



SAFETY DATA SHEET

according to regulation (EC) No 1907/2006 (REACH) and 1272/2008/EC

MOL-LUB Kft.

Trade name: **MOL Dynamic Star F 0W-30 synthetic motor oil**

Version: 3 Latest revision: 07. 12. 2022 Date of issue: 14. 10. 2016 Page: 1/(13)

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

1.1 Product identifier:

MOL Dynamic Star F 0W-30 synthetic motor oil

UFI: F5H0-N0H5-400Y-6GMK

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

Relevant identified uses: synthetic motor oil

Uses advised against: application other than the above.

1.3 Details of the supplier of the safety data sheet:

MOL-LUB Lubricant Production Distribution and Service Ltd.

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 Distribution and Service Ltd.

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 Kft.

Tel: +36 80 201 296

E-mail: EBKHelpdesk@MOL.hu

1.4 Emergency telephone number

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

Health Toxicological Information Service (ETTSZ 1097 Budapest, Albert Flórián st. 2-6.)

Tel.: +36 80 201 199 (0-24 h, free number, can only be called from Hungary).

+36 1 476 6464 (0-24 h, can be called for a normal fee - also from abroad)

National Health Toxicological Information Service:

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

Hazard Class and Category:

Skin Sens. 1

Hazard statement:

H317

May cause an allergic skin reaction.

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2.2 Label elements

Product identification: Trade name: **MOL Dynamic Star F 0W-30 synthetic motor oil**

Hazardous component(s): C14-16-18 Alkyl phenol

GHS Pictogram:



Signal word: **Warning**

Hazard statement:

H317 May cause an allergic skin reaction.

Supplemental hazard information: -

Precautionary statements – General:

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

P102 Keep out of reach of children.

Precautionary statements – Prevention:

P273 Avoid release to the environment.

P280 Wear protective gloves, protective clothing, eye protection/face protection.

Precautionary statements – Response:

P302 + P352 IF ON SKIN: Wash with plenty of soapy water.

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

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, at a concentration of 0.1% or more.

The mixture does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.



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SECTION 3 Composition/information on ingredients

3.2 Mixtures

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

Component(s) / Hazardous component(s):

Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. % (m/m)
Distillates (petroleum), hydrotreated heavy paraffinic REACH Registr. Nr.: 01-2119484627-25	265-157-1	64742-54-7	Asp. Tox. 1 (Note L)	H304	max. 50
1-Decene Homopolymer Hydrogenated REACH Registr. Nr.: 01-2119486452-34	500-183-1	68037-01-4	Asp. Tox. 1 (Note L)	H304	max. 20
1-Decene Homopolymer Hydrogenated REACH Registr. Nr.: 01-2119486452-34	500-183-1	68037-01-4	- (Note L)	-	max. 15
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based REACH Registr. Nr.: 01-2119474878-16	276-737-9	72623-86-0	Asp. Tox. 1 (Note L)	H304	max. 7.5
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based REACH Registr. Nr.: 01-2119474889-13	276-738-4	72623-87-1	Asp. Tox. 1 (Note L)	H304	max. 7.5
Bis(nonylphenyl)amine REACH Registr. Nr.: 01-2119488911-28	253-249-4	36878-20-3	Aquatic Chronic 4	H413	max. 1.3
C14-16-18 Alkylphenol REACH Registr. Nr.: 01-2119498288-19	931-468-2	-	Skin Sens. 1 Aquatic Chronic 4	H317 H413	max. 1.3

*: with exposure limit

Note L: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

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

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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: 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.

Prolonged and/or repeated contact may cause irritation on skin or in eyes depending on individual sensitivity.

4.3 Indication of any immediate medical attention and special treatment needed

Not required.

SECTION 5 Fire-fighting measures

Fire hazards:

Combustible.

5.1 Extinguishing media

Suitable extinguishing media:

Foam, carbon dioxide, dry chemical powder, water fog (trained personnel only).

Unsuitable extinguishing media:

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:

On burning, carbon monoxide, carbon dioxide, sulphur oxides, phosphor oxides, various hydrocarbons and soot can be formed.

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5.3 Advice for fire-fighters

Special protective equipment:

According to the existing fire-fighting regulations. Respiratory protection.

Further information:

Collect contaminated firefighting 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.

Danger of slipping on leaked out/spilled product.

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 removed. Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid by pumping. 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.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Keep general measures applied for normal operations with lubricants.

Keep away from radiant heat and open flame.

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

Wash hands before breaks and at end of work.

Take off contaminated clothing and wash it before reuse.

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

Handling temperature:

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- 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 motor oil.

SECTION 8 Exposure controls / personal protection

- 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

Engineering control measures:
Not required.

Personal protection:

- (a) Eye/face protection Where splashing is possible, wear safety glasses (EN 166).
- (b) Skin protection
- (i) Hand protection Oil resistant gloves (EN 374, Breakthrough time > 480 min, PK power level: 6; PR flow rate: 0).
Note: Manufacturer's directions for use and the conditions of application should be observed.
- (ii) Other Protective clothing (oil resistant).
- (c) Respiratory protection Under normal conditions not required. In case of exceeded exposure-limits respiratory protection with particle-filter is recommended.
- (d) Thermal hazards No data.

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.



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SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Physical state:	liquid
b) Colour:	brown, clear, bright
c) Odour:	characteristic
d) Melting point/freezing point (Pour point) (ISO 3016):	-54°C
e) Boiling point or initial boiling point and boiling range (DIN 51356):	not available
f) Flammability:	combustible
g) Lower and upper explosion limit:	not explosive
h) Flash point (COC) (EN ISO 2592):	min. 230°C
i) Auto-ignition temperature:	not available
j) Decomposition temperature:	not available
k) pH:	not applicable
l) Kinematic viscosity (EN ISO 3104)	
	at 40°C: typ. 52.1 mm ² /s
	at 100°C: typ. 10.2 mm ² /s
m) Solubility	
Solubility in water:	practically insoluble in water
Solubility in other solvents:	gasoline, kerosene, toluene, etc.
n) Partition coefficient n-octanol/water (log value):	not available
o) Vapour pressure at 20°C:	negligible
p) Density and/or relative density at 15°C (DIN EN ISO 12185):	ca. 0.845 g/cm ³
q) Relative vapour density:	not available
r) Particle characteristics:	not available

9.2 Other information

Oxidizing properties:	not oxidize
Heating value:	inf. 38 000 kJ/kg

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



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- 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 hazard classes as defined in Regulation (EC) No 1272/2008

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

Components:

Distillates (petroleum), hydrotreated heavy paraffinic (CAS: 64742-54-7)

Oral:	LD ₅₀ (rat)	> 2000 mg/kg	(OECD 401)
Dermal:	LD ₅₀ (rabbit)	> 2000 mg/kg	(OECD 402)
Inhalation:	LC ₅₀ (rat)	> 5000 mg/m ³	(OECD 403)

1-Decene Homopolymer Hydrogenated (CAS: 68037-01-4)

Oral:	LD ₅₀ (rat)	> 5000 mg/kg
Dermal:	LD ₅₀ (rat)	> 2000 mg/kg
Inhalation:	LC ₅₀ (rat)	> 5.2 mg/L

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (CAS: 72623-86-0)

Oral:	LD ₅₀ (rat)	> 5000 mg/kg
Dermal:	LD ₅₀ (rabbit)	> 2000 mg/kg
Inhalation:	LC ₅₀ (rat)	> 5000 mg/m ³ (dust, mist)

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

Oral:	LD ₅₀ (rat)	> 5000 mg/kg
Dermal:	LD ₅₀ (rabbit)	> 2000 mg/kg
Inhalation:	LC ₅₀ (rat)	> 5.53 mg/L

Bis(nonylphenyl)amine (CAS: 36878-20-3)

Oral:	LD ₅₀ (rat)	> 5000 mg/kg	(OECD 401)
Dermal:	LD ₅₀ (rat)	> 2000 mg/kg	(OECD 402)

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.



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Carcinogenicity:	Based on available data, the classification criteria are not met.
Reproductive toxicity:	Based on available data, the classification criteria are not met.
STOT-single exposure:	Based on available data, the classification criteria are not met.
STOT-repeated exposure:	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.

11.2 Information on other hazards

The mixture does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

SECTION 12 Ecological information

12.1 Toxicity

No data for the product.

Components:

Distillates (petroleum), hydrotreated heavy paraffinic (CAS: 64742-54-7)

Fish:	> 1000 mg/L	96 h (OECD 203)
Daphnia:	> 100 mg/L	48 h (OECD 202)
Algae:	> 100 mg/L	72 h (OECD 201)

1-Decene Homopolymer Hydrogenated (CAS: 68037-01-4)

Fish (Oncorhynchus mykiss):	LC ₅₀	> 1000 mg/L	4 h
Daphnia (Daphnia magna):	EC ₅₀	> 1000 mg/L	48 h
Daphnia (Daphnia magna):	EC ₅₀	> 125 mg/L	21 days
Daphnia (Daphnia magna):	NOEC	125 mg/L	21 days
Algae (Scenedesmus quadricauda):	LC ₅₀	> 1000 mg/L	3 h
Algae (Scenedesmus quadricauda):	NOEC	> 1000 mg/L	3 h

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (CAS: 72623-86-0)

Algae:	NOEC	≥ 100 mg/L	72 h
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Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

Fish:	LC ₅₀	> 100 mg/L
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Bis(nonylphenyl)amine (CAS: 36878-20-3)

Fishes (Danio rerio):	LC ₅₀	> 100 mg/L	96 h (OECD 203)
Daphnia (Daphnia magna):	EC ₅₀	> 100 mg/L	48 h (OECD 202)
Algae (Desmodesmus subspicatus):	EC ₅₀	> 100 mg/L	72 h (OECD 201)



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12.2 Persistence and degradability	No data available.
Biodegradability:	No data available.
<i>1-Decene Homopolymer Hydrogenated</i> (CAS: 68037-01-4)	2 % (28 days) (OECD TG 301 D9)
<i>Distillates (petroleum), hydrotreated heavy paraffinic</i> (CAS: 64742-54-7)	31 % (28 days) (OECD TG 301 F)
12.3 Bioaccumulative potential	No data available.
<i>1-Decene Homopolymer Hydrogenated</i> (CAS: 68037-01-4)	Log Kow: >6.5 (process value)
12.4 Mobility in soil:	Floats on water.
Mobility in water:	Absorbs in soil.
12.5 Results of PBT and vPvB assessment	Does not contain PBT and vPvB substances, at a concentration of 0.1% or more.
12.6 Endocrine disrupting properties	The mixture does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.
12.7 Other adverse effects	
Heavy metal content:	None.
PCT, PCB and other chlorinated hydrocarbons:	None.
Environmental effects:	Large spills may be hazardous to the environment. Spills may form a film on water surfaces causing impaired oxygen transfer.
Water hazard class (German):	WGK 1 (Classification by AwSV)

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.

Waste Identification Code: 13 02 06*

Synthetic engine, gear and lubricating oils.

Disposal must be in compliance with national and local regulations.

Recommended waste treatment method: incineration



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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.

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

Skin Sens. 1 H317 calculation method

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

H304 May be fatal if swallowed and enters airways.

H317 May cause an allergic skin reaction.

H413 May cause long lasting harmful effects to aquatic life.

Asp. Tox. 1 Aspiration hazard Category 1

Skin Sens. 1 Respiratory/skin sensitization Category 1

Aquatic Chronic 4 Hazardous to the aquatic environment, Chronic Category 4

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 Labelling
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
COD	Chemical Oxygen Demand
CSA	Chemical Safety Assessment



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CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ec _x	Effective Concentration x%
ErC50	EC50 in terms of reduction of growth rate
Ed _x	Effective Dose x%
EC	European Community
EC number	European Community number
ELINCS	European List of Notified Chemical Substances
ES	Exposure Scenario
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC _x	Lethal Concentration x%
LD _x	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
ppm	parts/million
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	Hazards identification	10. 02. 2020	2
3	Composition/information on ingredients		
8	Exposure controls / personal protection		
9	Physical and chemical properties		
1-16	Revision modification according to 2020/878/EU Full revision due to composition change	07. 12. 2022	3