

Safety Data Sheet according to EC-Regulation 91/155/EEC

1. Identification of the substance/preparation and of the company/undertaking

Identification of the substance or preparation

MOTOR PROTECT 500 ml

Art.: 2053

Use of the substance/preparation

Additives

Company/undertaking identification

LIQUI MOLY GmbH, Jerg-Wieland-Straße 4, D-89081, Ulm-Lehr

Telephone (+49) 0731-1420-0, Fax (+49) 0731-1420-88

Emergency telephone / Office for advice

Advisory office in case of poisoning:

Tel.:

Telephone number of the company in case of emergencies:

Tel. (+49) 0731-1420-0

2. Composition/information on ingredients

2.1 Chemical name	content %	symbol	R-phrases	CAS	EINECS, ELINCS
Zinc alkyl dithiophosphate	0,5 -< 2,5	Xi/N	38-41-51-53		272-028-3
2,2'-(octadec-9-enylimino)bisethanol	5 -< 10	C/Xn/N	22-34-50		246-807-3
Diammonium dimolybdate	1 - 5		52/53		248-517-2

For complete wording of the R-phrases, refer to point 16.

3. Hazards identification

3.1 To people

See point 11 and 15.

Preparation is classified as hazardous in the sense of directive 1999/45/EC.

Irritation of the eyes

Irritation of the skin.

3.2 To the environment

See point 12.

4. First aid measures

4.1 Inhalation

Remove person from danger area.

Supply person with fresh air and consult doctor according to symptoms.

4.2 Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

4.3 Skin contact

Wash thoroughly with soap and copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

4.4 Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.5 Special resources necessary for first aid

Indications for the physician:

Danger of aspiration.

5. Fire-fighting measures

5.1 Suitable extinguishing media

CO2
Extinguishing powder
Foam
Cool container at risk with water.

5.2 Extinguishing media which must not be used for safety reasons

High volume water jet

5.3 Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

In case of fire the following can develop:

Oxides of carbon
Oxides of sulphur
Oxides of nitrogen
Hydrocarbons
Toxic pyrolysis products.

5.4 Special protective equipment for fire-fighters

Protective respirator with independent air supply
According to size of fire
Full protection, if necessary

5.5 Further information

Dispose of contaminated extinction water according to official regulations.

6. Accidental release measures

Refer to point 13. and for personal protection refer to point 8.

6.1 Personal precautions

Ensure sufficient supply of air.
Avoid contact with eyes or skin.
Caution - risk of slipping.

6.2 Environmental measures

If leakage occurs, dam up.
Prevent from entering drainage system.
Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods for cleaning up

Collect using absorbant material (e.g. Universal binding medium, sand, kieselguhr) and dispose of according to point 13.

7. Handling and storage

7.1 Handling

Tips for safe handling:

See point 6.1
Ensure good ventilation.
Do not heat to temperatures close to flash point.
Wash hands before breaks and at end of work.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.2. Storage

Requirements for storage rooms and containers:

Store products only unopened, in original packing.
Not to be stored in gangways or stair wells.
Solvent resistant floor
Do not store with oxidizing agents.

Special storage conditions:

See point 10.2
Store in a well ventilated place.
Protect from direct sunlight and warming.

8. Exposure controls/personal protection

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Revision: 09.06.2004 Replaces the version of: 22.09.2003 Printing date: 24.06.2004

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Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the OES, MEL or MAK values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Chemical name	content %	OES, MEL, MAK, TRK	BMGV, BAT
Diammonium dimolybdate	1 - 5	5 mg/m ³ (soluble Mo compounds, as Mo)	
Oil mist, mineral		5 mg/m ³	
8.1 Respiratory protection: With oil mist formation Filter A P 3 (EN 141)		Normally not necessary.	
8.2 Hand protection: If applicable Protective nitrile gloves (EN 374) Protective Neopren gloves (EN 374). Protective hand cream recommended.		Protective gloves, oil resistant (EN 374)	
8.3 Eye protection:		Tight fitting protective goggles with side protection (EN 166).	
8.4 Skin protection:		Protective working garments (e.g. safety shoes EN 344, long-sleeved protective working garments)	

Additional information on hand protection - No tests have been performed.

Selection made for preparations according to the best available knowledge and information on the ingredients.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

9. Physical and chemical properties

Physical state:	Liquid
Colour:	Brown
Odour:	Characteristic
pH-value undiluted:	n.a.
Boiling point / range (°C):	200
Melting point / range (°C):	- 30
Flash point (°C):	190
Oxidising properties:	No
Minimum limit of explosion:	n.a.
Maximum limit of explosion:	n.a.
Vapour pressure:	n.g.
Relative density (g/ml):	0,87
Solubility in water:	Insoluble
Viscosity:	88,9 mm ² /s (40°C)

10. Stability and reactivity

10.1 Conditions to avoid

See point 7

Stable when handled and stored correctly.

10.2 Materials to avoid

See point 7

Avoid contact with strong oxidizing agents.

10.3 Hazardous decomposition products

See point 5.3

11. Toxicological information

11.1 Acute toxicity and immediate effects

11.1.1 Ingestion, LD50 rat oral (mg/kg):	n.v.
11.1.2 Inhalation, LC50 rat inhal.(mg/l/4h):	n.v.
11.1.3 Skin contact, LD50 rat dermal (mg/kg):	Irritant
11.1.4 Eye contact:	Irritant

11.2 Delayed and chronic effects

11.2.1 Sensitization:	n.g.
11.2.2 Carcinogenicity:	n.g.
11.2.3 Mutagenicity:	n.g.
11.2.4 Reproductive toxicity:	n.g.
11.2.5 Narcosis:	n.g.

11.3. Further information

Classification according to calculation procedure.

The following may occur:

Product removes fat

Dermatitis (skin inflammation)

12. Ecological information

Water hazard class (Germany):	2
Self classification:	Yes (VwVwS)
Persistence and degradability:	
Readily biodegradable *	
Behaviour in sewage plants:	
According to the recipe, contains no AOX.	
Ecological toxicity:	n.v.
* 2,2'-(octadec-9-enylimino)bisethanol	

13. Disposal considerations

13.1. for the material / preparation / residue

Soaked polluted cloths, paper or other organic materials represent a fire hazard and should be controlled, collected and disposed of.

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances.

13 02 05 - mineral-based non-chlorinated engine, gear and lubricating oils

Recommendation:

Pay attention to local and national official regulations

Implement substance recycling.

E.g. suitable incineration plant.

13.2 for contaminated packing material

See point 13.1

Pay attention to local and national official regulations

Empty container completely.

Uncontaminated packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

14. Transport information

General statements

UN-Number: n.a.

Road/Rail-transport (ADR/RID)

Class/packing-group: n.a.

Classification code: n.a.

Hazard identification number: n.a.

LQ: n.a.

Transport by sea

IMDG-code: n.a. (class/packing-group)

EmS: n.a.

Marine Pollutant: n.a.

Transport by air

IATA: n.a. (class/secondary danger/packing-group)

Additional information:

Non-dangerous material according to Transport Regulations.

15. Regulatory information

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**Classification according to Dangerous Product Regulations incl. EC Directives
(67/548/EEC and 1999/45/EC)**

Symbols: Xi

Indications of danger:

Irritant

R-phrases:

36/38 Irritating to eyes and skin.

S-phrases:

2 Keep out of the reach of children.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

35 This material and its container must be disposed of in a safe way.

46 If swallowed, seek medical advice immediately and show this container or label.

Additions:

Contains

long-chained alkylated calcium aryl sulfonate

May produce an allergic reaction.

Observe restrictions:

Yes

Observe restrictive guidelines 76/769/EEC, 1999/51/EC, 1999/77/EC

VOC 1999/13/EC ---

**16. Other information**

These details refer to the product as it is delivered.

Storage class VCI (Germany):

10

Revised points:

15

The following phrases represent the prescribed R-phrases for the ingredients (designated in point 2):

38 Irritating to skin.

41 Risk of serious damage to eyes.

51 Toxic to aquatic organisms.

53 May cause long-term adverse effects in the aquatic environment.

22 Harmful if swallowed.

34 Causes burns.

50 Very toxic to aquatic organisms.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Legend:

n.a. = not applicable / n.v., k.D.v. = not available / n.g. = not checked / OES = Occupational exposure standard

MEL = Maximum exposure limit / BMGV = Biological monitoring guidance value / MAK = Maximum concentration for work place (Germany)

(Germany) / TRK = Technical guidance concentration (Germany) / BAT = Biological tolerance for work place (Germany)

VbF = Regulations for flammable liquids (Germany) / TRbF = Technical regulations for flammable liquids (Germany)

WGK = water hazard class (Germany) - WGK 3 = very hazardous, WGK 2 = hazardous, WGK 1 = slightly hazardous to water

VOC = Volatile organic compounds / AOX = Adsorbable organic halogen compounds

VwVwS = Administrative Order relating to substances hazardous to water (Germany)

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.

No responsibility.

These statements were made by:

Chemical Check GmbH, Beim Staumberge 3, D-32839 Steinheim, Tel.: 01805-CHEMICAL / 01805-243 642, Fax: 05233-941790

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