ENGINE FLUSH

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: 1032B
Issue date: 18-12-14 Revision date: 01-09-26 Supersedes version of: 12-06-24 Version: 4.0

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

1.1. Product identifier

Product form : Mixture
Product name : ENGINE FLUSH
UFI : 8XUW-SA9W-1PK0-VAVN
Product code : 1032B # 731032BR1
Type of product : Detergent

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 : Consumer use
Function or use category : Cleaning/washing agents and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Distributor
SADAPS BARDAHL Additives & Lubricants
ZI TOURNAI OUEST 2 - RUE DU MONT DES CARLIERS, 3
7522 TOURNAI
BELGIQUE
T +32 (0).69.59.03.60, F +32 (0).69.59.03.61
msds@bardahlfrance.com, www.bardahl.be

Supplier
SADAPS BARDAHL Additives & Lubricants
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msds@bardahlfrance.com, www.bardahl.be

1.4. Emergency telephone number

Emergency number : + 32 (0)70.245.245 / +33 (0)1.45.42.59.59

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	112 +356 2545 6508	
Saudi Arabia	Poison Control Center-Riyadh	General Directorate of Health Affairs Medial Province	+966 112324180 +966 112324189	
United Arab Emirates	Health Authority – Abu Dhabi (HAAD) Poison & Drug Information Center (PDIC)	P.O. Box 5674	+ 800-424	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Aspiration hazard, Category 1 H304

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) : Danger

Contains : Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

Hazard statements (CLP) : H304 - May be fatal if swallowed and enters airways.

Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P262 - Do not get in eyes, on skin, or on clothing.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor.
P331 - Do NOT induce vomiting.
P405 - Store locked up.
P501 - Dispose of contents/container to a hazardous or special waste collection point.

EUH-statements : EUH066 - Repeated exposure may cause skin dryness or cracking.

Child-resistant fastening : Applicable

Tactile warning : Applicable

2.3. Other hazards

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

Component	
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	PBT: not yet assessed vPvB: not yet assessed
triphenyl phosphite (101-02-0)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII vPvB: not yet assessed
O,O,O-triphenyl phosphorothioate (597-82-0)	This substance meets the PBT criteria of REACH regulation, annex XIII vPvB: not yet assessed

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]
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics substance with national workplace exposure limit(s) (FR)	EC-No.: 918-481-9 REACH-no: 01-2119457273-39	80-100	Asp. Tox. 1, H304 EUH066
(2-methoxymethylethoxy)propanol substance with national workplace exposure limit(s) (AT, BE, DE, DK, ES, FI, FR, GB, HU, IE, IT, LV, NL, PL, RO, SE); substance with a Community workplace exposure limit	CAS-No.: 34590-94-8 EC-No.: 252-104-2 REACH-no: 01-2119450011-60	3 - 6	Not classified
2-butoxyethanol substance with national workplace exposure limit(s) (BE, NL)	CAS-No.: 111-76-2 EC-No.: 203-905-0 EC Index-No.: 603-014-00-0 REACH-no: 01-2119475108-36	<0,5	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 3 (Inhalation), H331 (ATE=3 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319
oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1)	CAS-No.: 34140-91-5 EC-No.: 251-846-4 REACH-no: 01-2119974119-29	<0,1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411

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 : Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Remove contaminated clothes. Wash skin with plenty of water. Wash contaminated clothing before reuse.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects : May be fatal if swallowed and enters airways.

Symptoms/effects after inhalation : May be fatal if swallowed and enters airways.

Symptoms/effects after skin contact : Repeated exposure may cause skin dryness or cracking.

Symptoms/effects after ingestion : May be fatal if swallowed and enters airways.

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 : Carbon dioxide. Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Prevent liquid from entering sewers, watercourses, underground or low areas.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Eliminate every possible source of ignition. Ensure adequate ventilation, especially in confined areas. Keep public away from danger area. Equip cleanup crew with proper protection.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Dike for recovery or absorb with appropriate material. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Recover the product with absorbent material.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not eat, drink or smoke when using this product.
Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation.
Storage conditions : Store in a closed container. Keep out of frost.
Heat and ignition sources : Keep away from naked flames/heat. Keep away from ignition sources.
Storage area : Store in a dry place. Store in a well-ventilated place.
Special rules on packaging : Store in 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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
France - Occupational Exposure Limits	
VLEP 8h (OEL TWA)	1200 mg/m³
	184 ppm

Hydrocarbons, C10, aromatics, <1% naphtalene; (64742-94-5)	
France - Occupational Exposure Limits	
VLEP 8h (OEL TWA)	100 mg/m³
	17 ppm

2-butoxyethanol (111-76-2)	
Belgium - Occupational Exposure Limits	
OEL TWA	98 mg/m³
	20 ppm
OEL STEL	246 mg/m³
	50 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	100 mg/m³
	20,4 ppm
TGG-15min (OEL STEL)	246 mg/m³
	50 ppm

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³
OEL STEL	10 mg/m³
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	5 mg/m³
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	5 mg/m³
Denmark - Occupational Exposure Limits	
8-timers grænseværdi (OEL TWA)	1 mg/m³
Korttidsgrænseværdi (OEL STEL)*	2 mg/m³
Estonia - Occupational Exposure Limits	
OEL TWA	5 mg/m³

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	5 mg/m³
France - Occupational Exposure Limits	
VLEP 8h (OEL TWA)	5 mg/m³
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	5 mg/m³
Greece - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Italy - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	1 mg/m³
TPRV (OEL STEL)	3 mg/m³
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	5 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	5 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Romania - Occupational Exposure Limits	
OEL TWA	5 mg/m³
OEL STEL	10 mg/m³
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	1 mg/m³
	5 ppm
NPHV (OEL STEL)	3 mg/m³
	15 ppm
Slovenia - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 mg/m³
VLA-EC (OEL STEL)	10 mg/m³

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³
KGV (OEL STEL)	3 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5 mg/m³
WEL STEL (OEL STEL)*	15 mg/m³
Iceland - Occupational Exposure Limits	
OEL TWA	1 mg/m³
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	50 mg/m³
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³

mineral oil	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³

naphthalene (91-20-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Naphthalene
IOEL TWA	50 mg/m³
	10 ppm
Remark	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	50 mg/m³
	10 ppm
Belgium - Occupational Exposure Limits	
Local name	Naphtalène # Naftaleen
OEL TWA	53 mg/m³
	10 ppm
OEL STEL	80 mg/m³
	15 ppm
Remark	D: la mention “D” signifie que la résorption de l’agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l’exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l’agent dans l’air. # D: de vermelding “D” betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 21/01/2020
Denmark - Occupational Exposure Limits	
8-timers grænseværdi (OEL TWA)	50 mg/m³

naphthalene (91-20-3)	
	10 ppm
Korttidsgrænseværdi (OEL STEL)	100 mg/m³
	20 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	5 mg/m³
	1 ppm
HTP (OEL STEL)	10 mg/m³
	2 ppm
France - Occupational Exposure Limits	
Local name	Naphtalène
VLEP 8h (OEL TWA)	50 mg/m³
	10 ppm
Remark	Valeurs recommandées/admises; substance classée cancérogène de catégorie 2
Regulatory reference	Circulaire du Ministère du travail (réf.: INRS ED 984, 2016)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	2 mg/m³
	0,4 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	50 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	10 ppm
OEL STEL	75 mg/m³
	15 ppm
Italy - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	10 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	10 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	50 mg/m³
TGG-15min (OEL STEL)	80 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	20 mg/m³
NDSCh (OEL STEL)	50 mg/m³
Romania - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	9,5 ppm

naphthalene (91-20-3)	
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	53 mg/m³
	10 ppm
VLA-EC (OEL STEL)	80 mg/m³
	15 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	50 mg/m³
	10 ppm
KGV (OEL STEL)	80 mg/m³
	15 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	53 mg/m³
	10 ppm
WEL STEL (OEL STEL)	80 mg/m³
	15 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	50 mg/m³
	10 ppm
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	50 mg/m³
	10 ppm

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³ (8h; UE Valeurs limites d'exposition professionnelle (Europe).)
IOEL STEL	10 mg/m³ (15min; UE Valeurs limites d'exposition professionnelle (Europe).)
Belgium - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (8h; mist; Valeurs Limites (Belgique, 5/2021).)
OEL STEL	10 mg/m³ (15min; mist; Valeurs Limites (Belgique, 5/2021).)
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (8h; Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003.)
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	5 mg/m³ (8h; aerosol; Government regulation of Czech Republic PEL/NPK-P (République Tchèque, 5/2021).)
NPK-P (OEL C)	10 mg/m³ (15min; aerosol; Government regulation of Czech Republic PEL/NPK-P (République Tchèque, 5/2021).)
Denmark - Occupational Exposure Limits	
8-timers grænseværdi (OEL TWA)	1 mg/m³ (8h; mist and particles; Working Environment Authority (Danemark, 11/2021).)
Korttidsgrænseværdi (OEL STEL)*	2 mg/m³ (8h; mist and particles; Working Environment Authority (Danemark, 11/2021).)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	5 mg/m³ (8h; mist; Institute of Occupational Health, Ministry of Social Affairs (Finlande, 10/2021).)
Greece - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (8h; mist; Ministry of Labour and Social Affairs (Grèce, 9/2021).)
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³ (8h; mist; 5/2020. (II. 6.) ITM Decree (Hongrie, 2/2020).)
Ireland - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (8h; Ministers Cabinet Regulations Nr.325 - AER (Lettonie, 2/2021).)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	1 mg/m³ (8h; mist; Lithuanian Hygiene Standard HN 23 (Lituanie, 1/2021).)
TPRV (OEL STEL)	3 mg/m³ (15min; mist; Lithuanian Hygiene Standard HN 23 (Lituanie, 1/2021).)
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	5 mg/m³ (8h; mist; Ministry of Social Affairs and Employment, Legal limit values (Pays-Bas, 7/2021).)
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	5 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Romania - Occupational Exposure Limits	
OEL TWA	5 mg/m³ (8h; HG 1218/2006 with subsequent modifications and additions (Roumanie, 3/2021).)
OEL STEL	10 mg/m³ (15 min; HG 1218/2006 with subsequent modifications and additions (Roumanie, 3/2021).)
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	1 mg/m³ ((mineral oils) ; 8h; liquid aerosol, fumes; Government regulation SR c. 355/2006 (Slovaquie, 9/2020).)
	5 ppm ((mineral oils) ; 8h ; liquid aerosol, fumes; Government regulation SR c. 355/2006 (Slovaquie, 9/2020).)
NPHV (OEL STEL)	3 mg/m³ ((mineral oils) ; 15min; liquid aerosol, fumes; Government regulation SR c. 355/2006 (Slovaquie, 9/2020).)
	15 ppm ((mineral oils) ; 15min; liquid aerosol, fumes; Government regulation SR c. 355/2006 (Slovaquie, 9/2020).)
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 mg/m³ (8h; mist; National institute of occupational safety and health (Espagne, 4/2021).)
VLA-EC (OEL STEL)	10 mg/m³ (15min; mist; National institute of occupational safety and health (Espagne, 4/2021).)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	1 mg/m³ (8h; mist and fume; Work environment authority Regulation 2018:1 (Suède, 9/2021).)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
KGV (OEL STEL)	3 mg/m³ (15 min; mist and fume; Work environment authority Regulation 2018:1 (Suède, 9/2021).)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5 mg/m³ (8h; UE Valeurs limites d'exposition professionnelle (Europe).)
WEL STEL (OEL STEL)	10 mg/m³ (15 min; UE Valeurs limites d'exposition professionnelle (Europe).)
Iceland - Occupational Exposure Limits	
OEL TWA	1 mg/m³ (8h; particulates; Ministry of Welfare, List of Exposure Limits (Islande, 5/2021).)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	1 mg/m³ (8h; mineral oil particles ; FOR-2011-12-06-1358 (Norvège, 6/2021).)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	5 mg/m³

2-ethylhexan-1-ol (104-76-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-ethylhexan-1-ol
IOEL TWA	5,4 mg/m³
	1 ppm
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	5,4 mg/m³
	1 ppm
MAK (OEL STEL)	10,8 mg/m³
	2 ppm
Belgium - Occupational Exposure Limits	
Local name	2-Ethylhexan-1-ol # Ethylhexaan-1-ol
OEL TWA	5,4 mg/m³
	1 ppm
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Denmark - Occupational Exposure Limits	
8-timers grænseværdi (OEL TWA)	5,4 mg/m³
	1 ppm
Korttidsgrænseværdi (OEL STEL)	10,8 mg/m³
	2 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	5,4 mg/m³
	1 ppm
France - Occupational Exposure Limits	
Local name	2-Ethylhexan-1-ol
VLEP 8h (OEL TWA)	5,4 mg/m³
	1 ppm

2-ethylhexan-1-ol (104-76-7)	
Remark	Valeurs réglementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 6443, 2022; Outil65; Arrête du 27 septembre 2019)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	54 mg/m³
	10 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5,4 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	5,4 mg/m³
	1 ppm
Italy - Occupational Exposure Limits	
OEL TWA	5,4 mg/m³
	1 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	5,4 mg/m³
	1 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	5,4 mg/m³
	1 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	5,4 mg/m³
	1 ppm
NDSCh (OEL STEL)	10,8 mg/m³
	2 ppm
Romania - Occupational Exposure Limits	
OEL TWA	5,4 mg/m³
	1 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5,4 mg/m³
	1 ppm
VLA-EC (OEL STEL)	110 mg/m³
	20 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	5,4 mg/m³
	1 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	5,4 mg/m³
	1 ppm

2-ethylhexan-1-ol (104-76-7)	
WEL STEL (OEL STEL)*	16,2 mg/m³
	3 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	5,4 mg/m³
	1 ppm
Korttidsverdi (OEL STEL)	54 mg/m³
	10 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	5,4 mg/m³
	1 ppm
KZGW (OEL STEL)	10,8 mg/m³
	2 ppm

(2-methoxymethylethoxy)propanol (34590-94-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	(2-Methoxymethylethoxy)-propanol
IOEL TWA	308
	50 ppm
Remark	Skin
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	307 mg/m³
	50 ppm
MAK (OEL STEL)	614 mg/m³
	100 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Denmark - Occupational Exposure Limits	
8-timers grænseværdi (OEL TWA)	309 mg/m³
	50 ppm
Korttidsgrænseværdi (OEL STEL)	618 mg/m³
	100 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	310 mg/m³
	50 ppm
France - Occupational Exposure Limits	
Local name	(2-méthoxyméthyléthoxy)-propanol
VLEP 8h (OEL TWA)	308 mg/m³
	50 ppm
Remark	Valeurs règlementaires contraignantes; risque de pénétration percutanée

(2-methoxymethylethoxy)propanol (34590-94-8)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	310 mg/m³
	50 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	308 mg/m³
CK (OEL STEL)	308 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Italy - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	300 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m³
NDSCh (OEL STEL)	280 mg/m³
Romania - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	308 mg/m³
	50 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	300 mg/m³
	50 ppm
KGV (OEL STEL)	450 mg/m³
	75 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	308 mg/m³
	50 ppm
WEL STEL (OEL STEL)*	924 mg/m³
	150 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	300 mg/m³
	50 ppm

(2-methoxymethylethoxy)propanol (34590-94-8)	
KZGW (OEL STEL)	300 mg/m³
	50 ppm
USA - ACGIH® - Threshold Limit Values	
ACGIH® TLV® TWA	600 mg/m³
	100 ppm
ACGIH® TLV® STEL	900 mg/m³
	150 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

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Safety glasses. ISO 16321-1

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Gloves. ISO 374-1

8.2.2.3. Respiratory protection

Respiratory protection:
Good ventilation of the workplace required

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Yellow.
Appearance	:	clear.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	63,5 °C (NF EN ISO 3679)
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	< 20,5 mm²/s
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	0,794 – 0,809 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Heat. Open flame. Sparks. Water, humidity. Freezing.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat (Vapours)	> 5 mg/l/4h

Hydrocarbons, C10, aromatics, <1% naphtalene; (64742-94-5)	
LD50 oral rat	≈ 6318 mg/kg bodyweight
LD50 oral	> 10000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight
LD50 dermal	> 3160 mg/kg
LC50 Inhalation - Rat	> 4688 mg/m³

2-butoxyethanol (111-76-2)	
LD50 oral	1200 mg/kg Guinea pig
LD50 dermal	> 2000 mg/kg Guinea pig
LC50 Inhalation - Rat (Vapours)	3 mg/l/4h

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat	> 5,53 mg/l/4h

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	
LD50 oral rat	3100 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight

mineral oil	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 5 mg/l/4h

oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1) (34140-91-5)	
LD50 oral rat	2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: other:

triphenyl phosphite (101-02-0)	
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: other:

naphthalene (91-20-3)	
LD50 oral	490 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LD50 dermal	> 2500 mg/kg
LC50 Inhalation - Rat	> 340 mg/m³

Distillates (petroleum), solvent-dewaxed heavy paraffinic Baseoil (64742-65-0)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Vapours)	5,53 mg/l/4h (OCDE 403)

2-ethylhexan-1-ol (104-76-7)	
LD50 oral rat	≈ 2047 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 3000 mg/kg (OECD 402 method)
LC50 Inhalation - Rat	0,89 – 5,3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

O,O,O-triphenyl phosphorothioate (597-82-0)	
LD50 oral rat	> 10000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))

(2-methoxymethylethoxy)propanol (34590-94-8)	
LD50 oral rat	8740 mg/kg
LD50 dermal rabbit	9510 mg/kg
LC50 Inhalation - Rat	3404,47 mg/l

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

2-ethylhexan-1-ol (104-76-7)	
NOAEL (chronic, oral, animal/male, 2 years)	500 mg/kg bodyweight (OECD 451 method)
NOAEL (chronic, oral, animal/female, 2 years)	500 mg/kg bodyweight (OECD 451 method)

Reproductive toxicity : Not classified

O,O,O-triphenyl phosphorothioate (597-82-0)	
NOAEL (animal/male, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test), Guideline: other:
NOAEL (animal/female, F0/P)	1000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test), Guideline: other:
NOAEL (animal/male, F1)	300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test), Guideline: other:

O,O,O-triphenyl phosphorothioate (597-82-0)	
NOAEL (animal/female, F1)	1000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test), Guideline: other:

STOT-single exposure : Not classified

Hydrocarbons, C10, aromatics, <1% naphtalene; (64742-94-5)	
STOT-single exposure	May cause drowsiness or dizziness.

2-ethylhexan-1-ol (104-76-7)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0,98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1) (34140-91-5)	
LOAEL (oral, rat, 90 days)	20 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)), Guideline: other:
NOAEL (oral, rat, 90 days)	0,4 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral)), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (subchronic, oral, animal/male, 90 days)	1 mg/kg bodyweight
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

triphenyl phosphite (101-02-0)	
NOAEL (oral, rat, 90 days)	15 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Distillates (petroleum), solvent-dewaxed heavy paraffinic Baseoil (64742-65-0)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 1000 mg/kg bodyweight/day Animal : rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0,98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	> 0,98 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

2-ethylhexan-1-ol (104-76-7)	
NOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

2-ethylhexan-1-ol (104-76-7)	
NOAEC (inhalation, rat, gas, 90 days)	120 ppm Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : May be fatal if swallowed and enters airways.

ENGINE FLUSH	
Viscosity, kinematic	< 20,5 mm²/s

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
Viscosity, kinematic	1,3 mm²/s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

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

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
LC50 - Fish [1]	> 1000 mg/l
EC50 - Crustacea [1]	> 1000 mg/l Daphnia Magna
EC50 72h - Algae [1]	> 1000 mg/l Pseudokirchnerella subcapitata
NOEC chronic algae	1000 mg/l Pseudokirchnerella subcapitata

Hydrocarbons, C10, aromatics, <1% naphtalene; (64742-94-5)	
LC50 - Fish [1]	2 mg/l
EC50 - Crustacea [1]	3 mg/l
EC50 72h - Algae [1]	1 – 3 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	0,44 mg/l (Oncorhynchus mykiss - QSAR Petrotox)
NOEC chronic crustacea	0,77 mg/l (Daphnia magna - QSAR Petrotox)
NOEC chronic algae	1 mg/l Pseudokirchneriella subcapitata - OECD 201

2-butoxyethanol (111-76-2)	
LC50 - Fish [1]	> 100 mg/l (OCDE N° 203)Rainbow trout
EC50 - Crustacea [1]	> 100 mg/l (OCDE N°202)Daphnia magna (Water flea)
EC50 72h - Algae [1]	> 100 mg/l (OCDE N° 201) Pseudokirchneriella subcapitata
NOEC chronic fish	> 100 mg/l (OCDE N° 204)Brachydanio rerio (zebra-fish)
NOEC chronic crustacea	100 mg/l (OCDE N°211) Daphnia magna (Water flea)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [2]	> 10000 mg/l Daphnia magna
NOEC chronic fish	1000 mg/l Oncorhynchus mykiss
NOEC chronic crustacea	10 mg/l Daphnia magna (OCDE 211)

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
NOEC chronic algae	≥ 100 mg/l Pseudokirchneriella subcapitata

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	
LC50 - Fish [1]	4,4 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	75 mg/l Daphnia magna ; 2 days
EC50 72h - Algae [1]	410 mg/l Scenedesmus quadricauda ; 3 days
NOEC chronic crustacea	0,4 mg/l (Daphnia magna), 21 d
NOEC chronic algae	220 mg/l Scenedesmus quadricauda; 3 days

mineral oil	
LC50 - Fish [1]	> 100 mg/l (Pimephales promelas)
EC50 - Crustacea [1]	> 10000 mg/l (Daphnia magma)
EC50 72h - Algae [1]	> 100 mg/l (Scenedesmus quadricauda)
NOEC chronic crustacea	> 10 mg/l (Daphnia magma) ; 21 days

oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1) (34140-91-5)	
LC50 - Fish [1]	0,95 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	1,4 mg/l
EC50 72h - Algae [1]	0,006 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0,00473 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
NOEC (acute)	993,2 mg/kg

triphenyl phosphite (101-02-0)	
LC50 - Fish [1]	> 12 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0,94 mg/l (Daphnia magna)

naphthalene (91-20-3)	
LC50 - Fish [2]	≥ 2350 µg/l 48 hours
EC50 - Crustacea [1]	1,96 mg/l 48 hours

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LC50 - Fish [1]	> 100 mg/l (Pimephales promelas)
EC50 - Crustacea [1]	> 10000 mg/l (Daphnia magna)
NOEC chronic fish	1000 mg/l (Oncorhynchus mykiss) - 14 d
NOEC chronic crustacea	≈ 10 mg/l (Daphnia magna) - 21 d
NOEC chronic algae	≥ 100 mg/l (Pseudokirchneriella subcapitata) - 72h

2-ethylhexan-1-ol (104-76-7)	
LC50 - Fish [1]	17,1 mg/l Test organisms (species): Leuciscus idus melanotus
LC50 - Fish [2]	28,2 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	39 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	11,5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

2-ethylhexan-1-ol (104-76-7)	
EC50 72h - Algae [2]	16,6 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

O,O,O-triphenyl phosphorothioate (597-82-0)	
LC50 - Fish [1]	> 100 mg/l OCDE 203
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
ErC50 algae	> 100 mg/l OCDE 201
NOEC chronic fish	0,0017 mg/l 97d
NOEC chronic crustacea	> 0,000724 mg/l 21d (Daphnia magna)

(2-methoxymethylethoxy)propanol (34590-94-8)	
LC50 - Fish [1]	> 1000 mg/l Poecilia reticulata (Guppy)
EC50 - Crustacea [1]	1919 mg/l Daphnia magna
ErC50 algae	> 969 mg/l Pseudokirchneriella subcapitata
LOEC (chronic)	0,5 mg/l 22 d, Daphnia magna
NOEC chronic crustacea	0,5 mg/l 22 d, Daphnia magna

12.2. Persistence and degradability

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	
Biodegradation	80 % 28 days

Hydrocarbons, C10, aromatics, <1% naphtalene; (64742-94-5)	
Biodegradation	49,6 % 28 jours

2-butoxyethanol (111-76-2)	
Persistence and degradability	Readily biodegradable.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Biodegradation	31 % (28d) (OCDE 301F)

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	
Persistence and degradability	Not readily biodegradable. (OECD 301D method). <5 % biodegradation 28 days.

mineral oil	
Persistence and degradability	Not readily biodegradable. (OECD 301B method). 31 % biodegradation 28 days.

oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1) (34140-91-5)	
Persistence and degradability	Readily biodegradable.
Biodegradation	61 % 28 days

triphenyl phosphite (101-02-0)	
Biodegradation	0,14 % OECD TG 301 D

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
Biodegradation	31 % 28d - not readily biodegradable

O,O,O-triphenyl phosphorothioate (597-82-0)	
Biodegradation	19,3 % 29d

(2-methoxymethylethoxy)propanol (34590-94-8)	
Persistence and degradability	Readily biodegradable.
Biodegradation	75 % 28 days

12.3. Bioaccumulative potential

2-butoxyethanol (111-76-2)	
Partition coefficient n-octanol/water (Log Kow)	0,81 (20 °C)
Bioaccumulative potential	not bioaccumulable.

Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate) (4259-15-8)	
Partition coefficient n-octanol/water (Log Kow)	3,6

oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1) (34140-91-5)	
Bioconcentration factor (BCF REACH)	70,8
Partition coefficient n-octanol/water (Log Kow)	32,91

triphenyl phosphite (101-02-0)	
Partition coefficient n-octanol/water (Log Kow)	6,62 (25°C)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
Partition coefficient n-octanol/water (Log Pow)	3,9 – 6

2-ethylhexan-1-ol (104-76-7)	
Partition coefficient n-octanol/water (Log Kow)	2,9 (OECD 117 method)

(2-methoxymethylethoxy)propanol (34590-94-8)	
Partition coefficient n-octanol/water (Log Pow)	0,006

12.4. Mobility in soil

2-butoxyethanol (111-76-2)	
Surface tension	65 mN/m (20 °C)
Ecology - soil	In water, material soluble.

2-ethylhexan-1-ol (104-76-7)	
Surface tension	47 mN/m (OECD 115 method)

(2-methoxymethylethoxy)propanol (34590-94-8)	
Ecology - soil	In water, material soluble.

12.5. Results of PBT and vPvB assessment

No additional information available

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

Waste treatment methods : Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Sewage disposal recommendations : Do not discharge into drains or the environment.

Product/Packaging disposal recommendations : Collect all waste in suitable and labelled containers and dispose according to local legislation.

Additional information : Empty the packaging completely prior to disposal. Do not re-use empty containers.

Ecological waste information : Do not discharge the product into the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name			
Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)			
Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group			
Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards			
Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available			

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Rail transport
Not applicable

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**
3(b)	ENGINE FLUSH ; Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics ; 2-butoxyethanol ; oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1)
3(c)	oleic acid, compound with (Z)-N-octadec-9-enylpropane-1,3-diamine (2:1)

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List < 0.1% or SCL.

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)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)
Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Detergent Regulation (EC 648/2004)

Labelling of contents	
Component	**%**
aliphatic hydrocarbons	≥30%
aromatic hydrocarbons	<5%

Seveso Directive (Disaster Risk Reduction)

Not 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)

15.1.2. National regulations

Austria

Ordinance on Flammable Liquids (VbF) : Auto detect

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Override matching entry (12. BImSchV) : Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

SZW List of Carcinogenic Substances : None of the components are listed
SZW List of Mutagenic Substances : None of the components are listed
SZW List of Reprotoxic Substances – Breastfeeding : None of the components are listed
SZW List of Reprotoxic Substances – Fertility : None of the components are listed
SZW List of Reprotoxic Substances – Development : None of the components are listed

Denmark

Class for fire hazard : Class III-1
Store unit : 50 liter
Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with it.
If an employee is pregnant or breastfeeding and the person in question uses or is exposed to this product at work, the employer must always carry out a risk assessment of the work. The assessment must both deal with the dangerousness of the impact and its strength and duration. The employer's decision that a pregnant or lactating woman can perform a specific work task must therefore be made in the context of her specific working conditions. See also WEA-Guideline A.1.8-7 on the working environment of pregnant and breastfeeding workers.

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Full text of H- and EUH-statements:	
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

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.