code) International Bulk Chemical (Code)

IC Inhibitory concentration



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IMDG-code International Maritime Code for Dangerous Goods

incl. including, inclusive

IUCLID International Uniform Chemical Information Database

LC lethal concentration

LC50 lethal concentration 50 percent kill LCLo lowest published lethal concentration

LD Lethal Dose of a chemical 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

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration

NOAEL No Observed Adverse Effect Level NOEC No Observed Effect Concentration NOEL No Observed Effect Level ODP Ozone Depletion Potential

OECD Organisation for Economic Co-operation and Development

org. organic

PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
Chamical product extension

PC Chemical product category

PE Polyethylene

PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential

ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene

REACHRegistration, 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)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

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

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.



SYNTHOIL PREMIUM 5W-40

Liqui Moly GmbH

Chemwatch: 48-5638 Version No: 2.1.1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 07/04/2015 Print Date: 05/08/2015 Initial Date: Not Available S.GHS.USA.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	SYNTHOIL PREMIUM 5W-40
Synonyms	Item No: 2040, 2041, 2069, 2099, SYNTHOIL PREMIUM 5W-40, 1 L, SYNTHOIL PREMIUM 5W-40, 205 L, SYNTHOIL PREMIUM 5W-40, 5L, SYNTHOIL PREMIUM 5W-40, 60 L
Other means of identification	Not Available

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

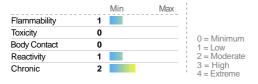
Relevant identified uses

Use according to manufacturer's directions. Motor Oil.

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS





GHS Classification

Not Applicable

Label elements

GHS label elements

Not Applicable

SIGNAL WORD

NOT APPLICABLE

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Precautionary statement(s) Response

Precautionary statement(s) Storage

Precautionary statement(s) Disposal

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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
72623-87-1.	60-80	lubricating oils, petroleum C20-50, hydrotreated neutral

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ► Wash out immediately with water. ► If irritation continues, seek medical attention. ► Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: ▶ Flush skin and hair with running water (and soap if available). ▶ Seek medical attention in event of irritation.
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- ▶ Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- ▶ In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases
- ▶ High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ► Foam. ► Dry chemical powder. ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Advice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO).

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

	· ·
Minor Spills	Slippery when spilt. Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes.
Major Spills	Slippery when spilt. Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard.
	Development of the state of the MODO
	Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

SYNTHOIL PREMIUM 5W-40

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Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- ▶ Prevent concentration in hollows and sumps.

Other information

- Store in original containers.
- ▶ Keep containers securely sealed
- No smoking, naked lights or ignition sources.
- ► Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container

- ► Metal can or drum
- Packaging as recommended by manufacturer.
- ► Check all containers are clearly labelled and free from leaks.

Storage incompatibility

CARE: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire.

► Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	lubricating oils, petroleum C20-50, hydrotreated neutral	Oil mist, mineral	5 mg/m3	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	lubricating oils, petroleum C20-50, hydrotreated neutral	Mineral oil, excluding metal working fluids - Pure, highly and severely refined / Mineral oil, excluding metal working fluids - Poorly and mildly refined	5 mg/m3	Not Available	Not Available	TLV® Basis: URT irr
US NIOSH Recommended Exposure Limits (RELs)	lubricating oils, petroleum C20-50, hydrotreated neutral	Heavy mineral oil mist, Paraffin oil mist, White mineral oil mist	5 mg/m3	10 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient M	Material name	TEEL-1	TEEL-2	TEEL-3
SYNTHOIL PREMIUM 5W-40 N	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
lubricating oils, petroleum C20-50, hydrotreated neutral	Not Available	Not Available

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Personal protection









Eye and face protection

- ► Safety glasses with side shields
- ▶ Chemical goggles
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

Skin protection

See Hand protection below

Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Suitability and durability of glove type is dependent on usage.

Body protection

See Other protection below

Other protection

- ▶ Overalls.
 - P.V.C. apron.Barrier cream.

Thermal hazards

Not Available

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Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computer-generated* selection:

SYNTHOIL PREMIUM 5W-40 Not Available

Material CPI

- * CPI Chemwatch Performance Index
- A: Best Selection
- B: Satisfactory; may degrade after 4 hours continuous immersion
- C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

	·			
Appearance	Brown colour liquid with characteristic odour; not miscible wit	Brown colour liquid with characteristic odour; not miscible with water.		
Physical state	Liquid	Relative density (Water = 1)	0.856	
Odour	Not Available	Partition coefficient n-octanol / water	Not Available	
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available	
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available	
Melting point / freezing point (°C)	-42	Viscosity (cSt)	88	
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable	
Flash point (°C)	234	Taste	Not Available	
Evaporation rate	Not Available	Explosive properties	Not Available	
Flammability	Not Applicable	Oxidising properties	Not Available	
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available	
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available	
Vapour pressure (kPa)	Not Available	Gas group	Not Available	
Solubility in water (g/L)	Immiscible	pH as a solution (1%)	Not Available	
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available	

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation hazard is increased at higher temperatures. Not normally a hazard due to non-volatile nature of product Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.

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The liquid may be miscible with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives **Skin Contact** Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised Eve by tearing or conjunctival redness (as with windburn). Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of Chronic the feet.

SYNTHOIL PREMIUM	TOXICITY	IRRITATION
5W-40	Not Available	Not Available
	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (rat) LC50: >3.9 mg/l4 h ^[1]	
	Inhalation (rat) LC50: >4.7 mg/l4 h ^[1]	
	Inhalation (rat) LC50: >5 mg/l4 h ^[1]	
lubricating oils, petroleum C20-50, hydrotreated neutral	Inhalation (rat) LC50: >5.2 mg/l4 h ^[1]	
	Inhalation (rat) LC50: >5.3 mg/l4 h ^[1]	
	Inhalation (rat) LC50: 10.5 mg/l4 h ^[1]	
	Inhalation (rat) LC50: 5.7 mg/l4 h ^[1]	
	Inhalation (rat) LC50: 9.6 mg/l4 h ^[1]	
	Oral (rat) LD50: >2000 mg/kg ^[1]	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity extracted from RTECS - Register of Toxic Effect of chemical Substances	2.* Value obtained from manufacturer's msds. Unless otherwise specified data

LUBRICATING OILS. PETROLEUM C20-50. **HYDROTREATED** NEUTRAL

The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives;

The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since:

- ▶ The adverse effects of these materials are associated with undesirable components, and
- ▶ The levels of the undesirable components are inversely related to the degree of processing;
- ▶ Distillate base oils receiving the same degree or extent of processing will have similar toxicities;
- ▶ The potential toxicity of residual base oils is independent of the degree of processing the oil receives.
- The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing.

Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential carcinogenic and mutagenic activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components.

Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	0	Reproductivity	0
Serious Eye Damage/Irritation	0	STOT - Single Exposure	0
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

✓ – Data required to make classification available

🗶 – Data available but does not fill the criteria for classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

DO NOT discharge into sewer or waterways

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air	
	No Data available for all ingredients	No Data available for all ingredients	

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

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Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

Product / Packaging disposal

- ▶ Reduction
- ▶ Reuse▶ Recycling
- ► Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant

NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

SECTION 15 REGULATORY INFORMATION

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

LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED NEUTRAL(72623-87-1.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - Alaska Limits for Air Contaminants	US - Washington Permissible exposure limits of air contaminants
US - California Permissible Exposure Limits for Chemical Contaminants	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US - California Proposition 65 - Carcinogens	US ACGIH Threshold Limit Values (TLV)
US - Hawaii Air Contaminant Limits	US ACGIH Threshold Limit Values (TLV) - Carcinogens
US - Idaho - Limits for Air Contaminants	US National Toxicology Program (NTP) 13th Report Part A Known to be Human Carcinogens
US - Michigan Exposure Limits for Air Contaminants	US NIOSH Recommended Exposure Limits (RELs)
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Oregon Permissible Exposure Limits (Z-1)	US Priority List for the Development of Proposition 65 Safe Harbor Levels - No Significant Risk
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for
US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants	Chemicals Causing Reproductive Toxicity
	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Υ
Canada - NDSL	N (lubricating oils, petroleum C20-50, hydrotreated neutral)
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (lubricating oils, petroleum C20-50, hydrotreated neutral)
Korea - KECI	Υ
New Zealand - NZIoC	Υ
Philippines - PICCS	Υ
USA - TSCA	Υ
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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