

# MATERIAL SAFETY DATA SHEET

Revision date: 20.01.2020  
Version: 03



## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name	KANSLER, Brake Fluid, DOT-4
Product use	Lubricants and additives
Company	BLW Handel GmbH
Address	Wachtelstr. 13 12526 Berlin, Deutschland
Phone	+49 30 818 78 777
E-mail address	info@kansler.de
Emergency telephone number	112

## 2. HAZARDS IDENTIFICATION

Classification of a mixture	The mixture is hazardous according to Regulation (EC) No. 1272/2008.
Physical hazards	Not Classified
Health hazards	Eye Irrit. 2; H319 STOT RE 2; H373
Environmental hazards	Not Classified.
Label elements	Labelling according to Regulation (EC) No. 1272/2008 [CLP].
Hazard pictograms	
Signal words	Warning.
Hazardous ingredients	Ethanediol.
Hazard statements	H319 Causes serious eye irritation. H373 May cause damage to the kidneys through prolonged or repeated exposure.
Precautionary Statements	P102 Keep out of reach of children. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314 Get medical advice/attention if you feel unwell. P337+P313 If eye irritation persists: Get medical advice/attention. P403+P235 Store in a well-ventilated place. Keep cool.

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

Other hazards

No additional information available.

## 3. COMPOSITION/INFORMATION ON INGREDIENT

Mixture:

Name	W (%)	CAS Nr. EC Nr.	Classification
2-(2-(2 butoxyethoxy)ethoxy)ethanol	55-75	143-22-6 205-592-6	Eye Dam. 1; H318
2,2'-oxybisethanol	25-45	111-46-6 203-872-2	Acute Tox. 4; H302 STOT RE 2; H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 4. FIRST AID MEASURES

Description of first aid measures:

After ingestion:

If swallowed, get immediate medical attention. Do not induce vomiting.

After inhalation:

Move a person to fresh air if necessary.

In case of skin contact:

Wash the skin with soap and water. Remove contaminated clothing as soon as possible. Seek medical advice if symptoms persist

In case of eye contact:

Flush immediately with water for at least 15 minutes. Get medical advice if discomfort continues. Continue to flush during transport to physician.

Most important symptoms and effects, both acute and delayed:

Symptoms/Injuries

Risk of thermal burns on contact with hot oil.

Symptoms/injuries after inhalation:

May cause irritation to the eyes, nose, throat, and skin. Inhalation of mists or vapors at elevated temperatures may cause respiratory irritation. Possible respiratory damage following repeated or prolonged inhalation.

Symptoms/injuries after skin contact

May cause moderate irritation. Risk of thermal burns on contact with molten product. Prolonged or repeated contacts with the skin may cause dermatitis. Skin rash/inflammation. Drying up of the skin.

Symptoms/injuries after eye contact:

May cause moderate irritation, including burning sensation, tearing, redness or swelling.

Indication of any immediate medical attention and special treatment needed:

First aid kits:

Clean, warm water, soap, drinking water.

## 5. FIREFIGHTING MEASURE

Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>), dry chemical powder, foam. Water fog. Apply aqueous extinguishing media carefully to prevent frothing/steam explosion.

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Special hazards arising from the substance or mixture

On combustion forms: Carbon dioxide. Carbon monoxide. Smokes. Hydrocarbons. Nitrogen oxides (NO<sub>x</sub>). Phosphorus oxides. Zinc oxide. Sulfur oxides. Material will burn but does not easily ignite. When heated above the flash point, releases vapor. Vapors can travel considerable distances to a source of ignition where they can ignite, flash back, or explode. Mist or spray may burn at temperature below flash point.

Advice for firefighter

Wear proper protective equipment. Extra personal protection: complete protective clothing including self-contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURE

Personal precautions, protective equipment and emergency procedures

Stop leak if safe to do so. Evacuate personnel to a safe area. Avoid any direct contact with the product. Avoid contact with skin, eye and clothing. Avoid breathing dust. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Spilled material may present a slipping hazard. Prevent entry to sewers and public waters. Wear suitable protective clothing and eye/face protection.

Environmental precaution

Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material.

Methods and material for containment and cleaning up

Wear suitable protective clothing. Stop leak if safe to do so. Spilled material may present a slipping hazard. Small spills: Clean up any spills as soon as possible, using an absorbent material to collect it. Contain large spills to maximize product recovery or disposal. Substance floats in water. Specialist clean-up methods may be required. Comply with applicable regulations.

Reference to other section

Refer to sections 1 (contact and emergency phone number), 8 and 13.

## 7. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURE

Precautions for safe handling:

Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.

Conditions for safe storage, including any incompatibilities:

Technical measures: Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.

Storage condition(s): Keep away from heat/sparks/open flames/hot surfaces. No smoking. Keep container tightly closed. Do not store near oxidizing agents.

Recommended Materials:

For containers or container linings, use mild steel or high density polyethylene.

Specific end use:

No additional information available

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

2-(2-(2-butoxyethoxy)ethoxy)ethanol

TWA(8 Hrs): 67,5 mg/m<sup>3</sup>

2,2'-oxybisethanol

TWA(8 Hrs): 101 mg/m<sup>3</sup>

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2-(2-(2-butoxyethoxy)ethoxy)ethanol:

DNEL

Workers - Dermal; Long term systemic effects: 50 mg/kg/day  
Workers - Inhalation; Long term systemic effects: 195 mg/m<sup>3</sup>  
Consumer - Dermal; Long term systemic effects: 25 mg/kg/day  
Consumer - Inhalation; Long term systemic effects: 117 mg/m<sup>3</sup>  
Consumer - Oral; Long term systemic effects: 2,5 mg/kg/day

PNEC

Water, Fresh water: 1,5 mg/l  
Water, Marine water: 0,25 mg/l  
Water, Intermittent release: 50 mg/l  
STP: 200 mg/l  
Sediment (Freshwater): 5,77 mg/kg/sediment dw  
Sediment (Marinewater): 0,13 mg/kg/sediment dw  
Soil: 0,45 mg/kg  
Oral: 111 mg/kg

2,2'-oxybisethanol:

DNEL

Workers - Dermal; Long term systemic effects: 106 mg/kg/day  
Workers - Inhalation; Long term systemic effects: 60 mg/m<sup>3</sup>  
Consumer - Dermal; Long term systemic effects: 53 mg/kg/day  
Consumer - Inhalation; Long term systemic effects: 12 mg/m<sup>3</sup>

PNEC

Water, Fresh water: 10 mg/l  
Water, Marine water: 1 mg/l  
Water, Intermittent release: 10 mg/l  
STP: 199,5 mg/l  
Sediment (Freshwater): 20,9 mg/kg/sediment dw  
Soil: 1,53 mg/kg

Personal protective equipment:  
Respiratory protection

No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours.

Hand protection

Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean

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hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

## Skin and body protection

When skin contact is possible, protective clothing including gloves, apron, sleeves, boots, head and face protection must be worn. Wash contaminated clothing before reuse.

## Eyes protection

Safety glasses with side-shields. Use splash goggles when eye contact due to splashing is possible. Wear goggles and face shield if material is heated above 51°C.

## Hygiene measure

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Wash hands thoroughly after handling. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. DO NOT use gasoline, kerosene, solvents, or harsh abrasives as skin cleansers. Remove all contaminated clothing and footwear. Wash contaminated clothing prior to re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance  
Odor  
Odor Threshold  
pH  
Melting Point / Freezing Point  
Initial Boiling Point and Boiling Range  
Flash point  
Flammability  
Upper/Lower Flammability or Explosive Limits  
Vapor Pressure@ 20 °C  
Vapor Density  
Relative Density@ 15 °C  
Solubility in Water  
Partition Coefficient:  
n-Octanol/Water  
Auto-ignition Temperature  
Decomposition Temperature  
Viscosity

Liquid  
Ethereal  
Not established  
8  
≤ -50 °C  
≥230 °C  
>135 °C  
Not applicable  
3,2 - 15,3 % vol. (for ethylene glycol)  
Not applicable  
against air - 6  
1,05 (water = 1)  
Slightly soluble, the product remains on the water surface  
  
log Pow <2  
>300 °C  
Not established  
Not established

## 10. STABILITY AND REACTIVITY

### Reactivity

No information available.

### Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7.

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Possibility of hazardous reaction	No information available.
Conditions to avoid	Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to chapter 7. Hazardous decomposition byproducts may form with exposure to high temperatures.
Incompatible materials	Keep away from strong acids, strong bases and strong oxidizing agents to avoid exothermic reactions.
Hazardous decomposition product	Hazardous decomposition byproducts may form with exposure to high temperatures, e.g.: carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

## II. TOXICOLOGICAL INFORMATION

### Information on toxicological effects:

#### Acute toxicity

Oral: Harmful if swallowed.

#### 2-(2-(2-butoxyethoxy)ethoxy) ethanol

LD50 oral rat: > 5000 mg/kg OECD 401

LD50 dermal rabbit: > 3000 mg/kg OECD 402

#### Skin Irritation

Expected to be slightly irritating. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis.

#### Eye Irritation

Expected to be slightly irritating.

#### Sensitization

Not expected to be a skin sensitizer.

#### Repeated dose toxicity

No data available.

#### Carcinogenicity

This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractable by the IP 346 test.

#### Mutagenicity

Not expected to be mutagenic.

#### Toxicity for reproduction

Not expected to be toxic.

### Information on likely routes of exposure:

#### After inhalation

Inhalation of vapors may cause respiratory irritation.

#### After contact with skin

Prolonged or repeated skin contact with the material will remove natural oils and could lead to dermatitis.

#### After contact with eyes

Flush immediately with water for at least 15 minutes. Get medical advice if discomfort continues. Continue to flush during transport to physician.

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After ingestion	Ingestion may cause nausea, vomiting and diarrhea.
Delayed and immediate effects as well as chronic effects from short and long-term exposure	No adverse health effects were noted.
Other information	No data available.

## 12. ECOLOGICAL INFORMATION

Toxicity	
2,2'-oxybisethanol:	LC50 fish 96h: >100 mg/l Pimephales promelas. OECD 203 LE50 daphnia 48h: >10000 mg/l Daphnia Magna. OECD 202
2-(2-(2 butoxyethoxy) ethoxy) ethanol:	LC50 fish 96h: >100 mg/l Pimephales promelas. OECD 203 EL50 daphnia 48h: >10000 mg/l Daphnia Magna. OECD 202 NOEL algae 72h: >100 mg/l Pseudokrichneriella subcapitata. OECD 201
Persistence and degradability	Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.
Bioaccumulative potential	The product is not bioaccumulating. Partition coefficient: <2
Mobility in soil	The product is soluble in water. Soluble in water and will partition to aqueous phase. Volatilization from water to air not expected. Mobile in soil until degraded.
Results of PBT and vPvB assessment	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Other adverse effects	Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

## 13. DISPOSAL CONSIDERATIONS

Material Disposal	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.
Container Disposal	Dispose in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand.
Local Legislation	Disposal should be in accordance with applicable regional, national, and local laws and regulations.

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## 14. TRANSPORT INFORMATION

The substance is not a subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

UN number	Not applicable.
UN proper shipping name	Not applicable.
Transport hazard class(es)	Not applicable.
Packing group	Not applicable.
Environmental hazards	Not applicable.
Special precautions for use	Not applicable.

## 15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:  
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Chemical safety assessment:

No chemical safety assessment has been carried out for the substance or the mixture by the supplier.

## 16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox. 4 - Acute toxicity 4 cat.

Eye Dam. 1 - Serious eye damage/eye irritation, Category 1

STOT RE 2 - Toxic effect on the target organ – repeated exposure 2 cat.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Key or legend to abbreviations and acronyms used in the safety data sheet:

ADR : European Agreement concerning the International Carriage of Dangerous Goods by Road

DNEL : Derived No Effect Level

EINECS : European Inventory of Existing Commercial Chemical Substances (EINECS)

EN : European Standard

ES : Exposure Scenario

EU : European Union

IATA : International Air Transport Association

LC50 : Lethal Concentration to 50 % of a test population

LD50 : Lethal Dose to 50% of a test population (Median Lethal Dose)

NDSL : Non-Domestic Substances List (NDSL)

OEL : Occupational Exposure Limit

PEC : Predicted Effect Concentration

PNEC : Predicted No Effect Concentration



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PPE : Personal Protection Equipment

RID : Regulations concerning the International Carriage of Dangerous Goods by Rail

STEL : Short term exposure limit

TWA : time weighted average

Other information:

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