



SAFETY DATA SHEET

HIDROLİK FREN YAGI (DOT4)

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name HIDROLİK FREN YAGI (DOT4)

Product number 13102

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

Identified uses Brake fluid.

Uses advised against This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier. This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser. This product is designed only to suit automotive applications and no provision is made for the requirements of aviation applications.

1.3. Details of the supplier of the safety data sheet

Supplier PETROL OFİSİ A.Ş.
Ünalan Mahallesi, Libadiye Caddesi No: 82F Kat: 2-3-4, 34700 Üsküdar/ İstanbul
Tel: +90 850 339 1919
Fax: +90 216 275 3854
madeniyag@petrolofisi.com.tr

Contact person Customer Services: madeniyag@petrolofisi.com.tr

1.4. Emergency telephone number

Emergency telephone Madeni Yağ Customer Services: 0850 339 1919 (working hours)

National emergency telephone number Emergency Medical Services: 112 National Poison Consultance Center: 114

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

2.2. Label elements

Hazard statements EUH208 Contains dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.

Supplemental label information EUH208 Contains: dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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ethanol, 2-butoxy-, manufacture of, by-products from		10-20%
CAS number: 161907-77-3	EC number: 310-287-7	
Classification		
Eye Dam. 1 - H318		
2,2'-oxybisethanol, diethylene glycol		10-20%
CAS number: 111-46-6	EC number: 203-872-2	
Classification		
Acute Tox. 4 - H302		
2-(2-METHOXYETHOXY)ETHANOL		1-5%
CAS number: 111-77-3	EC number: 203-906-6	
Classification		
Repr. 2 - H361d		

The full text for all hazard statements is displayed in Section 16.

Composition comments Some substances are not classified by legislation. They are self classified by the manufacturer. The DMSO extract by IP 346 of the oil is less than 3%

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Treat symptomatically.
Inhalation	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	Treat symptomatically.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	May cause skin sensitisation or allergic reactions in sensitive individuals.
Eye contact	May irritate eyes.

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

Notes for the doctor	Treat symptomatically.
Specific treatments	Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.

Unsuitable extinguishing media Do not use the following: Water. Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Not flammable. Heating causes rise in pressure with risk of bursting.

Hazardous combustion products Oxides of carbon. BOx

5.3. Advice for firefighters

Protective actions during firefighting Evacuate area. Use water to keep fire exposed containers cool and disperse vapours. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

For non-emergency personnel Necessary precautions should be taken to ensure that non-educated personnel do not intervene.

For emergency responders Stop the leakage source if it can be done without risk. Limit spillage to prevent further contamination of soil, surface or ground water. Remove any spilled material as soon as possible by following the precautions in the section Exposure Controls / Personal Protection. Use suitable techniques such as non-flammable absorbent materials or pumping. When possible or appropriate, remove the contaminated soil from the area. Place contaminated products in disposable boxes and dispose of in accordance with regulations. If a heated material is spilled, allow it to cool before handling with disposal methods.

6.2. Environmental precautions

Environmental precautions Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 1 for emergency contact information. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Do not handle broken packages without protective equipment.

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Advice on general occupational hygiene

Persons susceptible to allergic reactions should not handle this product. When using do not eat, drink or smoke. Eye wash facilities and emergency shower must be available when handling this product.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Not applicable.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description The product must be used as specified in the data sheet.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

2-(2-methoxyethoxy)ethanol; EU IOELV, TWA: 50,1 mg/m³; 10 ppm (possibility of significant uptake through the skin)

Ingredient comments

If this product contains a component with exclusion limits, to determine the effectiveness of ventilation and other control measures; and / or the necessity of the use of respiratory protective devices, the working environment or biological measurement and monitoring of employees may be required. The European Standard EN 689 and the relevant national guidelines should be taken as reference for the detection methods for assessing exposure to inhalation of chemicals of hazardous substances.

Biological limit values

There is no available data.

DNEL

There is no available data.

DMEL

There is no available data.

PNEC

There is no available data.

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.

Personal protection

Keep away from foodstuffs, beverages and foods. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Store protective clothing separately.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

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Hygiene measures	Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Respiratory protection	No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.
Thermal hazards	If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.
Environmental exposure controls	Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green
Odour	Characteristic.
Odour threshold	No information available.
pH	7-11,5
Melting point	<-50°C
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.02-1.09 g/cm ³ @ 20°C
Bulk density	No information available.
Solubility(ies)	No information available.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	14.5-17 mm ² /s @ 20°C
Explosive properties	Not applicable.
Explosive under the influence of a flame	Not considered to be explosive.

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Oxidising properties Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information No information required.

Refractive index No information available.

Particle size No information available.

Molecular weight No information available.

Volatility No information available.

Saturation concentration No information available.

Critical temperature No information available.

Volatile organic compound No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Strong oxidising agents. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂). BOx

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Other health effects No relevant information available.

Acute toxicity - oral

Summary Based on available data, the classification criteria are not met.

Notes (oral LD₅₀) Ethanol-2-butoxy- LD₅₀ 2630 mg/kg, Oral, Rat 2,2'-oxybisethanol, diethylene glycol: LD₅₀ 1120 mg/kg, Oral, Human 2-(2-methoxyethoxy)ethanol: LD₅₀ 4 ml/kg, Oral, Rat dihydro-3-(tetrapropenyl)furan-2,5-dione: LD₅₀ 2900 mg/kg, Oral, Rat

ATE oral (mg/kg) 3,571.43

Acute toxicity - dermal

Summary Based on the available data, the classification criteria are not met.

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Notes (dermal LD₅₀)	ethanol,-2-butoxy-: LD ₅₀ 3540 (24h) mg/kg, Dermal, Rat 2,2'-oxybisethanol, diethylene glycol: LD ₅₀ 11890 mg/kg, Dermal, Rabbit 2-(2-methoxyethoxy)ethanol: LD ₅₀ 650 mg/kg, Dermal, Rabbit dihydro-3-(tetrapropenyl)furan-2,5-dione: LD ₅₀ >2000 mg/kg, Dermal, Rat LD ₅₀ 6200-7500 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Summary	Basen on the available data, the classification criteria are not met.
Notes (inhalation LC₅₀)	2,2'-oxybisethanol, diethylene glycol: LC50 >4600 (4h) mg/m ³ , Inhalation, Rat dihydro-3-(tetrapropenyl)furan-2,5-dione: LC50 5,3 (4h) mg/l, Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Summary	Basen on the available data, the classification criteria are not met.
Skin corrosion/irritation	May cause sensitisation or allergic reactions.
Animal data	No specific test data are available.
Human skin model test	No specific test data are available.
Extreme pH	No specific test data are available.
<u>Serious eye damage/irritation</u>	
Summary	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Product includes a compound which may cause eye irritation.
<u>Respiratory sensitisation</u>	
Summary	Based on available data, the classification criteria are not met.
Respiratory sensitisation	There is no evidence that the product can cause respiratory hypersensitivity.
<u>Skin sensitisation</u>	
Summary	Does not meet the classification criteria.
Skin sensitisation	May cause sensitisation or allergic reactions in sensitive individuals.
<u>Germ cell mutagenicity</u>	
Summary	It is not expected to cause genetic damage in the light of current data.
Genotoxicity - in vitro	No specific test data are available.
Genotoxicity - in vivo	No specific test data are available.
<u>Carcinogenicity</u>	
Summary	There is no test data about the carcinogenicity of this product.
Carcinogenicity	2,2'-oxybisethanol, diethylene glycol: NOAEL 1160- 1210 mg/kg, bw/day, Oral, Rat
Target organ for carcinogenicity	No specific target organs known.
IARC carcinogenicity	Not listed.
NTP carcinogenicity	Not listed.
<u>Reproductive toxicity</u>	
Summary	There is no test data indicating that this product has a toxic effect on the reproductive system.
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.

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Specific target organ toxicity - single exposure

Summary	Based on the available data, the classification criteria are not met.
STOT - single exposure	2,2'-oxybisethanol, diethylene glycol: NOAEL 100 mg/kg, bodyweight, Oral, Rat NOAEL 3549 mg/kg, bodyweight, mouse, Dermal, Rat, Rabbit
Target organs	No specific target organs known.

Specific target organ toxicity - repeated exposure

Summary	Based on the available data, the classification criteria are not met.
STOT - repeated exposure	2,2'-oxybisethanol, diethylene glycol: NOAEL 100 mg/kg, bodyweight, (225 days), Oral, Rat, mammalian
Target organs	No specific target organs known.

Aspiration hazard

Summary	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

Toxicokinetics	No information is required.
General information	Information given is based on data of the components and of similar products.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause discomfort if swallowed.
Skin contact	Liquid may irritate skin.
Eye contact	Vapour or spray in the eyes may cause irritation and smarting.
Acute and chronic health hazards	There is not enough data.
Route of exposure	There is no available data.
Target organs	No specific target organs known.
Medical symptoms	No specific test data are available.
Medical considerations	No specific test data are available.

SECTION 12: Ecological information

Ecotoxicity	Not regarded as dangerous for the environment.
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12.1. Toxicity

Toxicity	There is not enough data.
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Acute aquatic toxicity

Summary	Based on available information, the classification criteria are not met.
Acute toxicity - fish	LC ₅₀ , 96 hours: 596 (96 h) mg/l, Fish
Acute toxicity - aquatic invertebrates	No information required.
Acute toxicity - aquatic plants	No information required.

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Acute toxicity - microorganisms No information required.

Acute toxicity - terrestrial No information required.

Chronic aquatic toxicity

Summary Based on available information, the classification criteria are not met.

Chronic toxicity - fish early life stage No information required.

Short term toxicity - embryo and sac fry stages No information required.

Chronic toxicity - aquatic invertebrates No information required.

Toxicity to soil There is not enough data.

Toxicity to terrestrial plants There is not enough data.

12.2. Persistence and degradability

Persistence and degradability Based on available information, the classification criteria are not met.

Phototransformation No information available.

Stability (hydrolysis) No information available.

Biodegradation No information available.

Biological oxygen demand No information available.

Chemical oxygen demand No information available.

12.3. Bioaccumulative potential

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility Uygun bilgi bulunmamaktadır.

Adsorption/desorption coefficient No information available.

Henry's law constant No information available.

Surface tension No information available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects No information required.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Use the substance for its intended purpose and recycle if possible. If this product is to be disposed of, it must be disposed of as defined by international, national or local laws and regulations. The generation of waste should be minimised or avoided wherever possible.

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Disposal methods	Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Waste class	The waste code classification is to be carried out according to the European Waste Catalogue (EWC).

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
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14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78
and the IBC Code

SECTION 15: Regulatory information

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

National regulations	T. C. Regulation on the Classification, Labeling and Packaging of Substances and Mixtures No. 28848, dated 11 December 2013, by the Ministry of Environment and Urbanization. T. C. Regulation on the Classification, Labeling and Packaging of Substances and Mixtures No. 28848, dated 11 December 2013, by the Ministry of Environment and Urbanization. According to Regulation (EC) No 1907/2006, Annex II, as amended.
EU legislation	https://echa.europa.eu
Guidance	Safety Data Sheets for Substances and Preparations.
Health and environmental listings	Hazardous ingredients are listed.

15.2. Chemical safety assessment

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	TWA: Workplace exposure limits UZEM: National Poison Information Center ATE: Acute Toxicity Estimate. CAS: Chemical Abstracts Service. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. IATA: International Air Transport Association. IMDG: International Maritime Dangerous Goods. LC ₅₀ : Lethal Concentration to 50 % of a test population. LD ₅₀ : Lethal Dose to 50% of a test population (Median Lethal Dose). PBT: Persistent, Bioaccumulative and Toxic substance. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. vPvB: Very Persistent and Very Bioaccumulative. NOAEL: No Observed Adverse Effect Level.
Classification abbreviations and acronyms	Eye Dam. = Serious eye damage Acute Tox. = Acute toxicity Eye Irrit. = Eye irritation Skin Sens. = Skin sensitisation Aquatic Chronic = Hazardous to the aquatic environment (chronic)
General information	Only trained personnel should use this material. This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters. MSDS Distribution : The information in this document should be made available to all who may handle the product. Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Key literature references and sources for data	This SDS is prepared based on the information received from suppliers.
Classification procedures according to Regulation (EC) 1272/2008	EUH208: Supplier information
Training advice	Untrained personnel should not use.
Revision comments	Revised formulation.
Issued by	Sena Ezgi SELÇUK Safety Data Sheet Specialist (Certificate No: GBF01.55.06 02.10.2024)
Revision date	31/12/2021
Revision	4
Supersedes date	17/06/2011
SDS number	10096
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H318 Causes serious eye damage. H361d Suspected of damaging the unborn child. EUH208 Contains dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.