



**Lembar Data Keselamatan**  
**menurut Peraturan Menteri Perindustrian RI No. 87/M-IND/**  
**PER/9/2009**

Printing date 29.04.2020

Version number 9

Revision: 01.04.2020

## 1 Identifikasi Senyawa (Tunggal atau Campuran)

### Product identifier

**Trade name:** Original ATE Brake Fluid SL (DOT 4)

**Article number:** 03.9901-58xx.x / 7058xx

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

No further relevant information available.

**Application of the substance / the mixture** hydraulic liquid

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Continental Aftermarket & Services GmbH

Sodener Straße 9

D-65824 Schwalbach am Taunus

Tel: +49-69-7603-11

Fax: +49-69-761061

#### Further information obtainable from:

Gefahrstoffmanagement Konzern, Zentrales Materiallabor

ate.sicherheit@contiautomotive.com

**Emergency telephone number:** +49-6132-84463 (24 h) 190 languages spoken

## 2 Identifikasi Bahaya

### Classification of the substance or mixture



health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

### Label elements

#### GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

**Hazard pictograms** GHS08

**Signal word** Warning

#### Hazard-determining components of labelling:

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

#### Hazard statements

H361 Suspected of damaging fertility or the unborn child.

#### 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.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Other hazards

#### Results of PBT and vPvB assessment

**PBT:** Not applicable.

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vPvB: Not applicable.

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### 3 Komposisi /Informasi tentang Bahan Penyusun Senyawa Tunggal

**Chemical characterisation: Mixtures**

**Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

30989-05-0	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate Repr. 2, H361	≥30-<50%
	Reaction mass of 2-(2-(2-butoxyethoxy)ethoxy)ethanol and 3,6,9,12-tetraoxahexadecan-1-ol Eye Dam. 1, H318 Specific concentration limits: Eye Dam. 1; H318: C ≥ 30 % Eye Irrit. 2; H319: 20 % ≤ C < 30 %	≥10-<20%
111-46-6	2,2'-oxybisethanol Acute Tox. 4, H302	<10%
110-97-4	1,1'-iminodipropan-2-ol Eye Irrit. 2, H319	<2%

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 Tindakan Pertolongan Pertama pada Kecelakaan

**Description of first aid measures**

**General information:** Remove contaminated clothes and shoes immediately.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.

**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** Call a doctor immediately.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Tindakan pemadaman kebakaran

**Extinguishing media**

**Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

Use fire extinguishing methods suitable to surrounding conditions.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

**Special hazards arising from the substance or mixture**

May be released in case of fire: CO, CO<sub>2</sub>, NO<sub>x</sub>.

**Advice for firefighters**

**Protective equipment:**

Wear self-contained respiratory protective device.

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Do not inhale explosion gases or combustion gases.

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## 6 Tindakan Penanggulangan jika terjadi Tumpahan dan Kebocoran

### Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

### Environmental precautions:

Do not allow product to reach sewage system or any water course.

Do not allow to penetrate the ground/soil.

### Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).

Dispose of the material collected according to regulations.

### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Penanganan dan Penyimpanan

### Handling:

**Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.

**Information about fire - and explosion protection:** No special measures required.

### Conditions for safe storage, including any incompatibilities

#### Storage:

**Requirements to be met by storerooms and receptacles:** Storage at room temperature.

**Information about storage in one common storage facility:** Store away from foodstuffs.

#### Further information about storage conditions:

This product is hygroscopic.

Store in dry conditions.

Keep container tightly sealed.

**Storage class according to TRGS 510:** 10 combustible liquids.

**Specific end use(s)** No further relevant information available.

## 8 Kontrol Paparan/ Perlindungan Diri

**Additional information about design of technical facilities:** No further data; see item 7.

### Control parameters

#### Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

### Exposure controls

#### Personal protective equipment:

#### General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

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**Respiratory protection:**

Respiratory protection required in case of release of vapors / aerosols.

Use particulate filter with medium retention capacity for solid and liquid particles (eg EN 143 or 149, type P2 or FFP2).

**Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

Butyl caoutchouc (butyl rubber): minimum breakthrough time 480 min; minimum layer thickness: 0.7 mm

NBR (nitrile rubber): minimum breakthrough time 30 min; minimum layer thickness: 0.4 mm

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Safety glasses**Body protection:** Protective work clothing**Limitation and supervision of exposure into the environment**

See section 6 and 7. No additional measures necessary.

**Risk management measures**

Use at industrial site in closed process with occasional controlled exposure or processes with equivalent containment conditions:

1 to 3 air changes per hour (90 % effectiveness) - basic standard of general ventilation

maximum 8 h exposure duration per day

maximum 40 °C process temperature

Use of functional fluids in small devices:

5 to 10 air changes per hour (70 % effectiveness) - good standard of controlled ventilation

maximum 8 h exposure duration per day

maximum 40 °C process temperature

## 9 Sifat fisika dan kimia

**Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Yellow
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

**pH-value at 20 °C:** 8.5 (FMVSS 116)

**Change in condition**

<b>Melting point/freezing point:</b>	<-70 °C (DIN 51583)
<b>Initial boiling point and boiling range:</b>	>260 °C (FMVSS 116)

**Flash point:** >125 °C (ASTM D 7094 (closed cup))

**Flammability (solid, gas):** Not applicable.

**Ignition temperature:** 210 °C (DIN 51794)

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<b>Decomposition temperature:</b>	> 360 °C (DSC)
<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	1.5 Vol %
<b>Vapour pressure at 20 °C:</b>	1.3 hPa
<b>Density at 20 °C:</b>	1.065 g/cm <sup>3</sup> (DIN 51757)
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>water:</b>	Fully miscible.
<b>Partition coefficient: n-octanol/water:</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic at 20 °C:</b>	16 mm <sup>2</sup> /s (FMVSS 116)
<b>Solvent content:</b>	
<b>Organic solvents:</b>	18.0 %
<b>Water:</b>	0.0 %
<b>Solids content:</b>	1.5 %
<b>Other information</b>	No further relevant information available.

## 10 Stabilitas dan Reaktifitas

**Reactivity** No further relevant information available.

**Chemical stability**

**Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

## 11 Informasi Toksikologi

**Information on toxicological effects**

**Acute toxicity**

**LD/LC50 values relevant for classification:**

**30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate**

Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

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**Reaction mass of 2-(2-(2-butoxyethoxy)ethoxy)ethanol and 3,6,9,12-tetraoxahexadecan-1-ol**

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>3,000 mg/kg (rabbit)

**111-46-6 2,2'-oxybisethanol**

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

**110-97-4 1,1'-iminodipropan-2-ol**

Oral	LD50	>2,000 mg/kg (rat) (OECD 401)
Dermal	LD50	8,000 mg/kg (rabbit)

**Primary irritant effect:****Skin corrosion/irritation** No irritant effect.**Serious eye damage/irritation** No irritating effect.**Respiratory or skin sensitisation** No sensitising effects known.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Repr. 2

**Reproductive toxicity**

Some evidence of adverse effects on development, based on animal experiments.

**12 Informasi Ekologi****Toxicity****Aquatic toxicity:**

EC50	6.25 mg/l (bacteria)
	250-350 mg/l (fish) (DIN 38412 96 h)

**30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate**

EC50	>100 mg/l (Algae) (72 h)
	>100 mg/l (daphnia) (48 h)
LC50	>100 mg/L (fish) (96 h)

**Reaction mass of 2-(2-(2-butoxyethoxy)ethoxy)ethanol and 3,6,9,12-tetraoxahexadecan-1-ol**

EC50	>100 mg/l (Algae)
LC50	>100 mg/L (daphnia)
	>100 mg/L (fish) (DIN 38412 96 h)

**111-46-6 2,2'-oxybisethanol**

EC50	>100 mg/l (Algae)
	>100 mg/l (daphnia) (DIN 38412 T.11)
LC50	>100 mg/L (fish) (96 h)

**110-97-4 1,1'-iminodipropan-2-ol**

EC50 (static)	>100 mg/l (Algae) (72 h)
	>100 mg/l (daphnia) (92/69/EWG 48 h)
LC50 (static)	>100 mg/L (fish) (OECD 203 96 h)

**Persistence and degradability** No further relevant information available.**Other information:** The product is easily biodegradable.**Behaviour in environmental systems:****Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.

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**Additional ecological information:****General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment** Not applicable.

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

### 13 Pembuangan Limbah

**Waste treatment methods**

Disposal should be based on the relevant state and local laws and regulations, the disposal process should avoid pollution of the environment.

**Recommendation**

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

**Uncleaned packaging:****Recommendation:**

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

### 14 Informasi Transpor/Pengangkutan

<b>UN-Number</b> ADR, ADN, IMDG, IATA	Void
<b>UN proper shipping name</b> ADR, ADN, IMDG, IATA	Void
<b>Transport hazard class(es)</b> ADR, ADN, IMDG, IATA Class	Void
<b>Packing group</b> ADR, IMDG, IATA	Void
<b>Environmental hazards:</b> <b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	Void

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### 15 Informasi yang Berkaitan dengan Regulasi

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

**National regulations:**

**Information about limitation of use:**

Employment restrictions concerning pregnant and lactating women must be observed.

**Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients are listed.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Informasi Lain

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**Relevant phrases**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H361 Suspected of damaging fertility or the unborn child.

**Recommended restriction of use** For industrial or professional purposes only.

**Department issuing SDS:**

Gefahrstoffmanagement Konzern

ate.sicherheit@contiautomotive.com

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - oral - 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

**Sources**

<http://echa.europa.eu/information-on-chemicals/cl-inventory>

<http://echa.europa.eu/web/guest/information-on-chemicals/registered-substances>

[http://www.reach-clp-biozid-helpdesk.de/de/Downloads/CLP-VO/CLP\\_VO\\_Anhang\\_VI\\_Tabelle\\_3\\_2.pdf](http://www.reach-clp-biozid-helpdesk.de/de/Downloads/CLP-VO/CLP_VO_Anhang_VI_Tabelle_3_2.pdf)

<http://www.safeworkaustralia.gov.au/>

\* **Data compared to the previous version altered.**