

Safety Data Sheet

according to Regulation (EC) No 1907/2006

ADDINOL Brake Fluid DOT 5.1

Revision date: 19.12.2018

Product code: 796015

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Brake fluid.

1.3. Details of the supplier of the safety data sheet

Company name:	ADDINOL Lube Oil GmbH	
	Gebäude 4609	
Street:	Am Haupttor	
Place:	D-06237 Leuna	
Telephone:	+49 (0) 3461 845-0	Telefax: +49 (0) 3461 845-555
e-mail:	info@addinol.de	
Contact person:	Application Technology	
Internet:	www.addinol.de	
Responsible Department:	ADDINOL Application Technology	

1.4. Emergency telephone number: +49 (0) 3461 845 222 - Only available during office hours.**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful to aquatic life with long lasting effects.

This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard statements**

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.

P501 Dispose of contents/container to a waste disposal system.

Special labelling of certain mixtures

EUH208 Contains N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine. May produce an allergic reaction.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

Contains: < 0,5% N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine. May produce an allergic reaction.

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Spilled product must not leak into the ground.

Do not allow uncontrolled leakage of product into the environment.

SECTION 3: Composition/information on ingredients**3.2. Mixtures**

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Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
111-46-6	Bis(2-hydroxyethyl)ether			< 1,50 %
	203-872-2		01-2119457857-21	
	Acute Tox. 4; H302			
101-83-7	Dicyclohexylamine			< 1,00 %
	202-980-7			
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H400 H410			
80584-90-3	N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine			< 0,50 %
	279-503-4			
	Skin Irrit. 2, Skin Sens. 1, Aquatic Chronic 2; H315 H317 H411			

Full text of H and EUH statements: see section 16.

Further Information

Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. Use skin protection ointment after cleaning. In case of skin irritation, seek medical treatment.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

Rinse mouth thoroughly with water. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Foam. Extinguishing powder. Carbon dioxide (CO₂). Water spray.

Unsuitable extinguishing media

High power water jet.

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5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). carbon black.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray/stream to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

High slip hazard because of leaking or spilled product. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Collect in closed containers for disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Refer to the provisions listed in Sections 8, 12 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Work in well-ventilated zones or use proper respiratory protection. Avoid oil mist. If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid contact with skin, eye and clothing.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use only antistatically equipped (spark-free) tools.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep container tightly closed in a cool place.

Advice on storage compatibility

Keep away from food, drink and animal feedingstuffs.

Further information on storage conditions

Recommended storage temperature: 5 - 40°C

7.3. Specific end use(s)

Brake fluid. Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL
		-	-		STEL (15 min)	WEL

Additional advice on limit values

source:

8.2. Exposure controls**Appropriate engineering controls**

Provide adequate ventilation as well as local exhaust at critical locations.

Protective and hygiene measures

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

Eye/face protection

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN 166

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374

Duration of wearing with permanent contact: 480 min

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

Skin protection

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Breathing protection with filter against organic gases and vapours type A - boiling point > 65°C: A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state: liquid
 Colour: amber
 Odour: characteristic

Test method

pH-Value: No data available

Changes in the physical state

Melting point: No data available

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Initial boiling point and boiling range: > 260 °C ASTM D 1120
Flash point: > 110 °C DIN EN ISO 2592

Flammability

Solid: No data available
Gas: No data available

Explosive properties

not Explosive.

Lower explosion limits: No data available

Upper explosion limits: No data available

Ignition temperature: 210 °C DIN 51794

Auto-ignition temperature

Solid: No data available
Gas: No data available

Decomposition temperature: No data available

Oxidizing properties

No data available

Vapour pressure: No data available

Density (at 20 °C): 1,065 g/cm³ ISO 12185

Water solubility: completely miscible

Solubility in other solvents

No data available

Partition coefficient: No data available

Viscosity / kinematic:
(at 40 °C) 6,90 mm²/s ISO 3104

Vapour density: No data available

Evaporation rate: No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Do not overheat to avoid decomposition by heat.

Refer to chapter 7 No further action is necessary.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition productsIn case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide Nitrogen oxides (NO_x). carbon black.

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SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

No data available

Mixture not tested.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
111-46-6	Bis(2-hydroxyethyl)ether				
	oral	ATE 500 mg/kg			
101-83-7	Dicyclohexylamine				
	oral	ATE 500 mg/kg			
80584-90-3	N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine				
	oral	LD50 2.000 mg/kg	Rat		

Irritation and corrosivity

Irritant effect on the eye: Not an irritant.

Irritant effect on the skin: Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Sensitising effects

Contains: < 0,5% N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

No data available

STOT-repeated exposure

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Specific effects in experiment on an animal

No data available

SECTION 12: Ecological information**12.1. Toxicity**

No data available

Mixture not tested.

12.2. Persistence and degradability

Individual components are biodegradable. Is well eliminable from water.

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

No data available

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Further information

Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

Waste disposal number of waste from residues/unused products

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Dispose of waste according to applicable legislation. Packing which cannot be properly cleaned must be thrown away.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

Inland waterways transport (ADN)

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

Marine transport (IMDG)

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

Other applicable information

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,5,7,9,10,12,14,15.

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
EUH208	Contains N,N-di(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methanamine. May produce an allergic reaction.

Further Information

This preparation is hazardous in the sense of regulation (EC) No 1272/2008 [GHS].

These given data only refer to the named product. If the product is used together with other materials or in manufacturing processes the data might not be applicable any more. The data are based on today's state of our knowledge and experience. They are, however, no guarantee of any specific product properties and do not established any legally valid contractual relationship.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)