SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier

Product name: COFRAN LF DOT 4

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

Identified uses: Brake fluid

Uses advised against: No uses advised against identified.

1.3 Details of the supplier of the safety data sheet

Manufacturer / Supplier
COFRAN FLF
1, Place des Papeteries
92000 Nanterre
France

Telephone: +33 (0) 1 41 37 42 00
Fax: +33 (0) 1 41 37 42 16

Contact Person:
E-mail: info@cofran.fr

1.4 Emergency telephone number:

+33 (0)1 45 42 59 59 (ORFILA)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The product has been classified and labelled as hazardous according to regulation (EU) 1272/2008 (CLP).

Classification according to Regulation (EC) No 1272/2008 as amended.

Health Hazards

Serious eye irritation	Category 2	H319: Causes serious eye irritation.
Toxic to reproduction	Category 2	H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

Hazard summary

Physical Hazards: No data available.

2.2 Label Elements

Contains: Triethylene glycol monomethyl ether borate
Glycol derivative

Signal Words: Warning

Hazard Statement(s): H319: Causes serious eye irritation.
H361fd: Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary Statements

General information: P101: If medical advice is needed, have product container or label at hand.
P102: Keep out of reach of children.

Prevention: P264: Wash hands thoroughly after handling.

Response: P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical advice/attention.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.

Disposal: P501: Dispose of contents/ container to a local hazardous waste disposal facility.

2.3 Information on other hazards By handling of mineral oil products and chemical products no particular hazard is known when normal precautions (item 7) and personal protective equipment (item 8) are kept. The product may not be released into the environment without control.

Endocrine disrupting properties The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

General information:

Chemical name	Identifier	Concentration *	REACH Registration No.	Notes
Glycol derivative	EINECS: 205-592-6	25,00% - <40,00%	01-2119475107-38	
Triethylene glycol monomethyl ether borate	EINECS: 250-418-4	15,00% - <25,00%	01-2119462824-33	
Diglycol	EINECS: 203-872-2	5,00% - <10,00%	01-2119457857-21	
3,6,9,12-tetraoxahexadecan-1-ol	EINECS: 216-322-1	5,00% - <10,00%		
Glycol derivative	EINECS: 203-961-6	1,00% - <3,00%	01-2119475104-44	
Alkyl diglycole	EINECS: 203-906-6	0,10% - <1,00%	01-2119475100-52	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.

Classification

Chemical name	Identifier	Classification	
Glycol derivative	EINECS: 205-592-6	CLP:	Eye Dam. 1;H318
Triethylene glycol monomethyl ether borate	EINECS: 250-418-4	CLP:	Repr. 2;H361d
Diglycol	EINECS: 203-872-2	CLP:	Acute Tox. 4;H302
3,6,9,12-tetraoxahexadecan-1-ol	EINECS: 216-322-1	CLP:	Eye Irrit. 2;H319
Glycol derivative	EINECS: 203-961-6	CLP:	Eye Irrit. 2;H319
Alkyl diglycole	EINECS: 203-906-6	CLP:	Repr. 2;H361d

CLP: Regulation No. 1272/2008.

specific concentration limit

Chemical name	Identifier	specific concentration limit	Hazard class	Hazard Category	Hazard statements
Glycol derivative	EINECS: 205-592-6	>= 30 %	Serious eye damage	1	H318
		20 - < 30 %	Serious eye irritation	2	H319

For the wording of the listed hazard statements refer to section 16.

SECTION 4: First aid measures

General: Change clothes and shoes contaminated or soaked by the product. Never put rags contaminated by the product into clothing pockets. Get medical attention if any discomfort continues.

4.1 Description of first aid measures

Inhalation: Supply fresh air; consult doctor in case of symptoms.

Eye contact: In the event of contact with the eyes, rinse thoroughly with clean water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists after washing.

Skin Contact:	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse.
Ingestion:	Rinse mouth thoroughly. DO NOT induce vomiting. Get medical attention immediately.
4.2 Most important symptoms and effects, both acute and delayed:	May cause skin and eye irritation. Causes serious eye irritation.
4.3 Indication of any immediate medical attention and special treatment needed	Get medical attention if symptoms occur.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:	CO2, fire extinguishing powder or fog like water spraying. Extinguish larger fires with alcohol resistant foam or spray water with suitable surfactant added
Unsuitable extinguishing media:	Water with a full water jet.
5.2 Special hazards arising from the substance or mixture:	During fire, gases hazardous to health may be formed. Carbon monoxide (CO)

5.3 Advice for firefighters

Special fire-fighting procedures:	Move container from fire area if it can be done without risk. Dispose of fire debris and contaminated fire fighting water inaccordance with official regulations. Collect contaminated fire fighting water separately. It must not enter drains.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	In case of spills, beware of slippery floors and surfaces. Avoid contact with spilled material. Use personal protective equipment. Ventilate closed spaces before entering them. Keep public away from danger area.
6.2 Environmental Precautions:	Prevent from spreading (e.g. by binding or oil barriers). Avoid release to the environment. Environmental manager must be informed of all major spillages. Prevent further leakage or spillage if safe to do so. Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acidbinders, universal binders, sawdust). Dispose of the material collected according to regulations. Stop the flow of material, if this is without risk.

6.4 Reference to other sections: See Section 8 of the SDS for Personal Protective Equipment. See Section 7 for information on safe handling See Section 13 for information on disposal.

SECTION 7: Handling and storage:

7.1 Precautions for safe handling: Use personal protective equipment as required. Prevent formation of aerosols. Provide adequate ventilation. Do not eat, drink or smoke when working with the product. Take usual precautions when handling mineral oil products or chemical products. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities: Store in closed original container in a dry place.

7.3 Specific end use(s): Not applicable

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters

Occupational Exposure Limits

Chemical name	Type	Exposure Limit Values	Source
Glycol derivative	STEL	15 ppm 101,2 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
Glycol derivative	TWA	10 ppm 67,5 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
Glycol derivative	VME	10 ppm 67,5 mg/m3	France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984, as amended (01 2008)
Glycol derivative	VLE	15 ppm 101,2 mg/m3	France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984, as amended (01 2008)
Alkyl diglycole	TWA	10 ppm 50,1 mg/m3	EU. Indicative Occupational Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, as amended (12 2009)
Alkyl diglycole	VME	10 ppm 50,1 mg/m3	France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984, as amended (01 2008)

8.2 Exposure controls

Appropriate engineering controls:	Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Observe Occupational Exposure Limits and minimize the risk of inhalation.

Individual protection measures, such as personal protective equipment (PPE)

General information:	Wash hands before breaks and after work. Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment. The usual precautionary measures should be adhered to in handling the chemicals. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Eye/face protection:	Avoid contact with skin and eyes. Goggles/face shield are recommended. If risk of splashing, wear safety goggles or face shield.
Skin protection	
Hand Protection:	Material: Nitrile butyl rubber (NBR). Min. Breakthrough time: >= 480 min Recommended thickness of the material: >= 0,38 mm Avoid long-term and repeated skin contact. Suitable gloves can be recommended by the glove supplier. Use skin protection cream for preventive skin protection. Protective gloves, where permitted in acc. to safety directions. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Other:	Wear suitable protective clothing. Do not carry cleaning cloths impregnated with the product in trouser pockets.
Respiratory Protection:	Ensure good ventilation/exhaustion at the workplace.
Thermal hazards:	Not known.
Hygiene measures:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.
Environmental Controls:	No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	
Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Characteristic

pH:	8,7 (100 %)
Freezing point:	< -50 °C
Boiling Point:	> 260 °C
Flash Point:	> 100 °C
Flammability (solid, gas):	not determined
Explosion Limit - Upper (%):	Not applicable for mixtures
Explosion Limit - Lower (%):	Not applicable for mixtures
Vapor pressure:	Not applicable for mixtures
Relative vapor density:	Not applicable for mixtures
Density:	1,04 g/cm3 (15 °C)
Solubility(ies)	
Solubility in Water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	Not applicable for mixtures
Auto-ignition temperature:	not determined
Decomposition Temperature:	300 °C
Kinematic viscosity:	5 - 10 mm2/s (20 °C)
Particle characteristics:	Not applicable

9.2 Other information

Minimum ignition temperature:	> 280 °C

SECTION 10: Stability and reactivity

10.1 Reactivity:	Stable under normal use conditions.
10.2 Chemical Stability:	Stable under normal use conditions.
10.3 Possibility of hazardous reactions:	Stable under normal use conditions.
10.4 Conditions to avoid:	Stable under normal use conditions.
10.5 Incompatible Materials:	Strong acids. Strong alkalis. Strong oxidizing agents.
10.6 Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

SECTION 11: Toxicological information

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

Acute toxicity

Oral

Product:	Not classified for acute toxicity based on available data.
	ATEmix: 11.313,13 mg/kg

Specified substance(s)

Glycol derivative	LD 50 (Rat): 6.730 mg/kg
Diglycol	LD 50 (Rat): 12.565 mg/kg LD 50 (Human): 1.120 mg/kg
Glycol derivative	LD 50 (Rat): 3.384 mg/kg
Alkyl diglycole	LD 50 (Rat): 9.210 mg/kg

Dermal

Product:	Not classified for acute toxicity based on available data.
	ATEmix: 130.000 mg/kg

Specified substance(s)

Glycol derivative	LD 50 (Rabbit): 3.540 mg/kg
Diglycol	LD 50 (Rabbit): 11.890 mg/kg
Glycol derivative	LD 50 (Rabbit): 2.700 mg/kg
Alkyl diglycole	LD 50 (Rabbit): 650 mg/kg

Inhalation

Product:	Not classified for acute toxicity based on available data. Not classified for acute toxicity based on available data.

Skin Corrosion/Irritation:

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

Specified substance(s)

Triethylene glycol monomethyl ether borate	OECD 404 (Rabbit): Not irritant.
Diglycol	OECD 404 (Rabbit): Not irritant.

Serious Eye Damage/Eye Irritation:

Product:	Based on available data, the classification criteria are met.

Specified substance(s)

Triethylene glycol monomethyl ether borate	OECD 405 (Rabbit): Not irritant.

Respiratory or Skin Sensitization:

Product: Skin sensitizer: Based on available data, the classification criteria are not met.
Respiratory sensitizer: Based on available data, the classification criteria are not met.

Specified substance(s)

Triethylene glycol monomethyl ether borate	No sensitizing effect (guinea pig); OECD 406
Diglycol	No sensitizing effect (guinea pig); OECD 406

Germ Cell Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

Product: Based on available data, the classification criteria are met.

Specific Target Organ Toxicity - Single Exposure

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

Specific Target Organ Toxicity - Repeated Exposure

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

Aspiration Hazard

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

11.2 Information on other hazards

Endocrine disrupting properties

Product: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 12: Ecological information

General information: Not applicable

12.1 Toxicity

Acute toxicity

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

Fish

Specified substance(s)

Glycol derivative	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2.400 mg/l

Triethylene glycol monomethyl ether borate	LC 50 (Fish, 96 h): > 222,2 mg/l (OECD 203)
Diglycol	LC 50 (Fish, 96 h): > 32.000 mg/l
Glycol derivative	LC 50 (Fish, 96 h): 1.300 mg/l

Aquatic Invertebrates
Specified substance(s)

Glycol derivative	EC 50 (Water Flea, 48 h): > 500 mg/l
Triethylene glycol monomethyl ether borate	EC 50 (Water Flea, 48 h): > 211,2 mg/l (OECD 202)
Diglycol	EC 50 (Water Flea, 48 h): > 10.000 mg/l
Glycol derivative	EC 50 (Water Flea, 48 h): > 101 mg/l

Chronic ToxicityProduct: Based on available data, the classification criteria are not met.

Toxicity to Aquatic Plants
Specified substance(s)

Glycol derivative	EC 50 (Alga, 72 h): 612,6 mg/l
Triethylene glycol monomethyl ether borate	EC 50 (Alga, 72 h): > 224,4 mg/l (OECD 201)
3,6,9,12-tetraoxahexadecan-1-ol	EC 50 (Alga, 96 h): > 100 mg/l
Glycol derivative	EC 50 (Alga, 96 h): > 101 mg/l

12.2 Persistence and Degradability

Biodegradation
Product: Not applicable for mixtures
Specified substance(s)

Triethylene glycol monomethyl ether borate	> 70 % (10 d, OECD 301A)
Diglycol	92 % (28 d, OECD 301A)

12.3 Bioaccumulative potential
Product: Not applicable for mixtures

12.4 Mobility in soil:
Product: Not applicable for mixtures

12.5 Results of PBT and vPvB assessment: The product does not contain any substances fulfilling the PBT/vPvB criteria.

12.6 Endocrine disrupting properties

Product: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

General information: Dispose in accordance with all applicable regulations.

Disposal methods: Discharge, treatment, or disposal may be subject to national, state, or local laws.

European Waste Codes

16 01 13*: brake fluids

SECTION 14: Transport information

ADR/RID

14.1 UN number or ID number:	–
14.2 UN Proper Shipping Name:	–
14.3 Transport Hazard Class(es)	
Class:	Non-dangerous goods
Label(s):	–
Hazard No. (ADR):	–
Tunnel restriction code:	–
14.4 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

IMDG

14.1 UN number or ID number:	–
14.2 UN Proper Shipping Name:	–
14.3 Transport Hazard Class(es)	
Class:	Non-dangerous goods
Label(s):	–
EmS No.:	–
14.3 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

IATA

14.1 UN number or ID number:	–
14.2 Proper Shipping Name:	–
14.3 Transport Hazard Class(es):	
Class:	Non-dangerous goods
Label(s):	–
14.4 Packing Group:	–
14.5 Environmental hazards:	–
14.6 Special precautions for user:	–

14.7 Maritime transport in bulk according to IMO instruments: Not applicable.

SECTION 15: Regulatory information

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

EU Regulations

EU. Ozone Depleters, Annex I to Regulation 2024/590 on Substances that Deplete the Ozone Layer: none

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: none

Regulation (EC) No. 649/2012 Import and export of dangerous chemicals: none

15.2 Chemical safety assessment: No Chemical Safety Assessment has been carried out.

DIRECTIVE 2012/18/EU (SEVESO III) on the control of major-accident hazards involving dangerous substances

Not applicable

SECTION 16: Other information

Revision Information: Vertical lines in the margin indicate an amendment.

Wording of the H-statements in section 2 and 3

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

Other information: The classification complies with the current EU lists; however, it has been supplemented with expert literature information and information provided by/about our company. The following evaluation methods were used: - On the basis of test data - Calculation Method - Bridging Principle "Substantially similar mixtures" - Expert Judgement

Revision Date:	16.07.2025
Disclaimer:	The data contained in this safety data sheet are based on our current knowledge and experience and are given to the best of our knowledge and belief. It characterizes the product only with regard to safety requirements for handling, transport and disposal. The data do not describe the product's properties (tech. product specification). Neither should any agreed property nor the suitability of the product for any specific technical application be deduced from the data contained in this safety data sheet. Modifications on this document are not allowed. The data are not transferable to other products. In the case of mixing the product with other products or in the case of processing, the data in this safety data sheet are not necessarily valid for the new-made material. It is the responsibility of the recipient of the product to observe federal, state and local law. Please contact us to obtain up-to-date safety data sheets. This document was issued electronically and has no signature.

Abbreviations and acronyms

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; EIGA - European Industrial Gases Association; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative