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

1.1 Product identifier:
MOL DOT 3 Brake fluid

1.2 Relevant identified uses of the mixture or substance and uses advised against
Relevant identified uses: brake fluid.
Uses advised against: no data.

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 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 (07-15^{20} h): +36 34 526 210 (CET) on workdays
Health Toxicological Information Service (ETTSZ 1096 Budapest, Nagyvárad tér 2.)
Tel.: +36 80 201 199 (0-24 h, free number).
National Health Toxicological Information Service:

SECTION 2 Hazards identification

2.1 Classification of the mixture or substance

Hazard Class and Category:	Hazard statement:	
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT RE 2	H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.

2.2 Label elements

Product identification: Trade name: **MOL DOT 3 Brake fluid**

Hazardous components: Diethylene glycol

GHS Pictogram:

Signal word: **Warning**

Hazard statement:

H319	Causes serious eye irritation.
H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.

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:

P280	Wear eye protection/face protection.

Precautionary statements – Response:

P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: 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: distribution for population.

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 the substance.

Component(s) / Hazardous component(s):

Name	EU number	CAS number	Hazard classes and cat.	Hazard statements	Conc. %(m/m)
Triethylene glycol monobutyl ether* REACH Registr. Nr.: 01-2119531322-53	205-592-6	143-22-6	Eye Dam. 1	H318	20-45
Diethylene glycol REACH Registr. Nr.: 01-2119457857-21	203-872-2	111-46-6	Acute Tox. 4 STOT RE 2	H302 H373	10-25
2-(2-Methoxyethoxy) etanol REACH Registr. Nr.: 01-2119475100-52	203-906-6	111-77-3	Repr. 2	H361d	0-<3
2-(2-butoxyethoxy) ethanol REACH Registr. Nr.: 01-2119475104-44	203-961-6	112-34-5	Eye Irrit. 2	H319	0-3

* Specific concentration limit:
Eye Irrit. 2; H319: 20 % ≤ C < 30 %; Eye Dam. 1; H318: C ≥ 30 %

The full text of each relevant H- phrase and 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. Keep him warm. Keep at rest. If symptoms persist, call medical attention.

Skin contact: Remove contaminated clothing and wash skin with plenty of water, use soap. In case of complaints, get medical attention.
Eye contact: Wash affected eyes for at least 10-15 minutes under running water with eyelids held open. Get medical attention.
Ingestion: If swallowed rinse mouth, give to drink plenty of water.
If medical treatment is delayed, drink 90-120 ml of 40% alcohol (e.g. liqueur) for an adult. Children should be given 2 ml / kg body weight. Do not induce vomiting unless directed to do so by your doctor. Get medical attention immediately.

Protection of first-aid person: No individual specifications.

4.2 Most important symptoms and effects, both acute and delayed
Ingestion of large quantities: renal failure, coma, death. Other symptoms include central nervous system effects, abdominal discomfort, metabolic acidosis, headache and nausea.
Inhalation: unlikely route of exposure. May cause respiratory irritation at high temperatures or in aerosol form. See also Ingestion.
Skin: May be absorbed by prolonged contact with damaged skin.
Prolonged contact degreases the skin, causing dermatitis.
Causes serious eye irritation.
May cause damage to kidneys through prolonged or repeated exposure if swallowed.

4.3 Indication of any immediate medical attention and special treatment need
Treat according to symptoms (decontamination, vital functions), no known specific antidote. May cause symptoms similar to ethylene glycol.

SECTION 5 Fire-fighting measures

Fire hazards:
Combustible.

5.1 Extinguishing media
Suitable extinguishing media:
Alcohol resistant foam, carbon dioxide, dry chemical powder, water spray (fog).

Unsuitable extinguishing media:
Water jet.

5.2 Special hazards arising from the mixture or substance
Hazardous combustion products:
On burning carbon dioxide, carbon monoxide and other toxic fumes / gases can be formed.

5.3 Advice for fire-fighters

Special protective equipment:

According to the existing fire-fighting regulations (breathing apparatus).

Further information:

In case or fire, keep containers cool with water spray.

Collect contaminated fire fighting water separately. It must not enter drains.

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.

Keep unnecessary personnel away.

Avoid contact with eyes, skin and clothing.

Danger of slipping on leaked out/spilled product.

Adequate ventilation required.

6.2 Environmental precautions:

Prevent spills from entering into natural water, soil and drains by containing the liquid. Notify relevant authority.

6.3 Methods and material for containment and cleaning up

On soil: Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid by pumping. Dispose of according to local regulations.
For smaller spills, rags or absorbent granules may be used.

On water: Confine the spillage. 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 chemicals.

Use in a well-ventilated area.

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

Keep unused containers closed (the liquid absorbs the humidity of the air).

Ensure washing facilities after working hours and before breaks. Take off contaminated clothing and wash it before reuse.

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

Handling temperature: no data

7.2 Conditions for safe storage, including any incompatibilities
Storage facilities must comply with regulations for storing of chemicals.
Store in cool, dry, well-ventilated area, in original, tightly closed containers.
Strong oxidizing agents, mineral oils be stored separately.
Suitable container material: mild steel, stainless steel.
Do not store in coated containers.
Storage temperature: Protect from frost.

7.3 Specific end use(s)
Brake fluid.

SECTION 8 Exposure controls / personal protection

Engineering control measures:
Adequate ventilation (general and local exhaust).

8.1 Control parameters:
EU limits

2-(2-Methoxyethoxy) etanol: CAS: 111-77-3	TWA (Time weighted average):	50,1 mg/m^3	EU2
2-(2-butoxyethoxy) ethanol: CAS: 112-34-5	10 ppm 670 mg/m^3	15 ppm 101,2 mg/m^3	

8.2 Exposure controls
Personal protection:

Respiratory protection: Under normal conditions not required.
When concentrations in air may exceed the limits recommended to use a half face filter mask to protect from overexposure by inhalation. (organic vapor against filter: A-P2)

Hand protection: Chemical resistant gloves recommended (EN 374), butyl, natural rubber, nitrile, PVC. DBZ breakthrough time:> 480 minutes.
Note: Manufacturer's directions for use and the conditions of application should be observed.

Eye protection: Safety glasses with side-shields or face shield (EN 166) in case of splashes. Made of acrylic or PVC.

Skin protection: Protective clothing.
Other special: An emergency shower and eye wash station shall be available at the workplace.

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 (ASTM D 1500):	colourless or amber
Odour:	mild

Change in physical state:

Initial boiling point / boiling range (SAE J 1703):	>205°C
Melting point (SAE J 1703):	<-50°C

Others:

Flash point (IP 35):	>93°C
Ignition temperature:	no data
Decomposition temperature:	>300°C
Autoignition temperature (ASTM D 286):	>300°C
Explosive properties:	not explosive
Oxidizing properties:	not oxidizing
Vapour pressure at 20°C:	<2 mbar
Evaporation rate:	negligible
Density at 20°C (DIN 51757):	1.010 – 1.060 g/cm^3
Solubility in water:	miscible with water
Solubility in polar solvents:	in ethyl alcohol is miscible in all proportions
n-Octanol/water partition coefficient (OECD 117):	< 2.0 (each main component)
Kinematic viscosity (ASTM D 445):	approx. 5-10 cSt
pH at 20°C (SAE J 1703):	7.0 – 11.5
Solvent content:	no data

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:	Contact with glycol ethers and light metals may produce hydrogen.
10.4	Conditions to avoid:	Contact with light metals.
10.5	Incompatible materials:	Light metals, strong oxidants.
10.6	Hazardous decomposition products:	Peroxides may be formed during storage of glycol ethers. Hazardous Combustion Products: See Section 5.

SECTION 11 Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Oral:	LD_{50} (rat)	≥5000 mg/kg
Dermal:	LD_{50} (rabbit)	≥3000 mg/kg

Acute toxicity: irritation

Skin:	not irritant (based on OECD 404 tests)
Eye:	irritant (based on OECD 405 test)

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

Other information, specific effects:

Germ cell mutagenicity:	not known, resp. not mutagen (based on components)
Carcinogenicity:	not known, resp. not carcinogen (based on components)
Reproductive toxicity:	not known, resp. no reproduction-damaging effect (based on components)
STOT-single exposure:	not classified
STOT-repeated exposure:	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
Aspiration hazard:	not classified

SECTION 12 Ecological information

12.1 Toxicity

Fish (Oncorhynchus mykiss):	LC_{50}	> 100	mg/L/96 h

12.2	Persistence and degradability Biodegradability:	 100% (OECD 302B, 21 days).
12.3	Bioaccumulative potential	Log Pow: ≤ 2.0 (each main component).
12.4	Mobility Mobility in soil: Mobility in water:	 Mobile in the soil until degradation. It is completely miscible with water. Evaporation is not expected.
12.5	Results of PBT and vPvB assessment	The product contains no PBT (persistent / bioaccumulative / toxic) and vPvB right (very persistent / very bioaccumulative) criteria material.
12.6	Other adverse effects Environmental effects: Water hazard class (German):	 Large spills may be hazardous to the environment. WGK 1 (self-classification) slightly water endangering.

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: 16 01 13*
Brake fluids.

Recommended waste treatment method: Must be dumper or incinerated in accordance with local regulations.

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.

Uncontaminated pack can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

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:		not classified.
14.2	UN proper shipping name:		not classified.
14.3	Transport hazard class(es):		not classified.
14.4	Packing group:		not classified.
14.5	Environmental hazards:		not classified.
14.6	Special precautions for user:		not classified.

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 (mod.: 2015/830/EU) and to Regulation (EC) 1272/2008.

15.2 Chemical safety assessment.
not available

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
1272/2008/EC regulation, Annex XVII. of REACH
Relevant Hungarian and EU regulations

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

Eye Irrit. 2	H319	based on test results
STOT RE 2	H373	calculated

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

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to kidneys through prolonged or repeated exposure if swallowed.
Acute Tox. 4	Acute toxicity Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 2	Reproductive toxicity Category 2
STOT RE 2	Specific target organ toxicity – repeated exposure Category 2

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
CSR	Chemical Safety Report

DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ecx	Effective Concentration x%
Edx	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
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
1 2 5 14	Responsible for SDS Other hazards Fire hazards Transport information	10.04.2015	2
1-16 2.2 3	Full revision. According to 2015/830 /EU. Label elements Composition/information on ingredients	14.05.2018	3
1-16	Full revision due to changes in composition	01.11.2018	4