



SAFETY DATA SHEET

according to regulation (EC) No 1907/2006 (REACH) and 1272/2008/EC **MOL-LUB Ltd.**

Trade name: **MOL Hykomol LS 85W-90 limited slip gear oil**

Version: 4 Latest revision: 06. 10. 2015 Date of issue: 20. 06. 2007 Page: 1/(13)

Section 1 Identification of the mixture and of the company/undertaking

1.1 Product identifier:

MOL Hykomol LS 85W-90 limited slip gear oil

1.2 Relevant identified uses of the mixture and uses advised against

Relevant identified uses: gear oil

Uses advised against: no data

1.3 Details of the supplier of the safety data sheet:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company

H-2931 Almásfüzitő, Fő út 21., Hungary

Phone / Fax: +36 34 526 330 / +36 34 526 391

E-mail: kenoanyag@mol.hu

Request SDS of:

MOL-LUB Lubricant Production Trade and Service Limited Liability Company

Customer Service Center

H-2931 Almásfüzitő, Fő út 21., Hungary

Phone / Fax: +36 80 201 296 / +36 34 348 010

Responsible for SDS:

MOL-LUB Ltd. Csaba Horváth, head of SD, HSE & Business Support

Phone: +36 34 526 343; Mobile: +36 20 474 2644

e-mail: csahorvath@mol.hu

1.4 Emergency telephone number

Emergency telephone (on workdays: 07-15²⁰ h (CET)): +36 34 526 210

Health Toxicological Information Service (ETTSZ 1096 Budapest, Nagyvárad tér 2.)

Tel.: +36 1 476 6464, or +36 80 201 199

National Health Toxicological Information Service:



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Section 2 Hazards identification

2.1 Classification of the mixture

Hazard Class and Category:	Hazard statement:
Skin Sens. 1	H317 May cause an allergic skin reaction.
Eye Dam. 1	H318 Causes serious eye damage.
Aquatic Chronic 3	H412 Harmful to aquatic life with long lasting effects.

2.2 Label elements ((EC) No 1272/2008)

Product identification: Trade name: **MOL Hykomol LS 85W-90 limited slip gear oil**

Hazardous component: Reaction products of bis(4- methylpentan-2-yl)dithiophosphoric acid with phosphorus oxide, propylene oxide and amines, C12-14 alkyl(branched) (EU: 931-384-6)
Oleilamin (CAS Nr.: 112-90-3)
Reaction product of 1,3,4- thiadiazolidine-2,5- dithione, formaldehyde and phenol, heptyl derivs (EU Nr.: 939-460-0)

GHS Pictogram:



Signal word: **Danger**

Hazard statement:

H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H412 Harmful to aquatic life with long lasting effects.

Supplemental hazard information:

EUH208 Contains reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. May produce an allergic reaction.

Precautionary statements – General: -

Precautionary statements – Prevention:

P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection/face protection.



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Precautionary statements – Response:

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

Precautionary statements – Storage: -

Precautionary statements – Disposal:

P501 Dispose of contents/container in accordance with national regulation.

Other liabilities for labelling:

Tactile warning of danger: Not required.

Transport classification: see section 14.

2.3 Other hazards

The product does not contain any PBT or vPvB substance according to annex XIII of regulation (EC) 1907/2006.

Section 3 Composition/information on ingredients

3.2 Mixtures

Chemical description: Mixture of refined mineral base oils containing additives.

Component(s) / Hazardous component(s):

Name	EU number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/m)
Lubricating oils (petroleum), C>25* REACH Registr.Nr.: 01-2119486948-13	309-874-0	101316-69-2	- (Note L)	-	max. 85
Lubricating oils (petroleum), C24-C50* REACH Registr. Nr.: 01-2119489969-06	309-877-7	101316-72-7	Asp. Tox. 1 (Note L)	H304	max. 25
Refined petroleum distillate, mixtures (***)		confidential	- (Note L)	-	max. 10
Reaction products of bis(4-methylpentan-2-yl) dithiophosphoric acid with phosphorous oxide, propylene oxide and amines, C12-C14 alkyl(branched) REACH Registr.Nr.: 01-2119493620-38	931-384-6	-	Acute Tox. 4 Eye Dam. 1 Skin Sens. 1 Aquatic Chronic 2	H302 H318 H317 H411	max. 2



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Name	EU number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/m)
Reaction Products of alcohols, C14-18, C18 unsat., esterified with phosphorus pentoxide and salted with amines, C12-14,-tert-alkyl REACH Registr. Nr.: 01-2119978530-33	939-591-3	-	Aquatic Chronic 3	H412	max. 1.5
Oleilamin	204-015-5	112-90-3	Acute Tox. 4 Asp. Tox. 1 Eye Dam. 1 Skin Corr. 1C STOT SE 3 STOT RE 2 Aquatic Acute 1 Aquatic Chronic 1	H302 H304 H318 H314 H335 H373 H400 H410	max. 0.65
Reaction product of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and phenol, heptyl derivs. REACH Registr. Nr.: 01-2119971727-23	939-460-0	-	Flam Liq. 3 Eye Dam. 1 Skin Irrit. 2 Skin Sens. 1 Aquatic Chronic 3	H226 H318 H315 H317 H412	max. 0.65

*: with exposure limit

(**) The EU Numbers of mixture: 265-157-1, 265-169-7, 265-158-7, 265-159-2

The full text of each relevant H- phrase, Hazard classes and cat. see in Section 16.

Section 4 First aid measures

4.1 Description of first aid measures

General information: Never give anything by mouth to an unconscious person, or never induce vomiting.

Inhalation: Remove the affected person to fresh air. If rapid recovery does not occur, obtain medical attention.

Skin contact: Remove contaminated clothing. Wash skin with large amounts of water, use soap. In case of persistent irritation, get medical attention.

Eye contact: Flush eyes with plenty of water for 10-15 minutes. In case of persistent irritation, get medical attention.

Ingestion: If swallowed, give water. **Do not** induce vomiting. Get medical attention.

Protection of first-aid person: No individual specifications.

4.2 Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction.

Causes serious eye damage.



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4.3 Indication of any immediate medical attention and special treatment need
Not required.

Section 5 Fire-fighting measures

Fire hazards:
Combustible

5.1 Extinguishing media

Suitable extinguishing media:
Foam, carbon dioxide, dry chemical powder.

Unsuitable extinguishing media:
Water jet.

5.2 Special hazards arising from the mixture

Hazardous combustion products:
On burning, carbon dioxide, carbon monoxide, sulphur oxides, nitrogen oxides, phosphor oxides, various hydrocarbons and soot can be formed.

5.3 Advice for fire-fighters

Special protective equipment:
According to the existing fire-fighting regulations, respiratory protection.

Further information:

Collect contaminated fire fighting water separately. It must not enter the sewage system. Contaminated extinguishing water must be disposed of in accordance with official regulations.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: see Section 8.

6.2 Environmental precautions:

Confine spills to prevent material from entering sewers, watercourses, drains and into soil Notify relevant authority.

6.3 Methods and material for containment and cleaning up

On soil: All kind of ignition sources should be remove. Recover free liquid by pumping. Contain the rest or small quantities with sand, earth or other suitable absorbents. Dispose of according to local regulations.



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On water: Confine the spillage. Remove from surface by skimming or suitable absorbents. Notify local authorities according to regulations.

6.4 Reference to other sections

Personal precautions: see section 8.

Waste treatment methods: see section 13.

Section 7 Handling and storage

7.1 Precautions for safe handling

Keep general measures applied for normal operations with lubricants and flammable liquids.

Keep away from radiant heat and open flame.

Avoid contact with skin and eyes. Avoid prolonged breathing of oil vapours or mists.

Ensure washing facilities after working hours and before breaks. Take off contaminated or oil-soaked clothing, wash with warm water and soap.

When using do not eat, drink or smoke. Avoid splashing the product.

Handling temperature: not known

7.2 Conditions for safe storage, including any incompatibilities

Storage facilities must comply with regulations for storing of flammable liquids.

Store in dry, well ventilated place in original, closed containers.

Keep away from radiant heat, open flame and strong oxidizing agents.

Storage temperature: max. 40°C

7.3 Specific end use(s)

Gear oil.

Section 8 Exposure controls / personal protection

Engineering control measures:

Not required.

8.1 Control parameters:

Mineral oil mist: TWA: **5 mg/m³**; STEL: 10 mg/m³, for oil mist, vapour excluded (ACGIH).

Method of testing, recommended: NIOSH 5026

8.2 Exposure controls

Personal protection:

Respiratory protection: Breathing apparatus not required.



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Hand protection: Oil resistant gloves (EN 374, Breakthrough time 480 min) (e.g. nitrile rubber – minimal thickness 0.33 mm).
Note: Manufacturer's directions for use and the conditions of application should be observed.

Eye protection: Where splashing is possible, wear safety glasses with side shields.

Skin protection: Protective clothing (oil resistant).

Other special: no data

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance:

Physical state: liquid
Colour: brown, clear
Odour: characteristic

Change in physical state:

Pour point (ISO 3016): typ. -27°C
Boiling point (DIN 51356): not available

Others:

Flash point (COC) (EN ISO 2592): typ. 220°C
Ignition point (EN ISO 2592): not available
Autoignition temperature: not available
Explosive properties: not explosive
Oxidizing properties: not oxidize
Vapour pressure at 20°C: negligible
Density at 15°C (EN ISO 12185): 0.895 – 0.915 g/cm³
Solubility in water: practically insoluble in water
Solubility in other solvents: gasoline, kerosene, toluene, etc.
n-Octanol/water partition coefficient: not available
Vapour density: not available
Evaporation rate: not available
Heating value: inf. 38 000 kJ/kg
Kinematic viscosity at 40°C (EN ISO 3104): typ. 204.7 mm²/s
Kinematic viscosity at 100°C (EN ISO 3104): typ. 17.1 mm²/s



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pH: not applicable

9.2 Other information

No data available.

Section 10 Stability and reactivity

- 10.1 Reactivity: Dangerous reactivity not known.
10.2 Chemical stability: No decomposition if stored and handled properly.
10.3 Possibility of hazardous reactions: Not known.
10.4 Conditions to avoid: Direct heat or ignition sources.
10.5 Incompatible materials: Strong oxidizing agents.
10.6 Hazardous decomposition products: No dangerous decomposition products are formed under normal conditions. Hazardous combustion products: See Section 5.

Section 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Oral:	LD ₅₀ (rat)	> 2000	mg/kg	(based on components)
Dermal:	LD ₅₀ (rabbit)	> 2000	mg/kg	(based on components)

Acute toxicity: irritation

Skin: not irritant (based on components)

Note: Prolonged and/or repeated contact may cause irritation on skin depending on individual sensitivity

Eye: irritant (based on components), causes serious eye damage.

Respiratory or skin sensitisation: sensitising (based on components)

Other information, specific effects:

The product does not contain PCBs, PCTs, and other chlorine compounds, and heavy metals, barium compounds.

Note L: The classification as a carcinogen need not apply according to 1272/2008/EC, because it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346.

Germ cell mutagenicity: not known, resp. not mutagen (based on components)

Carcinogenicity: not known, resp. not carcinogen (based on components)



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Reproductive toxicity:	not known, resp. no reproduction-damaging effect (based on components)
STOT-single exposure:	not known
STOT-repeated exposure:	not known
Aspiration hazard:	not known

Section 12 Ecological information

12.1	Toxicity	No data for the product.
	Aquatic organisms:	
	Soil organisms:	
	Plants:	
12.2	Persistence and degradability	No data available.
	Biodegradability:	No data available.
12.3	Bioaccumulative potential	No data available.
12.4	Mobility	
	Mobility in soil	Absorbs in soil.
	Mobility in water:	Floats on water.
12.5	Results of PBT and vPvB assessment	Does not contain PBT and vPvB substances.
12.6	Other adverse effects	
	Heavy metal content:	None.
	PCT, PCB and other chlorinated hydrocarbons:	None.
	Environmental effects:	Harmful to aquatic life with long lasting effects.
	Water hazard class (German):	WGK 2 (Classification by VwVwS)

Section 13 Disposal considerations

- 13.1 Waste treatment methods
- Product disposal:
- Wastes of the product or used oil should be treated as hazardous waste.
 - Waste Identification Code: 13 02 05*
 - Mineral-based non-chlorinated engine, gear and lubricating oils.
- Disposal must be in compliance with national and local regulations.
- Recommended waste treatment method: incineration



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Packaging disposal:

Containers with product residue should also be treated as hazardous waste according to national and local disposal regulations.

Waste Identification Code: 15 01 10*

Packaging containing residues of or contaminated by dangerous substances.

Disposal must be in compliance with national and local regulations.

Wastewater:

Quality of wastewater emitted to natural water must comply with national and local regulations.

Care should be taken in any case to ensure compliance with EC, national and local regulations. It is the responsibility of the user to know all relevant national and local regulations.

Section 14 Transport information

Land transport:

Road/ Railway ADR/RID: Not classified.

- | | | |
|-------|-------------------------------|---|
| 14.1. | UN number: | - |
| 14.2. | UN proper shipping name: | - |
| 14.3. | Transport hazard class(es): | - |
| 14.4. | Packing group: | - |
| 14.5. | Environmental hazards: | - |
| 14.6. | Special precautions for user: | - |

Waterways:

Inland waterways/ Sea transport ADN/IMDG: Not apply to the product.

Air transport: ICAO / IATA: Not apply to the product.

Section 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the mixture.
This safety data sheet has been prepared according to Regulation (EC) No 1907/2006 (applicable version) and to Regulation (EC) 1272/2008.
- 15.2 Chemical safety assessment.
Not available.



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Section 16 Other information

The information given in this data sheet is based on our best knowledge at the time of publication. The information is related only to this product and is intended to assist its safe transport, handling and use. The given physical and chemical parameters describe the product only for the purpose of safety requirements and therefore should not be construed as guaranteeing any specific property of the product or as being part of a product specification or any contract.

The manufacturer or supplier shall not take responsibility for any damages from the use other than recommended or other misuse of the product. It is the responsibility of the user to keep regulatory precautions and observe recommendations for safe use of the product.

Source of data presented in this material safety data sheet:

- Test results of this product
- Material safety data sheets of product's components
- Hungarian and EU lists of dangerous substances
- Relevant Hungarian regulation and EU directives

Classification for mixtures and used evaluation method according to regulation 1272/2008/EC (CLP)

Skin Sens. 1	H317	calculated method
Eye Dam. 1	H318	calculated method
Aquatic Chronic 3	H412	calculation method

The full text of each relevant Hazard classes and cat., H- phrase in Section 3.:

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure .
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.



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Flam.Liq. 3	Flammable liquid Category 3
Acute Tox. 4	Acute toxicity Category 4
Asp.Tox.1	Aspiration hazard Category 1
Skin Corr. 1C	Respiratory/skin sensitization Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1	Respiratory/skin sensitization Category 1
Eye Dam. 1	Serious eye damage/eye irritation Category 1
STOT SE 3	Specific target organ toxicity – single exposure Category 3
STOT RE 2	Specific target organ toxicity – repeated exposure Category 2
Aquatic Acute 1	Hazardous to the aquatic environment, Acute Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, Chronic Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, Chronic Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, Chronic Category 3

Legend:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BOD	Biological Oxygen Demand
Bw	Body Weight
C&L	Classification and Labeling
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
COD	Chemical Oxygen Demand
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ec _x	Effective Concentration x%
Ed _x	Effective Dose x%
ELINCS	European List of Notified Chemical Substances
ErC50	EC50 in terms of reduction of growth rate;
ES	Exposure Scenario
ESIS	European Chemical Substances Information System
IARC	International Agency for Research on Cancer



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IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LCx	Lethal Concentration x%
LDx	Lethal Dose x%
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration
LOEL	Lowest Observed Effect Level
NOEC	No observed effect concentration
NOEL	No observed effect level
NLP	No-Longer Polymer
NOAEL	No Observed Adverse Effect Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SVHC	Substance of Very High Concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bio-accumulative

Revision Indicators:

Section	Subject of change	Date	Version
2 3 8 9 11 1-16	Hazards identification Composition/information on ingredients Exposure controls / personal protection Physical and chemical properties Toxicological information Revision modification according to 1272/2008/EC and 453/2010/EC	26.08.2013	2
2 3 1-16	Hazards identification Composition/information on ingredients Regulatory information and other corrections	17.11.2014	3
1 3 9 1-16	Details of the supplier of the safety data sheet, Responsible for SDS Composition/information on ingredients Physical and chemical properties Other corrections, revision modification according to 2015/830 /EU	06.10.2015	4