MENT®

according to 1907/2006/EC, Article 31

Printing date 04.03.2021 Version number 12 Revision: 04.03.2021

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

· 1.1 Product identifier

· Trade name: **PTFE Super Lube**

87364 · Article number:

· UFI: H5GY-QRXU-4383-G1V9

· 1.2 Relevant identified uses of the substance or mixture and

uses advised against

No further relevant information available.

· Application of the substance / the

Lubricant mixture

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH

Tel. +49(0)911-642960 Lechstrasse 28 Fax. +49(0)911-644456 D 90451 Nürnberg e-mail info@akemi.de

· Further information obtainable

from:

Laboratory

· 1.4 Emergency telephone

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH number:

Tel. +49(0)911-64296-59

Reachable during the following office hours: Monday – Thursday from 07:30 a.m. to 16:30 p.m.

Friday from 07:30 a.m. to 13:30 p.m.

+44 (171) 635 91 91

National Poison Inform, Centre Medical Toxicology Unit

Avalonley Road London SE14 5ER

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

STOT SE 3 H336 May cause drowsiness or dizziness.

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways. Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

· 2.2 Label elements

· Labelling according to Regulation

(EC) No 1272/2008 · Hazard pictograms

The product is classified and labelled according to the CLP regulation.







GHS02 GHS07 GHS09

· Signal word Danger

· Hazard-determining components of

labelling: pentane

· Hazard statements H222-H229 Extremely flammable aerosol. Pressurised container: May burst if

heated.

May cause drowsiness or dizziness. H336 Toxic to aquatic life with long lasting effects. H411

If medical advice is needed, have product container or label at hand. · Precautionary statements P101

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

Keep away from heat, hot surfaces, sparks, open flames and other P210

ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

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P251 Do not pierce or burn, even after use.

P260 Do not breathe spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

Do NOT induce vomiting. P331

P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell. P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50

°C/122 °F.

P501 Dispose of contents/container in accordance with local/regional/

national/international regulations.

· Additional information: EUH066 Repeated exposure may cause skin dryness or cracking.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable. · vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· Description: Mixture: consisting of the following components.

5 1	
pentane Flam. Liq. 1, H224 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT SE 3, H336	25-50%
butane, pure Flam. Gas 1A, H220; Flam. Liq. 1, H224 Press. Gas (Comp.), H280	12.5-25%
propane Flam. Gas 1A, H220 Acute Tox. 1, H330 Press. Gas (Comp.), H280	1-5%
	1-5%
	Flam. Liq. 1, H224 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 STOT SE 3, H336 butane, pure Flam. Gas 1A, H220; Flam. Liq. 1, H224 Press. Gas (Comp.), H280 propane Flam. Gas 1A, H220 Acute Tox. 1, H330 Press. Gas (Comp.), H280 isobutane (containing ≥ 0,1% butadiene (203-450-8))

 Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· General information: Take affected persons out into the fresh air.

Position and transport stably in side position.

· After inhalation: Supply fresh air; consult doctor in case of complaints. Generally the product does not irritate the skin. · After skin contact:

Rinse opened eye for several minutes under running water. · After eye contact: Do not induce vomiting; call for medical help immediately. · After swallowing:

· Information for doctor: Symptoms in intoxication with (aromatic) hydrocarbons (dosis letalis about 30 g)

a) In acute intoxication: headache, dizziness, euphoria, gastro-intestinal

dysfunction, state of excitement, coma.

b) In chronic intoxication: myelotoxic damage, fatigue, dizziness, emaciation,

cardiac palpitation after physical exercise, leucopenia, anemia, leukosis.

Therapy in hydrocarbons intoxication: In case of inhalation provision of fresh air; in case of peroral intake administration of Carbo medicinalis; only after intubation conduct of gastrolavage in application of Carbo medicinalis; in case of cramps

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administration of Diazepam 20 mg intravenously.

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 4.2 Most important symptoms and effects, both acute and

delayed

Breathing difficulty

Headache Dizziness Dizziness Profuse sweating

Nausea

· Hazards

Danger of impaired breathing.

· 4.3 Indication of any immediate medical attention and special

treatment needed

If swallowed, gastric irrigation with added, activated carbon.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

CO2, powder or water spray. Fight larger fires with water spray or alcohol Suitable extinguishing agents:

resistant foam.

· For safety reasons unsuitable

extinguishing agents:

Water with full jet

5.2 Special hazards arising from

the substance or mixture Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide (CO)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

5.3 Advice for firefighters

Wear self-contained respiratory protective device. · Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear fully protective suit.

Dispose of fire debris and contaminated fire fighting water in accordance with Additional information

official regulations.

Collect contaminated fire fighting water separately. It must not enter the sewage

system.

SECTION 6: Accidental release measures

· 6.1 Personal precautions, protective equipment and

emergency procedures

Ensure adequate ventilation

Use respiratory protective device against the effects of fumes/dust/aerosol.

Keep away from ignition sources.

Wear protective equipment. Keep unprotected persons away.

Do not allow product to reach sewage system or any water course. · 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage

system.

Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for

containment and cleaning up:

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

· 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe

handling Keep receptacles tightly sealed.

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Store in cool, dry place in tightly closed receptacles.

Keep away from heat and direct sunlight.

Ensure good interior ventilation, especially at floor level. (Fumes are heavier than

air).

Use only in well ventilated areas.

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· Information about fire - and

<u>explosion protection:</u> Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurised container: protect from sunlight and do not expose to temperatures

exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

· 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by

storerooms and receptacles: Store only in the original receptacle.

Prevent any seepage into the ground.

Store in a cool location.

Observe official regulations on storing packagings with pressurised containers.

· Information about storage in one

common storage facility:

Store away from oxidising agents.

Store away from foodstuffs.

· Further information about storage

conditions:

Protect from frost.

Keep container tightly sealed. Do not seal receptacle gas tight.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

· Storage class:

2 B

• 7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

Additional information about design

of technical facilities: No further data; see item 7.

· Ingredients with limit values that require monitoring at the workplace:

109-66-0 pentane

WEL Long-term value: 1800 mg/m³, 600 ppm

106-97-8 butane, pure

WEL Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)

· DNELs

109-66-0 pentane

_		
Oral	DNEL (Langzeit-wiederholt)	214 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	432 mg/kg bw/day (ARB)
		214 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	3,000 mg/m³ Air (ARB)

· Additional information:

The lists valid during the making were used as basis.

643 mg/m³ Air (BEV)

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· 8.2 Exposure controls

· Personal protective equipment:

General protective and hygienic

measures:

Do not eat, drink, smoke or sniff while working.

Apply solvent resistant skin cream before starting work.

Use skin protection cream for skin protection. Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Short term filter device:

Filter AX

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

· Protection of hands:

Preventive skin protection by use of skin-protecting agents is recommended. After use of gloves apply skin-cleaning agents and skin cosmetics.



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (http://www.stoko.com)

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (http://www.stoko.com)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (http://www.stoko.com)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (http://www.stoko.com)

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory anylyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: http://www.kcl.de).

· Material of gloves

Nitrile rubber, NBR

Fluorocarbon rubber (Viton)

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product 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.

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· Penetration time of glove material Value for the permeation: Level < 6, 480 min

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protective gloves and has to be observed.

The exact break trough time has to be found out by the manufacturer of the

For the permanent contact gloves made of the following materials are

suitable:

Fluorocarbon rubber (Viton) Vitoject (KCL, Art_No. 890) Butyl rubber, BR

· As protection from splashes gloves made of the following materials are

suitable:

Fluorocarbon rubber (Viton) Vitoject (KCL, Art_No. 890) Butoject (KCL, Art_No. 897, 898)

Butyl rubber, BR

· Not suitable are gloves made of

the following materials:

Leather gloves

Strong material gloves Natural rubber, NR

· Eye protection:



Tightly sealed goggles

· Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

· 9.1 Information on	basic physical and	I chemical properties
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· General Information

· Appearance:

Form: Aerosol

Colour: According to product specification

· Odour: Specific type · Odour threshold: Not determined.

· pH-value: Not applicable

· Change in condition

Melting point/freezing point: Undetermined.

Initial boiling point and boiling range: -44 °C

-97 °C · Flash point:

Not applicable. · Flammability (solid, gas):

285 °C · Ignition temperature:

 Decomposition temperature: Not determined.

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product is not explosive. However, formation of explosive air/vapour mixtures

are possible.

· Explosion limits:

1.4 Vol % Lower: 10.9 Vol % Upper:

· Vapour pressure at 20 °C: 2,100 hPa

· Density at 20 °C: 0.68 g/cm³

· Relative density Not determined. Not determined. · Vapour density · Evaporation rate Not applicable.

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· <u>Solubility in / Miscibility with</u> water: Partly miscible.

· Partition coefficient: n-octanol/water: Not determined.

· Viscosity:

Dynamic: Not determined.
Kinematic: Not determined.

· Solvent content:

Organic solvents: 55.0 %

• **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability · Thermal decomposition /

conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous

<u>reactions</u> Reacts with strong alkali.

Reacts with strong oxidising agents.

• 10.4 Conditions to avoid

• 10.5 Incompatible materials:

No further relevant information available.

No further relevant information available.

10.6 Hazardous decomposition

products: Carbon monoxide and carbon dioxide

Possible in traces.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Inhalative LC50/4 h 15.5 mg/l (rat)

109-66-0 pentane

Oral LD50 >2,000 mg/kg (rat)

Inhalative LC50/4 h 5 mg/l (rat)

106-97-8 butane, pure

Inhalative LC50/4 h 658 mg/l (rat)

74-98-6 propane

Inhalative LC50/4 h >20 mg/l (rat)

Primary irritant effect:

Skin corrosion/irritation
 Serious eye damage/irritation
 Respiratory or skin sensitisation
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.

Additional toxicological information:

· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity
 Carcinogenicity
 Reproductive toxicity
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.
 Based on available data, the classification criteria are not met.

STOT-single exposure May cause drowsiness or dizziness.

• STOT-repeated exposure Based on available data, the classification criteria are not met.

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· Aspiration hazard May be fatal if swallowed and enters airways.

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SECTION 12: Ecological information

· 12.1 Toxicity

Aquatic toxicity:

109-66-0 pentane

EC50/48h 2.7 mg/l (daphnia magna)

NOEC 7.51 mg/kg (Pseudokirchneriella subcapitata)
EC50/72h 10.7 mg/l (Pseudokirchneriella subcapitata)

LC50/96h 4.26 mg/l (Oncorhynchus mykiss)

12.2 Persistence and

degradability
 12.3 Bioaccumulative potential
 12.4 Mobility in soil
 No further relevant information available.
 No further relevant information available.

· Ecotoxical effects:

Remark: Toxic for fish

· Additional ecological information:

· General notes: Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous

for water

· 12.5 Results of PBT and vPvB assessment

PBT: Not applicable.√PvB: Not applicable.

12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods

· Recommendation Must not be disposed together with household garbage. Do not allow product to

reach sewage system.

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

· 14.1 UN-Number

· ADR, IMDG, IATA UN1950

· 14.2 UN proper shipping name

· ADR 1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
· IMDG AEROSOLS (PENTANES), MARINE POLLUTANT

· IATA AEROSOLS, flammable

· 14.3 Transport hazard class(es)

· ADR





Class 2 5F Gases.

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· <u>Label</u>	2.1
· IMDG	
¥2	
· <u>Class</u> · <u>Label</u>	2.1 2.1
· <u>IATA</u>	
· Class · Label	2.1 2.1
· 14.4 Packing group	
· ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	Product contains environmentally hazardous substances: No Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
 14.6 Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Code Segregation Code	Warning: Gases. F-D,S-U SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7 Transport in bulk according to Annex II of Marp	
and the IBC Code	Not applicable.
· Transport/Additional information:	
· <u>ADR</u> · Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
IMDG Limited quantities (LQ) Excepted quantities (EQ)	1L Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALLY HAZARDOUS
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SECTION 15: Regulatory information

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

· Directive 2012/18/EU

· Named dangerous substances -

ANNEX I None of the ingredients is listed.
Seveso category P3a FLAMMABLE AEROSOLS

E2 Hazardous to the Aquatic Environment

· Qualifying quantity (tonnes) for the

application of lower-tier

requirements 150 t

Qualifying quantity (tonnes) for the

application of upper-tier

<u>requirements</u> 500 t

· National regulations:

· Information about limitation of use: Employment restrictions concerning juveniles must be observed.

· <u>Waterhazard class</u>: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· <u>VOC EU</u> 408.0 g/l

15.2 Chemical safety

assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases H220 Extremely flammable gas.

H224 Extremely flammable liquid and vapour.

H280 Contains gas under pressure; may explode if heated.

H304 May be fatal if swallowed and enters airways.

H330 Fatal if inhaled.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

· Recommended restriction of use refer to Technical Data Sheet (TDS)

Department issuing SDS:
 Contact:
 Laboratory
 Elke Hake

Fon ++49 (0)911 64296-59 @mail E.Hake@akemi.de

· Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de

fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord relatif au transport international des marchandises dangereuses par route (European

Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PRT: Persistent Rioaccumulative and Tox

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Flam. Gas 1A: Flammable gases – Category 1A

Aerosol 1: Aerosols - Category 1

Press. Gas (Comp.): Gases under pressure - Compressed gas

Flam. Liq. 1: Flammable liquids – Category 1 Acute Tox. 1: Acute toxicity – Category 1

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STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

* Data compared to the previous version altered.

Adaptation in accordance with REACH directive 1907/2006/EC

GB