



Putoline DOT 4 Brake Fluid

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3-7-2018 Revision date: 20-6-2025 Supersedes version of: 21-6-2024 Version: 3.3

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

1.1. Product identifier

Product form : Mixture
Trade name : Putoline DOT 4 Brake Fluid
UFI : 4UJY-A839-Q00Q-T20F
Product code : PW.30.00
Type of product : Hydraulic Fluids
Product group : Trade product

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

Relevant identified uses

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

1.3. Details of the supplier of the safety data sheet

Putoline Oil
Dollegoorweg 15
NL 7602 EC Almelo
Netherlands
T 0031 (0)546 81 81 65
vib@putoline.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.

2.2. Label elements

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

Hazard pictograms (CLP)



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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, protective clothing, 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

3.2. 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	< 80	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	< 20	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	< 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

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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	: Wash skin with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. If swallowed, rinse mouth with water (only if the person is conscious). 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	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

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	: Toxic fumes may be released.

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.
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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.

For non-emergency personnel

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

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.
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 : Keep container tightly closed. Store locked up.
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

National occupational exposure and biological limit values

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

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	50 mg/m ³
	9 ppm

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Eye protection

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

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

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

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	: dark orange.
Appearance	: clear.
Odour	: characteristic.
Odour threshold	: Not available

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Melting point	: < -50 °C
Freezing point	: Not available
Boiling point	: > 260 °C
Flammability	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 7 – 10,5
Viscosity, kinematic	: 15 mm²/s @20°C
Solubility	: Water: completely miscible
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: < 0,1 mPa
Vapour pressure at 50°C	: Not available
Density	: 1,02 – 1,09 kg/l @ 20°C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

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-(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

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2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
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
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-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
Skin corrosion/irritation	: Not classified pH: 7 – 10,5
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
pH	7 Temp.: 20 °C Concentration:]70 vol%,80 vol%] Remarks on result: 'other:'
Serious eye damage/irritation	: Not classified pH: 7 – 10,5
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
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
Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
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:
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight/day
2-(2-methoxyethoxy)ethanol (111-77-3)	
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)
Aspiration hazard	: Not classified
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Viscosity, kinematic	15 mm²/s @20°C

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

Viscosity, kinematic	9,2 mm²/s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm²/s)' Remarks on result: 'other:'
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Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)

Viscosity, kinematic	0,428 mm²/s
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Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)

Viscosity, kinematic	16,2 mm²/s @20°C
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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-(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)

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-methoxyethoxy)ethanol (111-77-3)

LC50 - Fish [1]	5741 mg/l Test organisms (species): Pimephales promelas
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2-(2-methoxyethoxy)ethanol (111-77-3)	
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)

12.2. Persistence and degradability

Putoline DOT 4 Brake Fluid	
Persistence and degradability	Rapidly degradable
Biodegradation	> 70 % (OECD 308 method)

2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Persistence and degradability	Readily biodegradable.
Biodegradation	85 % [28d, OECD 301 D]

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Persistence and degradability	Not rapidly degradable
Biodegradation	9,9 % 28 days (OECD 301D method)

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Persistence and degradability	Rapidly degradable
Biodegradation	> 80 % (OECD TG 301 A study)

2-(2-methoxyethoxy)ethanol (111-77-3)	
Persistence and degradability	Rapidly degradable
Biodegradation	> 75 %

12.3. Bioaccumulative potential

2-[2-(2-butoxyethoxy)ethoxy]ethanol (143-22-6)	
Partition coefficient n-octanol/water (Log Pow)	0,51

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Partition coefficient n-octanol/water (Log Pow)	1 @20°C

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

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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
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
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

Inland waterway transport

Not regulated

Rail transport

Not regulated

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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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Putoline DOT 4 Brake Fluid ; 2-[2-(2-butoxyethoxy)ethoxy]ethanol ; Dihydro-3-(tetrapropenyl)furan-2,5-dione ; Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate ; 2-(2-methoxyethoxy)ethanol	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 (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Biocide Regulation (528/2012)

Child-resistant fastening : Not applicable
Tactile warning : Applicable

Explosives Precursors Regulation (EU 2019/1148)

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

Drug Precursors Regulation (EC 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)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
4.1	First-aid measures for first aider	Added
4.2	Symptoms/effects after inhalation	Modified
9	Flash point	Removed
16	Abbreviations and acronyms	Modified

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
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)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
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
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration

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Abbreviations and acronyms:	
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A
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.
EUH208	Contains Dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.

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.