SAFETY DATA SHEET

Q8 Brake Fluid DOT 4 LV

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

1.1 Product identifier

Product name : Q8 Brake Fluid DOT 4 LV

UFI : 2030-U0PU-T00J-YUXM

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

Material uses : Brake fluids.

1.3 Details of the supplier of the safety data sheet

Supplier : Q8 Danmark A/S
Arne Jacobsens Allé 17
2300 København S, Danmark
Tel.: +45 7012 4545
Email: produktteknik@Q8.dk
Web: www.Q8.dk

Manufacturer / Distributor : Kuwait Petroleum Belgium N.V./S.A.
Petroleumkaai 7
B-2020 Antwerp
Belgium
/ Q8Oils Italia S.r.l.
Via Volpedo 2
15050 Castellar Guidobono (AL)
Italy

e-mail address of person responsible for this SDS : SDSinfo@Q8.com, communication preferably in English only.

PCN Information contact : PCNinfo@Q8.com, communication preferably in English only.

1.4 Emergency telephone number

Denmark : +45 8988 2286

Europe : +44 (0) 1235 239 670

Global (English only) : +44 (0) 1865 407 333

National advisory body/Poison Center

Denmark : Bispebjerg Hospital - poison line : +45 8212 1212

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

TOXIC TO REPRODUCTION	Category 2	H361fd

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

Ingredients of unknown toxicity : None.

Ingredients of unknown ecotoxicity : None.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :

Signal word : Warning

Hazard statements : H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements

General : P103 - Read carefully and follow all instructions.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.

Response : P308 + P313 - IF exposed or concerned: Get medical advice or attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Yes, applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] orthoborate	REACH #: 01-2119462824-33 EC: 250-418-4 CAS: 30989-05-0	≥75 - ≤90	Repr. 2, H361fd	-	[1]
2-[2-(2-butoxyethoxy) ethoxy]ethanol	REACH #: 01-2119475107-38 EC: 205-592-6 CAS: 143-22-6	≥10 - ≤15	Eye Dam. 1, H318	Eye Dam. 1, H318: C ≥ 30% Eye Irrit. 2, H319: 20% ≤ C < 30%	[1]

SECTION 3: Composition/information on ingredients

	Index: 603-183-00-0				
3,6,9,12-tetraoxahexadecan-1-ol	REACH #: 01-2120768763-41 EC: 216-322-1 CAS: 1559-34-8	≥1 - ≤3	Eye Irrit. 2, H319	-	[1]
2-(2-methoxyethoxy)ethanol	REACH #: 01-2119475100-52 EC: 203-906-6 CAS: 111-77-3 Index: 603-107-00-6	≤1	Repr. 1B, H360D	Repr. 1B, H360D: C ≥ 3%	[1] [2]
2-(2-butoxyethoxy)ethanol	REACH #: 01-2119475104-44 EC: 203-961-6 CAS: 112-34-5 Index: 603-096-00-8	<1	Eye Irrit. 2, H319 **See Section 16 for the full text of the H statements declared above.**	-	[1] [2]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : No specific data.

SECTION 4: First aid measures

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, alcohol-resistant foam or water spray (fog).

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

SECTION 6: Accidental release measures

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
2-(2-methoxyethoxy)ethanol	**Working Environment Authority (Denmark, 6/2022). Absorbed through skin.** TWA: 10 ppm 8 hours. TWA: 50 mg/m³ 8 hours. STEL: 100 mg/m³ 15 minutes. STEL: 20 ppm 15 minutes. **EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values** TWA: 50.1 mg/m³ 8 hours. TWA: 10 ppm 8 hours.
2-(2-butoxyethoxy)ethanol	**Working Environment Authority (Denmark, 6/2022).** TWA: 68 mg/m³ 8 hours. TWA: 10 ppm 8 hours. STEL: 15 ppm 15 minutes. STEL: 101 mg/m³ 15 minutes. **EU OEL (Europe, 1/2022). Notes: list of indicative occupational exposure limit values** TWA: 67.5 mg/m³ 8 hours. TWA: 10 ppm 8 hours. STEL: 101.2 mg/m³ 15 minutes. STEL: 15 ppm 15 minutes.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
tris[2-[2-(2-methoxyethoxy)ethoxy] ethyl] orthoborate	DNEL	Long term Oral	4.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	7.2 mg/m³	General population	Systemic
	DNEL	Long term Dermal	8.3 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	29.1 mg/m³	Workers	Systemic
2-[2-(2-butoxyethoxy)ethoxy]ethanol	DNEL	Long term Dermal	2.823 mg/cm²	General population	Local
	DNEL	Short term Dermal	4.173 mg/cm²	General population	Local
	DNEL	Long term Dermal	5.65 mg/cm²	Workers	Local

SECTION 8: Exposure controls/personal protection

	DNEL	Short term Dermal	8.35 mg/cm²	Workers	Local
	DNEL	Long term Inhalation	12 mg/m³	General population	Systemic
	DNEL	Long term Oral	12.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	15.252 mg/m³	General population	Local
	DNEL	Long term Inhalation	24 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	30.5 mg/m³	Workers	Local
	DNEL	Short term Inhalation	48 mg/m³	General population	Local
	DNEL	Short term Inhalation	48 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	96 mg/m³	Workers	Local
	DNEL	Short term Inhalation	96 mg/m³	Workers	Systemic
	DNEL	Short term Oral	103.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	200 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	208 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	400 mg/kg bw/day	Workers	Systemic
2-(2-methoxyethoxy)ethanol	DNEL	Long term Dermal	1.33 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.22 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Oral	7.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	30.1 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	50.1 mg/m³	Workers	Systemic
2-(2-butoxyethoxy)ethanol	DNEL	Long term Oral	6.25 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	67.5 mg/m³	Workers	Local
	DNEL	Short term Inhalation	101.2 mg/m³	Workers	Local

PNECs

No PNECs available.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Recommended: < 1 hour (breakthrough time): nitrile rubber 0.17 mm.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Boiling point > 65 °C: A1; Boiling point < 65 °C: AX1; Hot material: A1P2.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid.

Appearance : Clear.

Color : Colorless. to Amber.

Odor : Mild.

Odor threshold : Not available.

Melting point/freezing point : <-50°C (<-58°F) [SAE J 1703]

Initial boiling point and boiling range : >260°C (>500°F) [SAE J 1703]

Flammability : Not applicable.

Lower and upper explosion limit : Not available.

Flash point : Closed cup: >100°C (>212°F) [ASTM D 93]

Auto-ignition temperature : >280°C (>536°F)

Decomposition temperature : >300°C

pH : 7 to 10.5 [SAE J 1703]

Viscosity : Kinematic (room temperature): 5 to 10 mm^2/s (5 to 10 cSt) [ASTM D 445]
Kinematic (40°C (104°F)): 7.9 mm^2/s (7.9 cSt) [ASTM D 445]

Solubility(ies) :

SECTION 9: Physical and chemical properties

Media	Result
cold water hot water	Easily soluble Easily soluble

Solubility in water : Not available.

Miscible with water : Yes.

Partition coefficient: n-octanol/water : 1.5 [OECD 117]

Vapor pressure : 0.1 kPa (0.750061683 mm Hg)

Evaporation rate : 0.01 (butyl acetate = 100 = 1)

Density : 1.02 to 1.07 g/cm³ [20°C (68°F)] [DIN 51757]

Vapor density : Not available.

Explosive properties : Not applicable.

Oxidizing properties : Not applicable.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not applicable.

Oxidizing properties : Not applicable.

9.2.2 Other safety characteristics

Miscible with water : Yes.

Evaporation rate : 0.01 (butyl acetate = 100 = 1)

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2-[2-(2-butoxyethoxy)ethoxy] ethanol	LD50 Oral	Rat	5300 mg/kg	-
2-(2-butoxyethoxy)ethanol	LD50 Dermal LD50 Oral	Rabbit Rat	2700 mg/kg 4500 mg/kg	- -

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

Acute toxicity estimates

SECTION 11: Toxicological information

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
2-[2-(2-butoxyethoxy)ethoxy]ethanol	5300	N/A	N/A	N/A	N/A
2-(2-butoxyethoxy)ethanol	4500	2700	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
2-[2-(2-butoxyethoxy)ethoxy] ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
2-(2-methoxyethoxy)ethanol	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Moderate irritant	Rabbit	-	500 mg	-
2-(2-butoxyethoxy)ethanol	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

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

Sensitization

Conclusion/Summary

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

Mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

Conclusion/Summary : Suspected of damaging the unborn child.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

SECTION 11: Toxicological information

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

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

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : Suspected of damaging fertility. Suspected of damaging the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Q8 Brake Fluid DOT 4 LV	LC50 >100 mg/l	Fish - *Oncorhynchus Mykiss*	96 hours
2-[2-(2-butoxyethoxy)ethoxy] ethanol	EC50 >500 mg/l	Aquatic plants	72 hours
	EC50 500 to 6600 mg/l	Daphnia	48 hours
2-(2-methoxyethoxy)ethanol	Acute EC50 >930 ppm Fresh water	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 7500 ppm Fresh water	Fish - *Lepomis macrochirus*	96 hours
2-(2-butoxyethoxy)ethanol	Acute LC50 1300 ppm Fresh water	Fish - *Lepomis macrochirus*	96 hours

Conclusion/Summary : Practically non-toxic to aquatic organisms.

12.2 Persistence and degradability

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
2-[2-(2-butoxyethoxy)ethoxy] ethanol	OECD 302B	100 % - 28 days	-	-
	OECD 301E	88 to 92 % - 28 days	-	-

Conclusion/Summary : This product is inherently biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] orthoborate	-	-	Readily
2-[2-(2-butoxyethoxy)ethoxy] ethanol	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Q8 Brake Fluid DOT 4 LV	1.5	-	Low
tris[2-[2-(2-methoxyethoxy) ethoxy]ethyl] orthoborate	<3	-	Low
2-[2-(2-butoxyethoxy)ethoxy] ethanol	0.51	<100	Low
2-(2-methoxyethoxy)ethanol	-0.47	-	Low
2-(2-butoxyethoxy)ethanol	1	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Low mobility in soil predicted, based on log Kow < 3.0.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

SECTION 13: Disposal considerations

Waste code	Waste designation
16 01 13*	brake fluids

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Q8 Brake Fluid DOT 4 LV	≥90	3
2-(2-methoxyethoxy)ethanol	≤1	54
2-(2-butoxyethoxy)ethanol	<1	55 [Consumer paint]

SECTION 15: Regulatory information

Labeling : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Denmark

Product registration number : 4117899

MAL-code : 5-3

Protection based on MAL : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 5-3
Application: When spraying in new* booths if the operator is outside the spray zone. During non-atomizing spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Air-supplied full mask must be worn.

When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents.

- Air-supplied full mask and coveralls must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

SECTION 15: Regulatory information

- Air-supplied full mask, arm protectors and apron must be worn.

During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, coveralls and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

Restrictions on use : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

Germany

Hazard class for water (WGK) : 1

Switzerland

VOC content : Exempt.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : All components are listed or exempted.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

SECTION 15: Regulatory information

Thailand : Not determined.

Turkey : All components are listed or exempted.

United States of America : All components are active or exempted.

Viet Nam : All components are listed or exempted.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM = American Society for Testing and Materials
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DIN = German Institute for Standardization
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EC = European Commission
EC50 = Half maximal effective concentration
EN = European Standard (Norm)
EUH statement = CLP-specific Hazard statement
GHS - Globally Harmonized System of Classification and Labeling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IC50 = Half maximal inhibitory concentration
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organisation
ISO = International Organization for Standardization
LC50 = Median lethal concentration
LD50 = Median lethal dose
LOAEL / LOAEC = Lowest Observed Adverse Effect Level / Concentration
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
NOAEL / NOAEC = No Observed Adverse Effect Level / Concentration
NOEL / NOEC = No Observed Effect Level / Concentration
OECD = Organisation for Economic Co-operation and Development
OEL = Occupational Exposure Limit
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS = Safety Data Sheet
SVHC = Substances of Very High Concern
STEL = Short Term Exposure Limit
TLV = Threshold Limit Value
TWA = Time Weighted Average
UFI = Unique Formula Identifier
UN = United Nations
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

SECTION 16: Other information

Classification	Justification
Repr. 2, H361fd	Calculation method

Full text of abbreviated H statements

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

Full text of classifications [CLP/GHS]

Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
Repr. 1B	TOXIC TO REPRODUCTION - Category 1B
Repr. 2	TOXIC TO REPRODUCTION - Category 2

Training advice : Ensure operatives are trained to minimise exposures.

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Notice to reader

The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.