



# Safety Data Sheet

according to Regulation (EC) No 1907/2006

## ADDINOL Brake Fluid

Print date: 20.10.2014

Product code: 796014

Page 1 of 8

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

#### 1.1. Product identifier

ADDINOL Brake Fluid

#### 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 845-201	Telefax: +49 (0) 3461 845-561
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 845-201 - This number is serviced during office hours.

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

The preparation is dangerous in the sense of Directive 1999/45/EC.

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

##### GHS classification

Hazard categories:  
Serious eye damage/eye irritation: Eye Irrit. 2  
Hazard Statements:  
Causes serious eye irritation.

#### 2.2. Label elements

##### Hazardous components which must be listed on the label

Contains: Polyethylene glycol monobutyl ether.

Signal word:	Warning
Pictograms:	GHS07



##### Hazard statements

H319	Causes serious eye irritation.
------	--------------------------------

##### Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye/face protection.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ADDINOL Brake Fluid

Print date: 20.10.2014

Product code: 796014

Page 2 of 8

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.

#### 2.3. Other hazards

Risk of serious damage to eyes.

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

##### Hazardous components

EC No	Chemical name	Quantity
CAS No	Classification	
Index No	GHS classification	
REACH No		
310-287-7	Polyethylene glycol monobutyl ether	< 15 %
9004-77-7	Xi - Irritant R41	
	Eye Dam. 1; H318	
203-872-2	2,2' -oxybisethanol, diethylene glycol	< 10,0 %
111-46-6	Xn - Harmful R22	
603-140-00-6	Acute Tox. 4; H302	
203-820-9	1,1'-iminodipropan-2-ol, di-isopropanolamine	< 2,00 %
110-97-4	Xi - Irritant R36	
603-083-00-7	Eye Irrit. 2; H319	

Full text of R and H phrases: 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. In case of breathing difficulties administer oxygen. If victim is at risk of losing consciousness, position and transport on their side.

##### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. 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. Immediately get medical attention.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ADDINOL Brake Fluid

Print date: 20.10.2014

Product code: 796014

Page 3 of 8

#### **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. Atomized water.

##### **Unsuitable extinguishing media**

High power water jet.

#### **5.2. Special hazards arising from the substance or mixture**

Can be released in case of fire: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>). Carbon black.

#### **5.3. Advice for firefighters**

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

#### **Additional information**

Extinguishing materials should be selected according to the surrounding area. 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 empty into drains or the aquatic environment.

### **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 respiratory protection when in the presence of vapour, dust, and aerosols.

#### **6.2. Environmental precautions**

Do not empty into drains or the aquatic environment. In case of gas being released or leakage into waters, ground or the drainage system, the appropriate authorities must be informed. Prevent spreading over great surfaces (e.g. by damming or installing oil booms).

#### **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 objects and areas thoroughly observing environmental regulations.

#### **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. In case of open handling equipment with built-in suction must 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. Only use anti-static 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 dampness. Keep container tightly closed in a cool place.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ADDINOL Brake Fluid**

Print date: 20.10.2014

Product code: 796014

Page 4 of 8

**Advice on storage compatibility**

Keep away from food, drink and animal feedingstuffs.

**Further information on storage conditions**

Recommended storage temperature: 10 - 30°C

Protect against: heat. UV-radiation/sunlight.

**7.3. Specific end use(s)**

Brake fluid.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	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 for sufficient ventilation and punctiform suction at critical points.

**Protective and hygiene measures**

Wash hands before breaks and at the end of 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.

Duration of wearing 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 suction or ventilation measures are not possible or are insufficient, protective breathing apparatus must be worn. Breathing protection with filter against organic gases and vapours type A -



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ADDINOL Brake Fluid

Print date: 20.10.2014

Product code: 796014

Page 5 of 8

boiling point &gt; 65°C: A1: &lt; 1000 ppm; A2: &lt; 5000 ppm; A3: &lt; 10000 ppm

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	characteristic

#### Test method

pH-Value (at 20 °C):	8,0 FMVSS 116
----------------------	---------------

#### Changes in the physical state

Initial boiling point and boiling range:	> 260 °C FMVSS 116
Flash point:	> 125 °C DIN EN ISO 2719
Ignition temperature:	> 200 °C DIN 51794
Density (at 20 °C):	1,055 - 1,075 g/cm³ DIN 51757
Water solubility:	complete miscible
Viscosity / kinematic: (at 20 °C)	15 - 17 mm²/s FMVSS 116

### 9.2. Other information

Hygroscopic product.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable with proper care and handling.

### 10.2. Chemical stability

The product is chemically stable when handled and stored under normal conditions.

### 10.3. Possibility of hazardous reactions

No decomposition if used as intended.

### 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 products

Can be released in case of fire: Carbon dioxide (CO<sub>2</sub>). Carbon monoxide. Nitrogen oxides (NO<sub>x</sub>).  
Carbon black.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

No data available

Mixture not tested.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ADDINOL Brake Fluid**

Print date: 20.10.2014

Product code: 796014

Page 6 of 8

CAS No	Chemical name				
	Exposure routes	Method	Dose	Species	Source
111-46-6	2,2' -oxybisethanol, diethylene glycol				
	oral	ATE	500 mg/kg		
	dermal	LD50	11890 mg/kg	Rabbit	
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine				
	oral	LD50	4765 mg/kg	Rat	

**Irritation and corrosivity**

Irritant effect on the skin: Not an irritant.

Irritant effect on the eye: Risk of serious damage to eyes.

**Sensitising effects**

No data available

**Severe effects after repeated or prolonged exposure**

No data available

**Carcinogenic/mutagenic/toxic effects for reproduction**

No data available

**Specific effects in experiment on an animal**

No data available

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

Preparation related information:

Acute fish toxicity LC50: 96 h, Leuciscus idus 250 - 350 mg/l

Bacterial toxicity: EC50: 6,25 mg/l

CAS No	Chemical name				
	Aquatic toxicity	Method	Dose	[h]   [d]	Species
111-46-6	2,2' -oxybisethanol, diethylene glycol				
	Acute fish toxicity	LC50	> 32000 mg/l	96 h	Gambusia affinis
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine				
	Acute fish toxicity	LC50 mg/l	> 1000-2200	96 h	Leuciscus idus

**12.2. Persistence and degradability**

90% (15 d). Individual components are biodegradable.

Is well eliminable from water.

**12.3. Bioaccumulative potential**

No data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
111-46-6	2,2' -oxybisethanol, diethylene glycol	-1,98 (25°C)
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine	-0,82

**12.4. Mobility in soil**

No data available



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ADDINOL Brake Fluid

Print date: 20.10.2014

Product code: 796014

Page 7 of 8

#### 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

#### 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 empty into drains or the aquatic environment.

##### **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  
Classified as hazardous waste.

##### **Contaminated packaging**

Contaminated packing must be completely emptied and can be re-used following appropriate cleaning.  
Waste disposal according to official state regulations. Packing which cannot be properly cleaned must be thrown away.

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

14.1. UN number: -

#### **Inland waterways transport (ADN)**

14.1. UN number: -

#### **Marine transport (IMDG)**

14.1. UN number: -

#### **Air transport (ICAO)**

14.1. UN number: not applicable

#### 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 MARPOL73/78 and the IBC Code

not applicable

#### **Other applicable information**

Not a hazardous material with respect to these transportation regulations.

### SECTION 15: Regulatory information

#### 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

### SECTION 16: Other information

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**ADDINOL Brake Fluid**

Print date: 20.10.2014

Product code: 796014

Page 8 of 8

**Full text of R phrases referred to under Sections 2 and 3**

- |    |                                 |
|----|---------------------------------|
| 22 | Harmful if swallowed.           |
| 36 | Irritating to eyes.             |
| 41 | Risk of serious damage to eyes. |

**Full text of H statements referred to under Sections 2 and 3**

- |      |                                |
|------|--------------------------------|
| H302 | Harmful if swallowed.          |
| H318 | Causes serious eye damage.     |
| H319 | Causes serious eye irritation. |

**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.)*