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Reviewed on:	H1 - PTFE LUBE	Version: 1.0

1. Section 1. Identification of the substance/mixture and of the company/undertaking:

- 1.1. Product identifier: **H1 - PTFE LUBE 1 35672**
- 1.2. Relevant identified uses of the substance or mixture and uses advised against:
Sector of use category:
SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU21 Consumer uses: Private households (= general public = consumers)
Chemical product category:
PC24 Lubricants, greases, release products
Process category:
PROC7 Industrial spraying
PROC11 Non industrial spraying
Application of the substance / the mixture: Lubricant
- 1.3. Details of the supplier of the safety data sheet:
Identification of manufacturer/Supplier:
RETECH, s.r.o.
Vackova 1541/4
150 00 Praha-5 Stodůlky
Telephone/Fax: +420 327 596 128, +420 327 596 428
Information: info@retech.cz
- 1.4. Emergency telephone number: RETECH Suchdol 212, Suchdol u Kutné Hory
Tel.+420 327 596 128 (7.30-16.00 hour)
Toxicology information number, Na bojišti 1, 128 08 PRAHA 2
Tel. +420 224 919 293, +420 224 915 402 (24 hours a day)

2. Section 2. Hazard identification:

- 2.1. Classification of the substance or mixture:
Classification according to Regulation (EC) No 1272/2008 [CLP]:
Flam. Aerosol 1 H222 Extremely flammable aerosol.
H229 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 3 H412 Harmful to aquatic life with long lasting effects.
- Classification according to Directive 67/548/EEC or Directive 1999/45/EC:
F+ Extremely flammable R12 Extremely flammable.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- 2.2. Label elements:
Labelling according to Regulation (EC) No 1272/2008 [CLP]:



Signal word:

Danger

Hazard statements:

- H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

- P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.

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P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.
P211 Do not spray on an open flame or other ignition source.
P271 Use only outdoors or in a well-ventilated area.
P260 Do not breathe spray.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P312 IF INHALED: Call a POISON CENTER/doctor if you feel unwell.
P331 Do NOT induce vomiting.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P403 Store in a well-ventilated place.
P501 Dispose of contents/container in accordance with national regulation.

Contained dangerous substances:
109-66-0 Pentane

2.3. Other hazards:
Results of PBT and vPvB assessment:
PBT: Not applicable
vPvB: Not applicable

3. Section 3. Composition/information on ingredients:

3.2. Mixtures:
Description of the mixture: Mixture of active agents with propellant

Hazardous ingredients:

CAS: 106-97-8	Butane (containing <0.1 % butadiene (203-450-8))	25-<50 %
EINECS: 203-448-7	F+ R12	
Reg.nr.: 01-2119474691-32	Flam. Gas 1, H220; Press. Gas, H280	
CAS: 74-98-6	Propane	10-<25 %
EINECS: 200-827-9	F+ R12	
Reg.nr.: 01-2119486944-21	Flam. Gas 1, H220; Press. Gas, H280	
CAS: 109-66-0	Pentane	10-<25 %
EINECS: 203-692-4	F+ R12; Xn R65; N R51/53; R66; R67	
Reg.nr.: 01-2119459286-30	Flam. Liq. 2, H224; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	

For full text of H-statements and R-phrases: see SECTION 16.

4. Section 4. First aid measures:

4.1. Description of first aid measures:
After inhalation: Supply fresh air.
Get medical attention if any discomfort continues.
After skin contact: Wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: Do not induce vomiting.
Call for a doctor immediately.
4.2. Most important symptoms and effects, both acute and delayed:
No further relevant information available.
4.3. Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

5. Section 5. Fire fighting measures:

5.1. Extinguishing media:
Suitable extinguishing agents: Water haze, fire-extinguishing powder, carbon dioxide, alcohol resistant foam.
For safety reasons unsuitable extinguishing agents:
Water with full jet.
5.2. Special hazards arising from the substance or mixture:
No further relevant information available.

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5.3. Advice for firefighters: Wear protective clothing and self-contained breathing apparatus.

6. Section 6. Accidental release measures:

- 6.1. Personal precautions, protective equipment and emergency procedures:
Wear protective equipment see Section 8.2
Keep unprotected persons away.
Ensure adequate ventilation.
- 6.2. Environmental precautions: Do not allow to enter sewage system, surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- 6.3. Methods and material for containment and cleaning up:
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents.
Dispose contaminated material as waste according to Section 13.
- 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.

7. Section 7. Handling and storage:

- 7.1. Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
- Measures to prevent fire: Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized 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:
Technical measures and storage conditions:
Observe official regulations on storing packagings with pressurized containers.
- Requirements for storage rooms and vessels:
Observe official regulations on storing packagings with pressurized containers.
Store in a cool location.
Store in cool, dry conditions in well sealed receptacles.
Keep receptacle tightly sealed.
- Further information on storage conditions:
Protect from heat and direct sunlight.
- 7.3. Specific end use(s): No further relevant information available.

8. Section 8. Exposure controls/personal protection:

- 8.1. Control parameters:
Components with limit values that require monitoring at the workplace:

WEL(UK): EH40/2005

CAS	Substance	Long-term (8-hr TWA ref. period)		Short-term (15 minute ref. period)		Comments
		ppm	mg/m ³	ppm	mg/m ³	
106-97-8	Butane	600	1450	750	1810	Carc. (only applies if Butane contains more than 0.1 % of buta-1,3-diene)
109-66-0	Pentane	600	1800			

OEL (EU): 2000/39/EG, 2006/15/EG, 2009/161/EG

CAS	Name of agent	Eight hours		Short-term		Notation
		mg/m ³	ppm	mg/m ³	ppm	
109-66-0	Pentane	3000	1000			

DNELs:

109-66-0	Pentane					
Oral	DNEL Long term-systemic	214	mg/kg bw/day	(Consumer)		
Dermal	DNEL Long term-systemic	214	mg/kg bw/day	(Consumer)		
		432	mg/kg bw/day	(Worker)		

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Inhalative DNEL Long term-systemic 643 mg/m³ (Consumer)
3000 mg/m³ (Worker)

Additional information: The lists that were valid during the compilation were as basis.

8.2. Exposure controls:

Measures to prevent exposure: Ensure good ventilation/exhaustion at the workplace.

Personal protection equipment:

Breathing equipment: Use suitable respiratory protective device in case of insufficient ventilation. In case of brief exposure or low pollution use respiratory filter device (filter AX/P2). In case of intensive or longer exposure use self-contained respiratory protective device.

Eye protection: Tightly sealed goggles

Protection of hands: Protective gloves

Solvent resistant gloves

The final selection of the glove material must be carried out on the basis of penetration times, permeation rates and degradation.

Material of gloves: Nitril rubber, NBR

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Protection of skin: Protective suit.

General protective and hygienic measures:

Wash hands before breaks and at the end of work.

Do not inhale gases/ fumes/ aerosols.

9. Section 9. Physical and chemical properties:

9.1. Information on basic physical and chemical properties:

Form: Aerosol

Colour: Whitish

Odour: Characteristic

Odour threshold: Not determined

Value pH: Not determined

Melting point/freezing point: Not determined

Initial boiling point/boiling range: -44 °C

Flash point: -97 °C

Evaporation rate: Not applicable.

Flammability (solid, gas): Not applicable.

Explosive properties: The product is not explosive. However, formation of explosive air/steam mixtures is possible.

Explosive limits:

– lower: 1.4 Vol %

– upper: 10.9 Vol %

Vapour pressure at 20°C: 4 Bar

Vapour density at 20 °C: Not determined

Density at 20°C: 0.662 g/cm³

Relative density: Not determined

Solubility in/miscibility with:
– water Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined

Ignition temperature: 285 °C

Decomposition temperature: Not determined

Self-igniting: The product is not selfigniting.

Viscosity: Not determined

Oxidising properties: Not determined

9.2. Other information:

VOC: 407.1 g/l




Solids content: 10.0 %

Organic solvent: 61.5 %

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<p>10. Section 10. Stability and reactivity:</p> <p>10.1. Reactivity: No further relevant information available.</p> <p>10.2. Chemical stability: No decomposition if used according to specifications.</p> <p>10.3. Possibility of hazardous reactions: No dangerous reactions known.</p> <p>10.4. Conditions to avoid: No further relevant information available.</p> <p>10.5. Incompatible materials: No further relevant information available.</p> <p>10.6. Hazardous decomposition products: No dangerous decomposition products known.</p>																						
<p>11. Section 11. Toxicological information:</p> <p>11.1. Information on toxicological effects:</p> <p>Acute toxicity: No further relevant information available.</p> <p>Irritation: Skin: No irritating effect. Eyes: No irritating effect.</p> <p>Corrosivity: Not corrosive.</p> <p>Sensitization: No sensitizing effect known.</p> <p>Repeated dose toxicity: No further relevant information available.</p> <p>Carcinogenicity: No further relevant information available.</p> <p>Mutagenicity: No further relevant information available.</p> <p>Toxicity for reproduction: No further relevant information available.</p> <p>Other information: No further relevant information available.</p>																						
<p>12. Section 12. Ecological information:</p> <p>12.1. Toxicity:</p> <p>Aquatic toxicity:</p> <table border="0"> <tr> <td>109-66-0</td> <td>Pentane</td> <td></td> <td></td> </tr> <tr> <td>EL50 (72h)</td> <td>10.7 mg/l</td> <td>(Pseudokirchneriella subcapitata)</td> <td></td> </tr> <tr> <td>EL50 (48h)</td> <td>2.7 mg/l</td> <td>(Daphnia magna)</td> <td></td> </tr> <tr> <td>LC50 (96h)</td> <td>4.26 mg/l</td> <td>(Oncorhynchus mykiss)</td> <td></td> </tr> <tr> <td>NOEC (21 days)</td> <td>7.51 mg/l</td> <td>(Pseudokirchneriella subcapitata)</td> <td></td> </tr> </table> <p>12.2. Persistence and degradability: No further relevant information available.</p> <p>12.3. Bioaccumulative potential: No further relevant information available.</p> <p>12.4. Mobility in soil: No further relevant information available.</p> <p>Ecotoxic effects: Remark: Harmful to fish.</p> <p>Additional ecological information:</p> <p>General notes: Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Harmful to aquatic organisms</p> <p>12.5. Results of PBT and vPvB assessment:</p> <p>PBT: Not applicable</p> <p>vPvB: Not applicable</p> <p>12.6. Other adverse effects: No further relevant information available.</p>			109-66-0	Pentane			EL50 (72h)	10.7 mg/l	(Pseudokirchneriella subcapitata)		EL50 (48h)	2.7 mg/l	(Daphnia magna)		LC50 (96h)	4.26 mg/l	(Oncorhynchus mykiss)		NOEC (21 days)	7.51 mg/l	(Pseudokirchneriella subcapitata)	
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<p>13. Section 13. Disposal considerations:</p> <p>13.1. Waste treatment methods:</p> <p>Product: Must not be disposed together with household garbage. Do not allow product to reach sewage system. Dispose in safe manner in accordance with local/national regulation.</p> <p>Uncleaned packagings: Disposal must be made according to official regulations.</p>																						
<p>14. Section 14. Transport information:</p> <p>14.1. UN number: ADR, IMDG, IATA UN1950</p> <p>14.2. UN proper shipping name: ADR UN1950 AEROSOLS IMDG AEROSOLS</p>																						

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IATA	AEROSOLS, flammable		
14.3. Transport hazard class(es):			
ADR			
Class	2	5F	Gases
Hazard label	2.1		
IMDG			
Class	2.1		
Hazard label	2.1		
IATA			
Class	2.1		
Hazard label	2.1		
14.4. Packing group:	Void		
ADR, IMDG, IATA	Void		
14.5. Environmental hazards:			
Marine pollutant:	No		
14.6. Special precautions for user:	Warning: Gases		
Danger Code (Kemler):	-		
EMS Number:	F-D, S-U		
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:	Not applicable		
Transport/ Additional information:			
ADR			
Limited quantities (LQ)	1L		
Excepted quantities (EQ):	Code: E0		
	Not permitted as Excepted Quantity		
Transport category	2		
Tunnel restriction code	D		
IMDG			
Limited quantities (LQ)	1L		
Excepted quantities (EQ):	Code: E0		
	Not permitted as Excepted Quantity		
UN "Model Regulation":	UN1950, AEROSOLS, 2.1		

15. Section 15. Regulatory information:
15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:
Used legislation:
Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended
Directive 67/548/EEC and Directive 1999/45/EC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances, as amended
Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (CLP), as amended
Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, as amended
National regulations: Danish MAL Code 2-1
15.2. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Section 16. Other information:
These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.)

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Relevant R-phrases and H-statements (Section 3):

R12 Extremely flammable.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: May cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.
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.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Abbreviations and acronyms:

ADR Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG International Maritime Code for Dangerous Goods
IATA International Air Transport Association
ICAO International Civil Aviation Organization
GHS Globally Harmonized System of Classification and Labelling of Chemicals
EINECS European Inventory of Existing Commercial Chemical Substances
CAS Chemical Abstracts Service (division of the American Chemical Society)
OEL Occupational Exposure Limit
WEL Workplace exposure limits
BMGV Biological monitoring guidance values
STEL Short-term exposure limit
TWA Time-Weighted Average
EC50 Effective concentration, 50 percent
LC50 Lethal concentration, 50 percent
LD50 Lethal dose, 50 percent
DNEL Derived No-Effect Level
PNEC Predicted No-Effect Concentration
LOEC Lowest Observed Effect Concentration
NOEC No Observed Effect Concentration
PBT Persistent Bioaccumulative Toxic
vPvB Very Persistent, Very Bioaccumulative
VOC Volatile Organic Compounds
MAL-Code Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

The product is labeled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

***Compared to the last version the data has been changed.**