

HYDRAULIC BRAKE FLUID (DOT3)

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

1.1 - Product identifier

Trade name/designation HYDRAULIC BRAKE FLUID (DOT3)

Chemical name

Product-type Mixture

Product code 13099

1.2 - Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses

- Hydraulic oil
- Special product for automotive industry.

Uses advised against

- The uses are provided in Section 1.2. Other uses are not recommended unless a risk assessment is carried out, prior to commencement of that use, which demonstrates that the is safe.

1.3 - Details of the supplier of the safety data sheet

PETROL OF S. A.

Ünalan Mahallesi, Libadiye Caddesi No: 82F

Kat: 2-3-4, 34700 Üsküdar/ İstanbul

Turkey

Telephone : +90 850 339 1919 Fax +90 216 275 3854

Website : www.petrolofisi.com.tr - madeniyag@petrolofisi.com.tr

1.4 - Emergency telephone number

- National Poisons Information Service of England: <http://npis.org> -
NHS 111: dial 111 United Kingdom

- Company phone number (see section 1.3).

SECTION 2: Hazards identification

2.1 - Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Acute Tox. 4 Oral	Acute toxicity (oral) - Category 4
Eye Dam. 1	Serious eye damage, Category 1

2.2 - Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Contains: 2-[2-(2-butoxyethoxy)ethoxy]ethanol | 2,2' -oxybisethanol

Signal word : Danger

Hazard pictograms



Hazard statements

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H302	Harmful if swallowed.
H318	Causes serious eye damage.

Precautionary statements

P264	Wash hands/face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection/protective gloves/protective clothing/face protection.
P301+P312	IF SWALLOWED: Call a doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P330	Rinse mouth.
P501	Dispose of contents/container to an appropriate recycling or disposal facility in accordance with national regulation.

EUH-phrases : None

2.3 - Other hazards

<u>PBT-substance.</u>	- The substances in this mixture do not meet the PTB/vPvB criteria of REACH annex XIII.
<u>vPvB-substance.</u>	- The substances in this mixture do not meet the PTB/vPvB criteria of REACH annex XIII.

SECTION 3: Composition / information on ingredients

3.1 - Substances

Not applicable

3.2 - Mixtures

Chemical name	No.	%	Class(es)	Specific concentration limit
2-[2-(2-butoxyethoxy)ethoxy]ethanol	CAS No. : 143-22-6 Index No. : 603-183-00-0 EC No. : 205-592-6	60 - 80	Eye Dam. 1 - H318	Eye Dam. 1 - H318 : 30<=%<=100 Eye Irrit. 2 - H319 : 20<=%<30
2,2' -oxybisethanol	CAS No. : 111-46-6 Index No. : 603-140-00-6 EC No. : 203-872-2	25 - 40	Acute Tox. 4 Oral - H302	Not applicable
2-(2-methoxyethoxy)ethanol	CAS No. : 111-77-3 Index No. : 603-107-00-6 EC No. : 203-906-6	< 3	Repr. 1B - H360D	Repr. 1B - H360D : 3<=%<=100

- If REACH registration numbers are not visible, the substance is exempt from registration, does not exceed the minimum volume threshold for registration, the registration date has not yet arrived, or this information is registered information.

SECTION 4: First aid measures

4.1 - Description of first aid measures

<u>Following inhalation</u>	<ul style="list-style-type: none"> - Provide fresh air. - Rinse nose and mouth with water. - When in doubt or if symptoms are observed, get medical advice.
<u>Following skin contact</u>	<ul style="list-style-type: none"> - After contact with skin, wash immediately with plenty of water and soap.

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- Remove contaminated clothing and shoes.
- When in doubt or if symptoms are observed, get medical advice.

After eye contact

- Remove affected person from the danger area and lay down.
- Rinse immediately carefully and thoroughly with eye-bath or water.
- In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
- Protect uninjured eye.

After ingestion

- Rinse mouth thoroughly with water.
- Do not leave affected person unattended.
- Do NOT induce vomiting.
- Seek medical advice immediately.
- Never give anything by mouth to an unconscious person or a person with cramps.
- When in doubt or if symptoms are observed, get medical advice.

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

Symptoms and effects -

- No known symptoms to date.

Following inhalation

Symptoms and effects -

Following skin contact

- No known symptoms to date.
- In rare cases the product can cause temporary erythema of the skin.
- Itching.
- May cause skin sensitisation and allergic reactions in sensitive people.

Symptoms and effects - After eye contact

- Itching.
- Redness.
- Mild eye irritation.

Symptoms and effects - After ingestion

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

- No information available.
- Treat symptomatically.

SECTION 5: Firefighting measures

5.1 - Extinguishing media

Suitable extinguishing media

- The product is not flammable.
- Carbon dioxide (CO2)
- Alcohol resistant foam
- Dry sand
- Dry extinguishing powder

Unsuitable extinguishing media

- Strong water jet

5.2 - Special hazards arising from the substance or mixture

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Special hazards arising from the substance or mixture

- In case of fire hazardous decomposition products may be formed, such as: Carbon monoxide, Carbon dioxide (CO₂).
- In case of combustion, emission of toxic fumes.
- Thermal decomposition results in the formation of smoke, carbon oxides and low molecular weight organic compounds of unknown composition.

Hazardous decomposition products

- Formation of CO and CO₂ in the event of combustion (carbon monoxide - carbon dioxide).
- Nitrogen oxides (NO_x)

5.3 - Advice for firefighters

- Wear a self-contained breathing apparatus and chemical protective clothing.
- Move undamaged containers from immediate hazard area if it can be done safely.
- Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.
- Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1 - Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

- Use personal protection equipment.
- Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Provide adequate ventilation.
- Caution: Spreads are slippery

For emergency responders

- Provide adequate ventilation.
- Use personal protection equipment.
- Mittens.
- Spectacles.
- NOTICE: Report spillage to local authorities as appropriate or necessary.
- If it can be done without risk, stop the source of leakage.
- Limit spillage to prevent further contamination of soil, surface or groundwater.
- Use appropriate techniques such as non-flammable absorbent materials or pumping.
- Where possible or appropriate, scrape off the soil contaminated by the product from the area.
- Place product contaminated materials in disposable containers and dispose of in accordance with regulations.
- In case of spillage of a heated substance, allow it to cool down before proceeding with disposal methods.
- Provide adequate ventilation.

6.2 - Environmental precautions

- Ensure waste is collected and contained.
- Do not allow to enter into surface water or drains.

6.3 - Methods and material for containment and cleaning up

Methods and material for containment

- Soak up inert absorbent and dispose as waste requiring special attention.
- Collect in closed and suitable containers for disposal.

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Methods and material for cleaning up

- Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
- Ventilate affected area.
- Clear contaminated areas thoroughly.
- Clean contaminated articles and floor according to the environmental legislation.
- Refer to manufacturer or supplier for information on recovery or recycling.
- Do not allow to enter into surface water or drains.
- If the product contaminates water tables, rivers or sewers, alert the competent authorities according to regulatory procedures.

Inappropriate techniques

- Never return spills to original containers for reuse.

6.4 - Reference to other sections

- Disposal: see section 13
- Personal protection equipment: see section 8
- Safe handling: see section 7
- See Section 1 for emergency contact information.

SECTION 7: Handling and storage

7.1 - Precautions for safe handling

Recommendation

- It is recommended to design all work processes always so that the following is excluded:Eye contact
- Ensure sufficient ventilation.
- Avoid breathing vapours, mist, spray, fumes.
- Keep away from sources of ignition - No smoking.

Advices on general occupational hygiene

- Avoid contact with skin, eyes and clothes.
- Wash contaminated clothing prior to re-use.
- Immediately remove any contaminated clothing, shoes or stockings.
- Wash hands before breaks and after work.
- Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this product is used.
- If exposure limits have not been observed maintain airborne levels at an acceptable level. Provide eye wash station and safety shower.

7.2 - Conditions for safe storage, including any incompatibilities

- Keep/store only in original container.
- Keep container tightly closed in a cool, well-ventilated place.
- Protect against:Heat
- Keep away from:Food and feedingstuffs
- Protect from direct sunlight.

7.3 - Specific end use(s)

- See section 1.2 of the SDS.

SECTION 8: Exposure controls/personal protection

8.1 - Control parameters

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2,2' -oxybisethanol (111-46-6)

TWA EH40 ppm (UK)	23 ppm
TWA EH40 mg/m ³ (UK)	101 mg/m ³

2-(2-methoxyethoxy)ethanol (111-77-3)

IOELV TWA mg/m ³ (UE)	50,1 mg/m ³ Skin
IOELV TWA ppm (UE)	10 ppm Skin

- No exposure limit value is known.
- There is no chemical substance to be specified under this section.

DNEL / PNEC

2,2' -oxybisethanol (111-46-6)

Type	Value	User	Effect
DNEL acute inhalative	60 mg/m ³	Workers	Systemic
DNEL long-term inhalative	44 mg/m ³	Workers	Systemic
DNEL long-term inhalative	12 mg/m ³	Consumers	Systemic
DNEL long-term inhalative	12 mg/m ³	Consumers	Local
DNEL long-term dermal	43 mg/kg bw/day	Workers	Systemic
DNEL long-term dermal	21 mg/kg bw/day	Consumers	Systemic

2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)

Type	Value	User	Effect
DNEL long-term oral (repeated)	12,5 mg/kg bw/day	Consumers	Systemic
PNEC aquatic, freshwater	2 mg/l		
PNEC aquatic, marine water	0,2 mg/l		
PNEC aquatic, intermittent release	8,4 mg/l		
PNEC sediment, freshwater	7,7 mg/kg		
PNEC sediment, marine water	0,77 mg/kg		
PNEC soil	0,47 mg/kg		
PNEC Secondary Poisoning	111 mg/kg		
PNEC sewage treatment plant (STP)	200 mg/l		

8.2 - Exposure controls

Appropriate engineering controls

- Do not eat, drink or smoke during use.
- Ensure adequate ventilation.
- If exposure limits have not been observed maintain airborne levels at an acceptable level. Provide eye wash station and safety shower.

Individual protection measures, such as personal protective equipment

- Lab coat.
- Eye protection



- Tight-fitting goggles.
- In case of risk of splashes: Goggles with side-shields.
- EN 166

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- Protective gloves



- Chemical resistant gloves conforming to EN 374.
- Wear suitable chemical resistant gloves.
- Nitrile rubber
- PVA (Polyvinyl alcohol).
- Protective apron.
- Suitable protective clothing:Protective apron



- If there is a danger of contact with hot product, suitable protective equipment must be used, which protects against high temperatures.

Environmental exposure controls

- It is important to test emissions from ventilation systems or process equipment to ensure that they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1 - Information on basic physical and chemical properties

<u>Physical state</u>	Liquid	<u>Appearance</u>	Liquid
<u>Colour</u>	green	<u>Odour</u>	characteristic
Odour threshold		No information available.	
pH		8,55	
Melting point		No information available.	
Freezing point		No information available.	
Boiling point		No information available.	
Flash point		> 118 °C Open vase	
Evaporation rate		No information available.	
flammability		Not relevant.	
Lower explosion limit		No information available.	
Upper explosion limit		No information available.	
Vapour pressure		No information available.	
Vapour density		No information available.	
Relative density		No information available.	
Density		1,04 g/cm ³ < V < 1,07 g/cm ³ @20°C	
Solubility (Water)		Insoluble	
Solubility (Ethanol)		No information available.	
Solubility (Acetone)		No information available.	
Solubility (Organic solvents)		No information available.	
Log KOC		No information available.	
Auto-ignition temperature		No information available.	

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Decomposition temperature	No information available.
Kinematic viscosity	14,5 mm ² /s < V < 17 mm ² /s (cSt) @20°C
Dynamic viscosity	No information available.

Particle characteristics

Particle size	No data available
Dustiness	No data available
Specific surface area	No data available
Shape	No data available

9.2 - Other information

VOC content	Undetermined
Minimum ignition energy	No data available
Conductivity	No data available
Refractive index	No data available
Solids content	No data available
Surface tension	No data available
Saturation concentration	No data available

- No data available.

SECTION 10: Stability and reactivity

10.1 - Reactivity

- This material is considered to be non-reactive under normal use conditions.

10.2 - Chemical stability

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

10.3 - Possibility of hazardous reactions

- No hazardous reaction when handled and stored according to provisions.

10.4 - Conditions to avoid

- Stable under recommended storage and handling conditions.

- Keep away from: strong acids and strong oxidants.

- The product can decompose at high temperature.

10.5 - Incompatible materials

- Strong alkalis.

- Strong acids.

- Strongly reducing substances.

- Strong oxidising agents.

10.6 - Hazardous decomposition products

- Does not decompose when used for intended uses.

- In combustion emits toxic fumes.

- Carbon dioxide (CO₂)

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- Carbon monoxide

SECTION 11: Toxicological information

11.1 - Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity - Acute toxicity (oral) - Category 4 - Harmful if swallowed.

Toxicity : Mixture

LD50 oral (rat)	No data available
LD50 dermal (rat)	No data available
LD50 dermal (rabbit)	No data available
LC50 inhalation gas (rat)	No data available
LC50 inhalation dusts and mists (rat)	No data available
LC50 inhalation vapours (rat)	No data available

- The product has not been tested.

Toxicity : Substances

2,2' -oxybisethanol (111-46-6)

LD50 oral (rat)	500 mg/kg ATE
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2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)

LD50 oral (rat)	5170 mg/kg
LD50 dermal (rabbit)	3540 mg/kg

Skin corrosion/irritation

- Not classified

Serious eye damage/eye irritation

- Serious eye damage, Category 1 - Causes serious eye damage.

Respiratory or skin sensitisation

- Not classified
- Based on available data, the classification criteria are not met.

Germ cell mutagenicity

- Not classified
- Based on available data, the classification criteria are not met.

Carcinogenicity

- Not classified
- Based on available data, the classification criteria are not met.

Reproductive toxicity

- Not classified
- Based on available data, the classification criteria are not met.

STOT-single exposure

- Not classified
- Based on available data, the classification criteria are not met.

STOT-repeated exposure

- Not classified
- Based on available data, the classification criteria are not met.

Aspiration hazard

- Not classified
- Based on available data, the classification criteria are not met.

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11.2 - Information on other hazards

- This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

SECTION 12: Ecological information

12.1 - Toxicity

Toxicity : Mixture

EC50 48 hr crustacea	No data available
LC50 96 hr fish	No data available
ErC50 algae	No data available
ErC50 other aquatic plants	No data available
NOEC chronic fish	No data available
NOEC chronic crustacea	No data available
NOEC chronic algae	No data available
NOEC chronic other aquatic plants	No data available

- The product has not been tested.
- May cause long lasting harmful effects to aquatic life.
- May cause long-term adverse effects in the environment.

Toxicity : Substances

2,2' -oxybisethanol (111-46-6)	
EC50 48 hr crustacea	62630 mg/l Daphnia magna (Big water flea)
LC50 96 hr fish	66000 mg/l Pimephales promelas (fathead minnow)
NOEC chronic fish	> 40 mg/l (Q)SAR
NOEC chronic crustacea	> 15000 mg/l Daphnia magna (Big water flea)
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
EC50 48 hr crustacea	2210 mg/l Daphnia magna (Big water flea)
LC50 96 hr fish	2400 mg/l Pimephales promelas (fathead minnow)
ErC50 algae	840 mg/l Selenastrum capricornutum
NOEC chronic crustacea	> 100 mg/l Daphnia magna (Big water flea)
NOEC chronic algae	190 mg/l Scenedesmus subspicatus

12.2 - Persistence and degradability

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Mixture

Biochemical oxygen demand (BOD)	No data available
Chemical oxygen demand (COD)	No data available
% of biodegradation in 28 days	No data available

- No information available.
- The product contains a substance that does not degrade easily.

Substances

2,2' -oxybisethanol (111-46-6)	
% of biodegradation in 28 days	> 70 % Readily biodegradable (according to OECD criteria). OECD 301A OECD 301C

12.3 - Bioaccumulative potential

Mixture

Bioconcentration factor (BCF)	No data available
Log KOC	No information available.

- The product contains a bioaccumulating substance.
- The product has not been tested.

Substances

2,2' -oxybisethanol (111-46-6)	
Log KOC	-1,98 No bioaccumulation potential.
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Log KOC	<= 3 No bioaccumulation potential.

12.4 - Mobility in soil

- The product is immiscible with water and will spread on the surface of water.

12.5 - Results of PBT and vPvB assessment

- The substances in this mixture do not meet the PTB/vPvB criteria of REACH annex XIII.
- The substances in this mixture do not meet the PTB/vPvB criteria of REACH annex XIII.

12.6 - Endocrine disrupting properties

- This product does not have endocrine disrupting properties.

12.7 - Other adverse effects

- No data available.
- No information available.

SECTION 13: Disposal considerations

13.1 - Waste treatment methods

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<u>Waste treatment methods</u>	<ul style="list-style-type: none">- Dispose of waste according to applicable legislation.- Handle contaminated packages in the same way as the substance itself.
<u>Sewage disposal</u>	<ul style="list-style-type: none">- Do not empty into drains.
<u>Special precautions for waste treatment</u>	<ul style="list-style-type: none">- Consult the appropriate local waste disposal expert about waste disposal.
<u>Community or national or regional provisions</u>	<ul style="list-style-type: none">- The waste is to be kept separate from other types of waste until its recycling.- For recycling, contact recycling exchanges.- Non-contaminated packages must be recycled or disposed of.

SECTION 14: Transport information

14.1 - UN number or ID number

Not applicable

14.2 - UN proper shipping name

Not applicable

14.3 - Transport hazard class(es)

Not applicable

14.4 - Packing group

Not applicable

14.5 - Environmental hazards

Not applicable

14.6 - Special precautions for user

Not applicable

14.7 - Maritime transport in bulk according to IMO instruments

Not applicable

- Not applicable.

SECTION 15: Regulatory information

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

<u>Substances REACH candidates</u>	None
<u>Substances Annex XIV</u>	None
<u>Substances Annex XVII</u>	2-(2-methoxyethoxy)ethanol (Index No.: 603-107-00-6 - EC No.: 203-906-6 - CAS No.: 111-77-3)
<u>VOC content</u>	No data available

15.2 - Chemical Safety Assessment

Chemical safety assessment carried out for the product - A chemical safety assessment has been conducted for this mixture.

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SECTION 16: Other information

SDS versions

Version	Issue date	Author	Description of the amendments
5	17/02/2025		Updated according to current legislation.
4	31/01/2024		Updated according to current legislation.
1	26/02/2019		It was prepared for the first time.

Issued by: Sena Ezgi Selçuk

Abbreviations and acronyms

- ADR: The Agreement concerning the International Carriage of Dangerous Goods by Road
- ATE: Acute Toxicity Estimate.
- CAS No.: Chemical Abstracts Service number.
- DNEL: Derived no-effect level.
- EC No: European Community number
- EC50: Effective concentration of the substance that causes adverse effects in 50% of test animals.
- IATA: International Air Transport Association.
- ICAO: International Civil Aviation Organization
- IMDG: International Maritime Dangerous Goods.
- LC50: Lethal Concentration to 50 % of a test animals.
- LD50: Lethal Dose to 50% of a test animals.
- OEL: Occupational exposure limit.
- PBT: Persistent, Bioaccumulative and Toxic.
- PNEC: Predicted no-effect concentration.
- RID: International Carriage of Dangerous Goods by Rail.
- STEL: Short-term exposure limit
- TWA: Time weighted average
- vPvB: very Persistent and very Bioaccumulative.

Texts of the regulatory sentences

Acute Tox. 4 Oral	Acute toxicity (oral) - Category 4
Eye Dam. 1	Serious eye damage, Category 1
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H360D	May damage the unborn child.
Repr. 1B	Reproductive toxicity - Category 1B (H360D)

The information provided in this Safety Data Sheet (SDS) is current on the date the SDS was prepared or revised. Implementation of measures that are provided on SDS is under downstream user companies' responsibility. Downstream users may change the measures in the SDS according to the conditions in their own business.

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