

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

1.1 Product identifier

Trade name: Original ATE Brake Fluid TYP 200 (DOT 4)

Article number: 03.9901-62xx.x/7062xx

UFI: 0800-P0UA-W00X-TF54

1.2 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

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

AUMOVIO Aftermarket GmbH

Guerickestr. 7

60488 Frankfurt a. M.

Germany

Tel: +49-69-76031

Further information obtainable from:

Hazardous Substances Management Aftermarket, Central Materials Laboratory

ate.sicherheit@aumovio.com

1.4 Emergency telephone number:

INFOTRAC

+1-352-323-3500 (International)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Repr. 2 H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified according to the CLP regulation.

Hazard pictograms



GHS08

Signal word Warning

Hazard-determining components of labelling:

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

Hazard statements

H361fd Suspected of damaging fertility. Suspected of damaging 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 carefully and follow all instructions.

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/hearing 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.

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2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 30989-05-0 EINECS: 250-418-4 Reg.nr.: 01-2119462824-33-XXXX	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate Repr. 2, H361fd	≥70-<90%
CAS: 15520-05-5 EINECS: 239-555-0 Reg.nr.: 01-2120136161-71-0000 01-2120136161-71-0001	2,2'-(Octylimino)bisethanol Eye Dam. 1, H318; Acute Tox. 4, H302; Skin Irrit. 2, H315; Aquatic Chronic 3, H412	≥3-<5%
CAS: 111-46-6 EINECS: 203-872-2 Reg.nr.: 01-2119457857-21-XXXX	2,2'-oxybisethanol Acute Tox. 4, H302	≥1-<2.5%

SVHC Contains no or < 0.1% SVHC according to Regulation (EC) No. 1907/2006 (REACH), Article 57.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Take affected persons out of danger area.

Do not leave affected persons unattended.

Take off immediately all contaminated clothing.

After inhalation:

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Seek medical treatment.

After skin contact:

If skin irritation occurs: Get medical advice/attention.

Immediately wash with water and soap and rinse thoroughly.

After eye contact:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

Protect unharmed eye.

After swallowing:

Do NOT induce vomiting.

Rinse mouth thoroughly with water.

Call a doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

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4.3 Indication of any immediate medical attention and special treatment needed

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No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, 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

5.2 Special hazards arising from the substance or mixture

In case of fire, the following can be released:

Carbon monoxide (CO)

Nitrogen oxides (NO_x)

Boron oxides

Formation of toxic gases is possible in case of fire.

5.3 Advice for firefighters

Protective equipment:

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

Keep away from ignition sources.

6.2 Environmental precautions:

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

Do not allow to penetrate the ground/soil.

6.3 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.

6.4 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.

SECTION 7: Handling and storage

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

Information about fire - and explosion protection:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Temperature class: T3

7.2 Conditions for safe storage, including any incompatibilities

Storage:

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

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Information about storage in one common storage facility:

Store away from flammable substances.

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.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:
112-35-6 2-(2-(2-methoxyethoxy)ethoxy)ethanol

AGW (Germany)	Long-term value: 50 E mg/m ³ 2 (II);Y, 11, DFG
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111-46-6 2,2'-oxybisethanol

AGW (Germany)	Long-term value: 44 mg/m ³ , 10 ppm 4(II);DFG, Y, 11
WEL (Great Britain)	Long-term value: 101 mg/m ³ , 23 ppm

8.2 Exposure controls

Appropriate engineering controls No further data; see section 7.

Individual protection measures, such as 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.

Pregnant women should strictly avoid inhalation or skin contact.

Use skin protection cream for skin protection.

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Equipment should conform to EN 14387.

If the occupational exposure limits cannot be met, in exceptional cases suitable respiratory equipment should be worn only for a short period of time.

filter ABEK-P2

Hand protection

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection Safety glasses

Body protection: Protective work clothing

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Environmental exposure controls See section 6 and 7. No additional measures necessary.

Risk management measures

Ensure that activities are executed by specialists or authorised personnel only.

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

3 to 5 air changes per hour (90 % effectiveness) - basic standard of general ventilation

maximum 8 h exposure duration per day

maximum 40 °C process temperature

Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

5 to 10 air changes per hour (90 % effectiveness) - good standard of controlled ventilation

maximum 1 h exposure duration per day

maximum 40 °C process temperature

Use of functional fluids in small devices:

5 to 10 air changes per hour (80 % effectiveness) - good standard of controlled ventilation

maximum 8 h exposure duration per day

maximum 40 °C process temperature

Supervision in place to check that the risk management measures installed are being used correctly and operation conditions followed.

Ensure control measures are regularly inspected and maintained.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state

Liquid

Colour:

Yellow

Odour:

Characteristic

Odour threshold:

Not determined.

Melting point/freezing point:

<-70 °C (DIN 51583)

Boiling point or initial boiling point and boiling range

>280 °C (FMVSS 116)

Flammability

Not applicable.

Lower and upper explosion limit

Lower:

Not determined.

Upper:

Not determined.

Flash point:

141 °C (ASTM D 7094 (closed cup))

> 130 °C (ISO 2592)

Auto-ignition temperature:

>200 °C (DIN 51794)

Decomposition temperature:

ca. 360 °C (Analogy)

pH at 20 °C

7-8 ((50 %) FMVSS 116)

Viscosity:

Kinematic viscosity at 20 °C

17-18 mm²/s (FMVSS 116)

Dynamic:

Not determined.

water at 20 °C:

350 g/l

Partition coefficient n-octanol/water (log value) Not determined.

Vapour pressure at 20 °C:

<0.1 hPa

Density and/or relative density

Density at 20 °C:

1.07-1.09 g/cm³ (DIN 51757)

Relative density

Not determined.

Vapour density

Not determined.

9.2 Other information

No further relevant information available.

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Appearance:**Form:** Fluid**Important information on protection of health and environment, and on safety.****Ignition temperature:** Product is not selfigniting.**Explosive properties:** Product does not present an explosion hazard.**Change in condition****Evaporation rate** Not determined.**Information with regard to physical hazard classes****Explosives** Void**Flammable gases** Void**Aerosols** Void**Oxidising gases** Void**Gases under pressure** Void**Flammable liquids** Void**Flammable solids** Void**Self-reactive substances and mixtures** Void**Pyrophoric liquids** Void**Pyrophoric solids** Void**Self-heating substances and mixtures** Void**Substances and mixtures, which emit flammable gases in contact with water** Void**Oxidising liquids** Void**Oxidising solids** Void**Organic peroxides** Void**Corrosive to metals** Void**Desensitised explosives** Void* **SECTION 10: Stability and reactivity****10.1 Reactivity** No further relevant information available.**10.2 Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.**10.4 Conditions to avoid** Avoid heat, sparks, open flames and other ignition sources.**10.5 Incompatible materials:** No further relevant information available.**10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Boron oxides

Hydrocarbons

* **SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** Based on available data, the classification criteria are not met.

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EU



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LD/LC50 values relevant for classification:**ATE (Acute Toxicity Estimates)**

Oral	LD50	>5.000 mg/kg (Calculation method)
Dermal	LD50	>5.000 mg/kg (Calculation method)

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)

15520-05-5 2,2'-(Octylimino)bisethanol

Oral	LD50	1,157 mg/kg (rat) (OECD 401)
Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)

111-46-6 2,2'-oxybisethanol

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

Primary irritant effect:**Skin corrosion/irritation**

No irritant effect.

EPISKIN Human Skin Model Test (GLP)

Serious eye damage/irritation

No irritating effect.

OECD 437 Bovine cornea (GLP)

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity**

Suspected of damaging fertility. Suspected of damaging the unborn child.

STOT-single exposure Based on available data, the classification criteria are not met.**STOT-repeated exposure** Based on available data, the classification criteria are not met.**Aspiration hazard** Based on available data, the classification criteria are not met.**11.2 Information on other hazards****Endocrine disrupting properties**

None of the ingredients are listed.

SECTION 12: Ecological information**12.1 Toxicity****Aquatic toxicity:****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)

15520-05-5 2,2'-(Octylimino)bisethanol

EC50 (static)	1.35 mg/l (algae) (OECD 201 72 h)
	>100 mg/l (bacteria) (OECD 209)
	19.1 mg/l (daphnia) (OECD 202 48 h)
LC50	22 mg/L (fish) (OECD 203 96 h)
ErC10 (static)	0.402 mg/L (algae) (OECD 201 72 h)

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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)

12.2 Persistence and degradability No further relevant information available.

Other information: The product is easily biodegradable.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment Not applicable.

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects
Additional ecological information:
General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

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

SECTION 13: Disposal considerations

13.1 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.

European waste catalogue

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01 00	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)
16 01 13*	brake fluids

Uncleaned packaging:
Recommendation:

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

SECTION 14: Transport information

14.1 UN number or ID number
ADR, ADN, IMDG, IATA Void

14.2 UN proper shipping name
ADR, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)
ADR, ADN, IMDG, IATA
Class Void

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14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information

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

REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)

None of the ingredients are listed.

LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

None of the ingredients are listed.

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 75

Regulation (EU) No 649/2012

None of the ingredients are listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients are listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients are listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients are listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients are listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients are listed.

REGULATION (EU) 2024/590 on substances that deplete the ozone layer

None of the ingredients are listed.

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.

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

SECTION 16: Other information

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.

It is the sole responsibility of the importer or distributor to identify and comply with all legal requirements necessary for the lawful placing of chemical products on the market in the respective target countries.

Relevant phrases

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H412 Harmful to aquatic life with long lasting effects.

Recommended restriction of use For industrial or professional purposes only.

Classification according to Regulation (EC) No 1272/2008

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

Department issuing SDS:

Hazardous Substances Management Aftermarket

ate.sicherheit@aumovio.com

Date of previous version: 01.12.2022

Version number of previous version: 7.0

Abbreviations and acronyms:

ADR: Accord relatif au transport international 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

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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 – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Repr. 2: Reproductive toxicity – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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