

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : VatOil Brake Fluid DOT 4  
Product code : VW.10.01  
Type of product : Hydraulic Fluids  
Product group : Trade product

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Intended for general public  
Main use category : Industrial use, Professional use, Consumer use  
Use of the substance/mixture : Brake fluid

**1.2.2. Uses advised against**

No additional information available

**1.3. Details of the supplier of the safety data sheet**

VatOil  
Dollegoorweg 15  
NL 7602 EC Almelo  
Netherlands  
T 0031 (0)546 81 81 65  
[vib@vatoil.com](mailto:vib@vatoil.com)

**1.4. Emergency telephone number**

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Reproductive toxicity, Category 2 H361  
Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Suspected of damaging fertility or the unborn child.

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Warning

Contains :

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Hazard statements (CLP) :

H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements (CLP) :

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

P201 - Obtain special instructions before use.

P280 - Wear protective gloves, eye protection.

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

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

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

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	CAS-No.: 30989-05-0 EC-No.: 250-418-4 REACH-no: 01-2119462824-33	< 50	Repr. 2, H361d
2-[2-(2-butoxyethoxy)ethoxy]ethanol substance with a Community workplace exposure limit	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-2119475107-38	< 10	Eye Dam. 1, H318

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2'-oxydiethanol	CAS-No.: 111-46-6 EC-No.: 203-872-2 EC Index-No.: 603-140-00-6 REACH-no: 01-2119457857-21	< 10	Acute Tox. 4 (Oral), H302
2-(2-methoxyethoxy)ethanol	CAS-No.: 111-77-3 EC-No.: 203-906-6 EC Index-No.: 603-107-00-6 REACH-no: 01-2119475100-52	< 5	Repr. 1B, H360D
Dihydro-3-(tetrapropenyl)furan-2,5-dione	CAS-No.: 26544-38-7 EC-No.: 247-781-6 REACH-no: 01-2119979080-37	< 0,1	Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 4, H413

### Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
2-[2-(2-butoxyethoxy)ethoxy]ethanol	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-2119475107-38	(20 ≤ C < 30) Eye Irrit. 2, H319 (30 ≤ C < 100) Eye Dam. 1, H318
2-(2-methoxyethoxy)ethanol	CAS-No.: 111-77-3 EC-No.: 203-906-6 EC Index-No.: 603-107-00-6 REACH-no: 01-2119475100-52	(3 ≤ C ≤ 100) Repr. 1B, H360D
Dihydro-3-(tetrapropenyl)furan-2,5-dione	CAS-No.: 26544-38-7 EC-No.: 247-781-6 REACH-no: 01-2119979080-37	(0,1 ≤ C < 100) Skin Sens. 1A, H317

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Do NOT induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: May cause an allergic skin reaction. Redness.
Symptoms/effects after eye contact	: May cause eye irritation. Redness.

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Symptoms/effects after ingestion : Symptoms of ingestion include drowsiness, weakness, headache, dizziness, nausea, vomiting.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.  
Explosion hazard : No direct explosion hazard.  
Hazardous decomposition products in case of fire : Nitrogen oxides. Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.  
Absorb spillage to prevent material damage.

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".  
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.  
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Store locked up.
- Storage temperature : < 40 °C
- Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	50 mg/m <sup>3</sup>
	9 ppm

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**

Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

**Personal protective equipment:**

Wear recommended personal protective equipment.

**Personal protective equipment symbol(s):**



##### 8.2.2.1. Eye and face protection

**Eye protection:**

Safety glasses

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥0.35		EN ISO 374

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless to Amber.
Odour	: Faint. mild.
Odour threshold	: Not available
Melting point	: < -50 °C
Freezing point	: Not available
Boiling point	: > 230 °C
Flammability	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 100 °C
Auto-ignition temperature	: > 300 °C
Decomposition temperature	: > 300 °C
pH	: 7 – 11,5
Viscosity, kinematic	: 5 – 10 mm <sup>2</sup> /s @ 20°C
Solubility	: Water: Miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1,07 (Water = 1)
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Other properties : Material is hygroscopic

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 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 (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

2-(2-methoxyethoxy)ethanol (111-77-3)	
LD50 dermal rabbit	9404 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 6696 - 13212
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 oral	5170 mg/kg bodyweight
LD50 dermal rabbit	3540 mg/kg bodyweight Animal: rabbit, Animal sex: male, Remarks on results: other:, 95% CL: 1050 - 11800
LD50 dermal	3540 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 2400 mg/l

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

<b>2,2'-oxydiethanol (111-46-6)</b>	
LD50 dermal rabbit	> 13300 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 4,6 mg/l/4h
Skin corrosion/irritation	: Not classified pH: 7 – 11,5
<b>2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)</b>	
pH	7 Temp.: 20 °C Concentration: ]70 vol%,80 vol%] Remarks on result: 'other:'
Serious eye damage/irritation	: Not classified pH: 7 – 11,5
<b>2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)</b>	
pH	7 Temp.: 20 °C Concentration: ]70 vol%,80 vol%] Remarks on result: 'other:'
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
<b>2,2'-oxydiethanol (111-46-6)</b>	
NOAEL (chronic, oral, animal/male, 2 years)	1210 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (chronic, oral, animal/female, 2 years)	1160 mg/kg bodyweight Animal: rat, Animal sex: female
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
<b>2-(2-methoxyethoxy)ethanol (111-77-3)</b>	
LOAEL (oral, rat, 90 days)	1800 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Remarks on results: other:
NOAEC (inhalation, rat, vapour, 90 days)	> 1,06 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
<b>Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)</b>	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
<b>2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)</b>	
LOAEL (oral, rat, 90 days)	1200 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	4000 mg/kg bodyweight Animal: rat, Guideline: other:
<b>2,2'-oxydiethanol (111-46-6)</b>	
LOAEL (oral, rat, 90 days)	40000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
Aspiration hazard	: Not classified
<b>VatOil Brake Fluid DOT 4</b>	
Viscosity, kinematic	5 – 10 mm <sup>2</sup> /s @ 20°C
<b>Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)</b>	
Viscosity, kinematic	0,428 mm <sup>2</sup> /s



# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)

Viscosity, kinematic 16,2 mm<sup>2</sup>/s @20°C

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

Viscosity, kinematic 9,2 mm<sup>2</sup>/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm<sup>2</sup>/s)' Remarks on result: 'other:'

## 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

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

LC50 - Fish [1] 5741 mg/l Test organisms (species): Pimephales promelas

EC50 - Crustacea [1] 1192 mg/l Test organisms (species): Daphnia magna

EC50 96h - Algae [1] > 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

### Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)

LC50 - Fish [1] > 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)

EC50 96h - Algae [1] 110 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

### Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)

LC50 - Fish [1] 222,2 mg/l

EC50 - Crustacea [1] 211,2 mg/l

EC50 72h - Algae [1] 224,2 mg/l

NOEC chronic algae 224,2 mg/l

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

LC50 - Fish [1] 2200 – 4600 mg/l Test organisms (species): Leuciscus idus

LC50 - Fish [2] 2400 mg/l Test organisms (species): Pimephales promelas

EC50 - Crustacea [1] > 500 mg/l (Daphnia magna, 48h)

EC50 - Other aquatic organisms [1] > 5000 mg/l (Microorganisms, 16 h)

EC50 - Other aquatic organisms [2] > 500 mg/l

EC50 72h - Algae [1] 1589 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

EC50 72h - Algae [2] 3211 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

ErC50 other aquatic plants 2490 mg/l (Selenastrum capricornutum, 72h)

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2,2'-oxydiethanol (111-46-6)	
LC50 - Fish [1]	75200 mg/l Test organisms (species): Pimephales promelas
EC50 96h - Algae [1]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	9362 mg/l Test organisms (species): other:
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

### 12.2. Persistence and degradability

VatOil Brake Fluid DOT 4	
Persistence and degradability	Rapidly degradable
2-(2-methoxyethoxy)ethanol (111-77-3)	
Persistence and degradability	Rapidly degradable
Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Persistence and degradability	Rapidly degradable
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Persistence and degradability	Not rapidly degradable
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Persistence and degradability	Rapidly degradable
Biodegradation	85 % [28d, OECD 301 D]
2,2'-oxydiethanol (111-46-6)	
Persistence and degradability	Rapidly degradable

### 12.3. Bioaccumulative potential

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Partition coefficient n-octanol/water (Log Pow)	1 @20°C
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Partition coefficient n-octanol/water (Log Pow)	0,51
2,2'-oxydiethanol (111-46-6)	
Partition coefficient n-octanol/water (Log Pow)	-1,98

### 12.4. Mobility in soil

2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Surface tension	0,0612 N/m
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	≈ 10

### 12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Component

Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII | 2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)

### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.  
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Disposal must be done according to official regulations.  
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.  
Additional information : Do not re-use empty containers.  
European List of Waste (LoW, EC 2000/532) : 16 01 13\* - brake fluids  
HP Code : HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not regulated for transport				
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Inland waterway transport

Not regulated

### Rail transport

Not regulated

### 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

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	VatOil Brake Fluid DOT 4 ; 2-(2-methoxyethoxy)ethanol ; Dihydro-3-(tetrapropenyl)furan-2,5-dione ; Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate ; 2-[2-(2-butoxyethoxy)ethoxy]ethanol ; 2,2'-oxydiethanol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Dihydro-3-(tetrapropenyl)furan-2,5-dione	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
54.	2-(2-methoxyethoxy)ethanol	2-(2-methoxyethoxy)ethanol (DEGME)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

##### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

##### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

##### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

##### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

##### Biocide Regulation (528/2012)

Child-resistant fastening : Not applicable  
Tactile warning : Applicable

##### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

No additional information available

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Type of product	Added	
1.1	Trade name	Modified	
1.2	Function or use category	Removed	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.2	Symptoms/effects after inhalation	Added	
5.2	Explosion hazard	Added	
5.2	Fire hazard	Modified	
5.2	Hazardous decomposition products in case of fire	Modified	
5.3	Firefighting instructions	Added	
6.1	Emergency procedures	Added	
6.1	Protective equipment	Added	
6.1	General measures	Added	
6.3	For containment	Added	
7.1	Additional hazards when processed	Added	
7.2	Technical measures	Added	
7.2	Packaging materials	Added	
7.2	Storage conditions	Modified	
8	Generic OEL data	Removed	
8.2	Personal protective equipment	Added	
9.1	Flash point	Modified	
9.1	Boiling point	Modified	
10.3	Possibility of hazardous reactions	Modified	
13.1	Waste disposal recommendations	Added	
13.1	Sewage disposal recommendations	Added	
13.1	Additional information	Added	

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Indication of changes			
Section	Changed item	Change	Comments
13.1	Regional waste regulation	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

# VatOil Brake Fluid DOT 4

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
EUH208	Contains Dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H413	May cause long lasting harmful effects to aquatic life.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A

Safety Data Sheet (SDS), EU

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.