MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 1/(12)

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

1.1 Product identifier:

MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke motorcycle motor oil

1.2 Relevant identified uses of the mixture and uses advised against

Relevant identified: synthetic 4-stroke motorcycle motor 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

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 HSE, SD and QOP

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

e-mail: csahorvath@mol.hu

Technical information:

MOL-LUB Ltd. Product Development and Technical Service

H-1117 Budapest, Október huszonharmadika utca 18., Hungary

Phone/Fax: +36 80 201 296 or +36 1 464 0236 / +36 1 464 0304

1.4 Emergency telephone number

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

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:

2. Hazards identification

2.1 Classification of the substance according to regulation 1999/45/EC

Human health hazards: Danger symbol not required.

Note: Prolonged and/or repeated contact may cause irritation

on skin or in eyes depending on individual sensitivity

(See also Protective equipment).

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 2/(12)

Safety hazards: Danger symbol not required.

Environmental hazards: Danger symbol not required.

Note: Spills may form a film on water surfaces causing

impaired oxygen transfer.

2.2 Label elements

Product identification:

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Danger symbol(s) and indication(s): *not required*

Hazardous substance(s):

The packaging must bear the inscription: -

R-phrases: not required

S-phrases: S 60 This material and its container must be disposed of as hazardous

waste

S 61 Avoid release to the environment. Refer to special

instructions/Safety data sheets

Other liabilities for labelling:

Tactile warning of danger: Not required. Transport classification: see section 14.

2.3 Other hazards

no data available

3. Composition/information on ingredients

3.1 Mixtures

Chemical description: Mixture of refined mineral base oils and hydrotreated neutral oil

containing additives.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 3/(12)

Component(s) / Hazardous component(s):

Name	EINECS number	CAS number	Hazard symbol / Hazard classes and cat.	Risk phrase / Hazard statements	Conc. %(m/m)
Base oil – unspecified, hydrotreated heavy paraffinic, C20-C50*	265-157-1	64742-54-7	67/548/EEC: Xn (Note L) 1272/2008/EC:	R 65	
REACH Registr. Nr.: 01-2119484627-25			Asp.Tox.1 (Note L)	Н304	
Base oil – unspecified, hydrotreated heavy paraffinic, C20-C50* REACH Registr. Nr.: 01-2119484627-25	265-157-1	64742-54-7	67/548/EEC: - (Note L) 1272/2008/EC:	-	> max. 75
	257. 520. 4	52 (22 05 1	(Note L)	-	
Base oil – unspecified, hydrotreated neutral oil- based, C20-C50 REACH Registr. Nr.:	276-738-4	72623-87-1	67/548/EEC: - (Note L) 1272/2008/EC:	-	
01-2119474889-13			Asp.Tox.1 (Note L)	Н304	
Mineral oil raffinate*		confidential	67/548/EEC: -	-	max. 20
			(Note L) 1272/2008/EC:		
			(Note L)		
Zinc alkyl dithiophospate	283-392-8	84605-29-8	67/548/EEC: Xi, N	R 38, R 41, R 51/53	max. 0.9
REACH Registr. Nr.: 01-2119493626-26			1272/2008/EC: Skin Irrit. 2 Eye Dam. 1 Aquatic Chronic. 2	H315 H318 H411	
Reaction products of Benzenamine, N-phenyl- with nonene (branched)	253-249-4	36979-20-3	67/548/EEC: - 1272/2008/EC:	R 53	max. 0.9
REACH Registr. Nr.: 01-2119488911-28			Aquatic Chronic 4	H413	

^{*:} with exposure limit

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

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 4/(12)

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 Remove contaminated clothing. Wash skin with large amounts of water, use

contact: 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.

4.2 Most important symptoms and effects, both acute and delayed

No data available.

4.3 Indication of any immediate medical attention and special treatment need

Not required.

5. Fire-fighting measures

Fire hazards:

See also Section 9 - flash point.

5.1 Extinguishing media

Suitable extinguishing media:

Foam, carbon dioxide, dry chemical powder.

Unsuitable extinguishing media:

Water jet.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 5/(12)

5.2 Special hazards arising from the mixture

Hazardous combustion products:

On burning, carbon dioxide, carbon monoxide, sulphur 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.

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.

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.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 6/(12)

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)

Synthetic 4-stroke motorcycle motor oil.

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.

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.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 7/(12)

Eye protection: Not required.

Skin protection: Protective clothing (oil resistant).

Other special: no data

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

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. -36°C not available

Others:

Flash point (COC) (EN ISO 2592): typ. 230°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): $0.852 - 0.866 \text{ g/cm}^3$

Solubility in water: practically insoluble in water Solubility in other solvents: gasoline, kerosene, toluene, etc.

n-Octanol/water partition coefficient:

Vapour density:

Heating value:

Kinematic viscosity at 40°C (EN ISO 3104):

Kinematic viscosity at 100°C (EN ISO 3104):

pH:

not available

not available

typ. 150.2 mm²/s

typ. 23.6 mm²/s

not applicable

9.2 Other information

no data available

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 8/(12)

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 No dangerous decomposition products are formed under normal

products: conditions. Hazardous combustion products: See Section 5.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

 $\begin{array}{lll} \text{Oral:} & LD_{50} \left(\text{rat} \right) & > 2000 & \text{mg/kg} & \left(\text{based on components} \right) \\ \text{Dermal:} & LD_{50} \left(\text{rabbit} \right) & > 2000 & \text{mg/kg} & \left(\text{based on components} \right) \end{array}$

Acute toxicity: irritation

Skin: not irritant (based on components)
Eye: not irritant (based on components)

Note: Prolonged and/or repeated contact may cause irritation on skin or in eyes

depending on individual sensitivity.

Respiratory or skin sensitisation: not sensitising (based on components)

Chronic toxicity: not known

Repeated dose toxicity: not known

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.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 9/(12)

Carcinogen effect: not known, resp. not carcinogen (based on

components)

Mutagen effect: not known, resp. not mutagen (based on components)

Reproduction-damaging not known, resp. no reproduction-damaging effect

effect: (based on components)

Aspiration hazard: not known

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 Not required.

assessment

12.6 Other adverse effects

Heavy metal content: None. PCT, PCB and other chlorinated None.

hydrocarbons:

Environmental effects: Spills may form a film on water surfaces causing

impaired oxygen transfer.

Water hazard class (German): No data.

13. Disposal considerations

13.1 Waste treatment methods

Product disposal:

Wastes of the product or used oil should be treated as hazardous waste.

EWC cod: 13 02 05*

Mineral-based non-chlorinated engine, gear and lubricating oils.

EWC cod: 13 02 06*

Synthetic engine, gear and lubricating oils.

Disposal must be in compliance with national and local regulations.

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 10/(12)

Recommended waste treatment method: incineration

Packaging disposal:

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

EWC cod: 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.

14. Transport information

Land transport:

Road/ Railway ADR/RID: Not classified.

Waterways:

Inland waterways/ Sea transport ADN/IMDG: Not classified.

Air transport: ICAO / IATA: Not classified.

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 1907/2006/EC (mod.: 453/2010/EC).

15.2 Chemical safety assessment.

not available

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: **MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke**

motorcycle motor oil

Latest revision: 30, 11, 2012 Date of issue: 20. 06. 2007 Version: 2 Page: 11/(12)

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)

v	relevant R-, H- phrase and Hazard classes and cat. in Section 3.:		
R 38	Irritating to skin.		
R 41	Risk of serious damage to eyes.		
R 51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.		
R 53	May cause long-term adverse effects in the aquatic environment.		
H304	May be fatal if swallowed and enters airways.		
H315	Causes skin irritation.		
H318	Causes serious eye damage.		
H411	Toxic to aquatic life with long lasting effects.		
H413	May cause long lasting harmful effects to aquatic life.		
Asp.Tox.1	Aspiration hazard Category 1		
Skin Irrit. 2	Skin corrosion/irritation Category 2		
Eye Dam. 1	Serious eye damage/eye irritation Category 1		
Aquatic Chronic 2	Hazardous to the aquatic environment, Chronic Category 2		
Aquatic Chronic 4	Hazardous to the aquatic environment, Chronic Category 4		

MOL-LUB Ltd.

according to regulation 1907/2006/EC (REACH)

Trade name: MOL Dynamic Moto 4T Racing Pro 5W-60 synthetic 4-stroke

motorcycle motor oil

Version: 2 Latest revision: 30. 11. 2012 Date of issue: 20. 06. 2007 Page: 12/(12)

Revision Indicators:						
Section	Subject of change	Date	Version			
3	Composition/information on ingredients	30.11.2012	2			
9	Physical and chemical properties					
13	Disposal considerations					
1-16	Revision modification according to 453/2010/EC					