

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

Product form : Mixture
Product name : 45230 - ENGINE OIL HDX 15W-50
Product code : 45230

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
Function or use category : Lubricants and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

77 Lubricants B.V.
NL- 1761 JA
The Netherlands
T +31 (0)78 6527652
technical@77lubricants.nl - www.77lubricants.nl

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
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	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	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]**

Hazardous to the aquatic environment – Chronic Hazard, H412
Category 3
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Signal word (CLP) : -
Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read carefully and follow all instructions.
P273 - Avoid release to the environment.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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2.3. Other hazards

Other hazards which do not result in classification : Flammable liquids. Repeated or prolonged contact may cause skin irritation. Spills of this product present a serious slipping hazard.

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

Component	
phenol, (tetrapropenyl) derivatives (74499-35-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

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 %

Component	
phenol, (tetrapropenyl) derivatives(74499-35-7)	The substance is included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is 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

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]
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil substance with a Community workplace exposure limit	CAS-No.: 72623-87-1 EC-No.: 276-738-4 EC Index-No.: 649-483-00-5 REACH-no: 01-2119474889-13	$\geq 55 - < 75$	Asp. Tox. 1, H304
Distillates (petroleum), hydrotreated heavy paraffinic substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	$\geq 15 - < 25$	Not classified
Distillates (petroleum), hydrotreated light paraffinic substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH); substance with a Community workplace exposure limit	CAS-No.: 64742-55-8 EC-No.: 265-158-7 EC Index-No.: 649-468-00-3 REACH-no: 01-2119487077-29	$\geq 3 - < 10$	Not classified
Distillates (petroleum), solvent-dewaxed heavy paraffinic substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 64742-65-0 EC-No.: 265-169-7 EC Index-No.: 649-474-00-6 REACH-no: 01-2119471299-27	$\geq 1 - < 3$	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50	EC-No.: 701-251-5 REACH-no: 01-2119524004-56	≥ 0.3 – < 3	Aquatic Chronic 4, H413
Distillates (petroleum), solvent-refined heavy paraffinic substance with national workplace exposure limit(s) (BE, BG, CZ, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, LT, LV, NL, PL, PT, RO, SE, SI, SK, IS, NO, CH); substance with a Community workplace exposure limit	CAS-No.: 64741-88-4 EC-No.: 265-090-8 EC Index-No.: 649-454-00-7 REACH-no: 01-2119488706-23	≥ 0.3 – < 3	Not classified
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts substance with national workplace exposure limit(s) (CZ, DE, SK)	CAS-No.: 84605-29-8 EC-No.: 283-392-8 REACH-no: 01-2119493626-26	≥ 0.3 – < 1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts substance with national workplace exposure limit(s) (DE, SK)	CAS-No.: 85940-28-9 EC-No.: 288-917-4 REACH-no: 01-2119521201-61	≥ 0.3 – < 1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Distillates (petroleum), solvent-dewaxed light paraffinic substance with national workplace exposure limit(s) (BE, BG, CZ, DK, ES, FI, GR, HU, IE, LT, LV, NL, PL, PT, RO, SE, SK, IS, NO, CH); substance with a Community workplace exposure limit	CAS-No.: 64742-56-9 EC-No.: 265-159-2 EC Index-No.: 649-469-00-9 REACH-no: 01-2119480132-48	≥ 0.1 – < 1	Asp. Tox. 1, H304
phenol, (tetrapropenyl) derivatives substance listed as REACH Candidate (Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP))	CAS-No.: 74499-35-7 EC-No.: 310-154-3 EC Index-No.: 604-092-00-9	< 0.1	Repr. 1B, H360F Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts	CAS-No.: 84605-29-8 EC-No.: 283-392-8 REACH-no: 01-2119493626-26	(6.25 < C ≤ 100) Skin Irrit. 2, H315 (10 < C ≤ 12.5) Eye Irrit. 2, H319 (12.5 < C ≤ 100) Eye Dam. 1, H318
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	CAS-No.: 85940-28-9 EC-No.: 288-917-4 REACH-no: 01-2119521201-61	(15 ≤ C < 100) Skin Irrit. 2, H315 (15 ≤ C < 20) Eye Irrit. 2, H319 (20 ≤ C < 100) Eye Dam. 1, H318

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 after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after inhalation	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after skin contact	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after eye contact	: After adequate first aid, no further treatment is required unless symptoms reappear.
Symptoms/effects after ingestion	: After adequate first aid, no further treatment is required unless symptoms reappear.

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 water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Use water spray or fog for cooling exposed containers.
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	: Avoid spilling the product, as this might cause falls.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. Wear suitable protective clothing, gloves and eye/face protection. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up	: Take up liquid spill into absorbent material.
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.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Ensure good ventilation of the work station. Wear personal protective equipment.
Handling temperature	: ≤ 40 °C
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	: Provide local exhaust or general room ventilation.
Storage conditions	: Store in a well-ventilated place. Keep cool.
Storage temperature	: ≤ 40 °C
Storage area	: Store in a well-ventilated place. Store away from heat.
Special rules on packaging	: Keep only in original container. Store in a closed 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

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
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United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	5 mg/m ³
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Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
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United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	5 mg/m ³
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Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
IOEL STEL	10 mg/m ³

United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	5 mg/m ³
WEL STEL (OEL STEL)	10 mg/m ³

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
IOEL STEL	10 mg/m ³

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Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

United Kingdom - Occupational Exposure Limits

WEL TWA (OEL TWA) [1]	5 mg/m ³
WEL STEL (OEL STEL)	10 mg/m ³

Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³ ACGIH TLV (inhalable fraction)
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Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	5 mg/m ³
IOEL STEL	10 mg/m ³

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:

Gloves. Safety glasses. Protective clothing.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

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

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Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
	Nitrile rubber (NBR), Neoprene rubber (HNBR)	5 (> 240 minutes)	0.7	3 (> 0.65)	EN ISO 374
	Polyvinylchloride (PVC)	2 (> 30 minutes)	0.4	3 (> 0.65)	EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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	: brown.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -36 °C (ASTM D7346)
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 201 °C (ASTM D92)
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 132 mm ² /s @ 40°C (ASTM D7042)
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 872 kg/m ³ @ 15°C (ASTM D4052)
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

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

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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

Strong oxidizing agents.

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

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

LD50 oral (rat)	> 5000 mg/kg bodyweight 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	> 2000 mg/kg 402 Acute Dermal Toxicity Test
LC50 inhalation (rat) (mg/l)	> 5000 mg/l/4h
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

LD50 oral (rat)	> 5000 mg/kg 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	> 5000 mg/kg 402 Acute Dermal Toxicity Test
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

LD50 oral (rat)	> 5000 mg/kg bodyweight 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	> 5000 mg/kg 402 Acute Dermal Toxicity Test
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50

LD50 oral (rat)	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal (rabbit)	> 4000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 inhalation (rat) (mg/l)	> 1.67 mg/l OECD 403 (1h)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

LD50 oral (rat)	> 5000 mg/kg
LD50 dermal (rabbit)	> 2000 mg/kg

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Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
LC50 inhalation (rat) (mg/l)	> 5000 mg/m ³
LC50 inhalation (rat) (Vapours - mg/l/4h)	5.53 mg/l/4h
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
LD50 oral (rat)	3100 mg/kg OECD 401
LD50 dermal (rat)	> 2002 mg/kg OECD 402
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 2.3 mg/l/4h OECD 403
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts (85940-28-9)	
LD50 oral (rat)	3080 mg/kg OECD Guideline 401
LD50 dermal (rabbit)	> 20000 mg/kg OECD Guideline 402
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 2.3 mg/l/4h OECD Guideline 403
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)	
LD50 oral (rat)	> 5000 mg/kg bodyweight
LD50 dermal (rat)	> 5000 mg/kg
LC50 inhalation (rat) (Vapours - mg/l/4h)	> 2.18 mg/l/4h
phenol, (tetrapropenyl) derivatives (74499-35-7)	
LD50 oral (rat)	2200 mg/kg 401 Acute Oral Toxicity Test
LD50 dermal (rabbit)	15000 mg/kg 402 Acute Dermal Toxicity Test
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)	
LD50 oral (rat)	> 5000 mg/kg
LD50 dermal (rabbit)	> 2000 mg/kg
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5.53 mg/l/4h
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
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
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
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight

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Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50	
NOAEL (oral, rat, 90 days)	200 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
NOAEL (subacute, oral, animal/male, 28 days)	160 mg/kg bodyweight
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts (85940-28-9)	
NOAEL (subacute, oral, animal/female, 28 days)	125 mg/kg bodyweight 407 Repeated Dose 28-day Oral Toxicity Study in Rodents
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day
Aspiration hazard : Not classified	
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Viscosity, kinematic	132 mm ² /s @ 40°C (ASTM D7042)
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	98 (98 – 108) mm ² /s @40°C
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Viscosity, kinematic	< 20.5 mm ² /s @40°C
Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)	
Viscosity, kinematic	150 (1.99 – 847) mm ² /s @40°C
Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50	
Viscosity, kinematic	206820 mm ² /s Temp.: '20°C' Parameter: 'cSt'
Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)	
Viscosity, kinematic	28.51 mm ² /s @40°C
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
Viscosity, kinematic	407.6 mm ² /s
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)	
Viscosity, kinematic	1.99 – 847 mm ² /s Temp.: '40°C'
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)	
Viscosity, kinematic	47 mm ² /s

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Component

phenol, (tetrapropenyl) derivatives(74499-35-7)	The substance is identified for having endocrine disrupting properties but there is no additional data available (see section 2.3)
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11.2.2. Other information

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)	: Harmful to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	1000 mg/l Oncorhynchus mykiss (14d)
NOEC chronic crustacea	10 mg/l Daphnia magna (21d)
NOEC chronic algae	≥ 100 mg/l Pseudokirchneriella subcapitata (72h)

Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Pseudokirchneriella subcapitata
NOEC chronic fish	1000 mg/l Oncorhynchus mykiss (14d)
NOEC chronic crustacea	10 mg/l Daphnia magna (21d)
NOEC chronic algae	≥ 100 mg/l Pseudokirchneriella subcapitata (72h)

Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
NOEC chronic fish	> 1000 mg/l Oncorhynchus mykiss (14d)
NOEC chronic crustacea	> 10 mg/l Daphnia magna (21d)
NOEC chronic algae	> 100 mg/l Pseudokirchneriella subcapitata (72h)

Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50

LC50 - Fish [1]	> 1000 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna
EC50 96h - Algae [1]	> 500 mg/l Pseudokirchneriella subcapitata

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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 (14d)
NOEC chronic crustacea	10 mg/l Daphnia magna (21d)
NOEC chronic algae	≥ 100 mg/l Pseudokirchneriella subcapitata (72h)
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)	
LC50 - Fish [1]	4.5 mg/l Oncorhynchus mykiss
LC50 - Fish [2]	46 mg/l Cyprinodon variegatus
EC50 - Crustacea [1]	23 mg/l Water flea (Daphnia magna) (OECD 202)
EC50 72h - Algae [1]	21 mg/l Scenedesmus quadricauda
NOEC chronic crustacea	0.4 mg/l Daphnia magna (21d) (OECD 211)
NOEC chronic algae	10 mg/l Scenedesmus quadricauda (72h)
Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts (85940-28-9)	
LC50 - Fish [1]	4.5 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	> 5.4 mg/l Daphnia magna
EC50 96h - Algae [1]	> 2.1 mg/l Selenastrum capricornutum
NOEC chronic crustacea	0.4 mg/l Daphnia magna (21d)
NOEC chronic algae	1 mg/l Selenastrum capricornutum (96h)
Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)	
LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l Daphnia magna
NOEC chronic fish	≥ 1000 mg/l Oncorhynchus mykiss
NOEC chronic crustacea	10 mg/l Daphnia magna
NOEC chronic algae	≥ 100 mg/l Pseudokirchneriella subcapitata
phenol, (tetrapropenyl) derivatives (74499-35-7)	
LC50 - Fish [1]	40 mg/l Pimephales promelas
EC50 - Crustacea [1]	0.037 mg/l Daphnia magna
EC50 72h - Algae [1]	0.36 mg/l Desmodesmus subspicatus
NOEC chronic crustacea	0.0037 mg/l Daphnia magna (21d)
NOEC chronic algae	0.07 mg/l Desmodesmus subspicatus (72h)
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)	
LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 Daphnia magna
NOEC chronic fish	1000 mg/l Oncorhynchus mykiss (14d)
NOEC chronic crustacea	10 mg/l Daphnia magna (21d)
NOEC chronic algae	100 mg/l Pseudokirchneriella subcapitata (72h)

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12.2. Persistence and degradability

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % OECD TG 301 F (28d)

Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

Biodegradation	31 % OECD TG 301 F (28d)
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Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

Biodegradation	31 % OECD 301F (28d)
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Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50

Persistence and degradability	Not readily biodegradable.
Biodegradation	13.4 % OECD 301B (28d)

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % OECD 301F (28d)

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)

Persistence and degradability	Not readily biodegradable.
Biodegradation	1.5 % OECD TG 301 B (28d)

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts (85940-28-9)

Persistence and degradability	Not readily biodegradable.
Biodegradation	1.5 % OECD 301B (28d)

Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)

Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % OECD 301F

phenol, (tetrapropenyl) derivatives (74499-35-7)

Persistence and degradability	Not readily biodegradable.
Biodegradation	6 – 25 % OECD 301B (28d)

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil (72623-87-1)

Biodegradation	31 %
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12.3. Bioaccumulative potential

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)

Partition coefficient n-octanol/water (Log Pow)	3.9 – 6
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Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)

Partition coefficient n-octanol/water (Log Pow)	> 6
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Distillates (petroleum), solvent-dewaxed heavy paraffinic (64742-65-0)

Bioconcentration factor (BCF REACH)	260
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Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50

Bioconcentration factor (BCF REACH) 2.2

Partition coefficient n-octanol/water (Log Pow) 9.5

Distillates (petroleum), solvent-refined heavy paraffinic (64741-88-4)

Partition coefficient n-octanol/water (Log Pow) 3.9 – 6

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)

Partition coefficient n-octanol/water (Log Kow) 0.56

Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts (85940-28-9)

Partition coefficient n-octanol/water (Log Pow) 8.87 @ 20°C

phenol, (tetrapropenyl) derivatives (74499-35-7)

Bioconcentration factor (BCF REACH) 289

Partition coefficient n-octanol/water (Log Pow) 7.14 @ 25°C

Bioaccumulative potential Bioaccumulative potential.

12.4. Mobility in soil

Phenol, paraalkylation products with C10-15 branched olefins (C12 rich) derived from propene oligomerization, carbonates, calcium salts, overbased, sulfurized including distillates (petroleum), hydrotreated, solvent-refined, solvent-dewaxed, or catalytic dewaxed, light or heavy paraffinic C15-C50

Mobility in soil 3615000000000 Source: EPISUITE

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts (84605-29-8)

Ecology - soil Adsorbs into the soil.

Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)

Ecology - soil Adsorbs into the soil.

12.5. Results of PBT and vPvB assessment

Component

phenol, (tetrapropenyl) derivatives (74499-35-7) This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Component

phenol, (tetrapropenyl) derivatives(74499-35-7) The substance is identified for having endocrine disrupting properties but there is no additional data available (see section 2.3)

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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European List of Waste (LoW, EC 2000/532) : 13 02 00 - waste engine, gear and lubricating oils
HP Code : HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

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 applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	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

Inland waterway 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)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

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

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REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: Phenol, alkylation products (mainly in para position) with C12-rich branched alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP) (EC 310-154-3, CAS 74499-35-7)

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)

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)

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
	Revision date	Modified	
	Supersedes	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Precautionary statements (CLP)	Modified	
6.1	General measures	Added	
10.5	Incompatible materials	Added	
13.1	European List of Waste (LoW, EC 2000/532)	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

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Abbreviations and acronyms:	
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

Full text of H- and EUH-statements:	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

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Full text of H- and EUH-statements:	
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2

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.