



78630 - System and Circulation Oil 220

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 28/08/2012 Revision date: 14/03/2024 Supersedes version of: 25/01/2022 Version: 5.0

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

1.1. Product identifier

Product form : Mixture
Product name : 78630 - System and Circulation Oil 220
Product code : 78630

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

Transnational Blenders bv
Wieldrechtseweg, 37
NL- 3316 BG Dordrecht – Netherlands Zuid Holland
Netherlands
T +31 (0)78 6527652
technical@tnb.nl - www.tnb.nl

1.4. Emergency telephone number

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)	

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

Harmful to aquatic life with long lasting effects.

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

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

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]
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	$\geq 45 - < 55$	Not classified
Residual oils (petroleum), solvent-dewaxed substance with national workplace exposure limit(s) (NL)	CAS-No.: 64742-62-7 EC-No.: 265-166-0 EC Index-No.: 649-471-00-X REACH-no: 01-2119480472-38	$\geq 45 - < 55$	Not classified
Hydrocarbons, C10-C13, aromatics, <1% naphthalene substance with national workplace exposure limit(s) (AT, BE, CZ, DK, ES, GB, IE, LV, NL, RO, SE, CH); substance with a Community workplace exposure limit	EC-No.: 922-153-0 REACH-no: 01-2119451097-39	< 0.3	Asp. Tox. 1, H304 Aquatic Chronic 2, H411 (M=0)
N-Phenyl-1-naphthylamin substance with national workplace exposure limit(s) (DE, NL)	CAS-No.: 90-30-2 EC-No.: 201-983-0	< 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based 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.: 72623-86-0 EC-No.: 276-737-9 EC Index-No.: 649-482-00-X REACH-no: 01-2119474878-16	< 0.1	Asp. Tox. 1, H304
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, EE, HR, NL, PL, CH); substance with a Community workplace exposure limit	EC-No.: 920-901-0 REACH-no: 01-2119456810-40	< 0.1	Asp. Tox. 1, H304
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	< 0.1	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
diphenylamine substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, IE, IT, LT, PL, PT, RO, SE, SI, SK, IS, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 122-39-4 EC-No.: 204-539-4 EC Index-No.: 612-026-00-5 REACH-no: 01-2119488966-13	< 0.1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1-naphthol substance with national workplace exposure limit(s) (LT, LV, RO)	CAS-No.: 90-15-3 EC-No.: 201-969-4 EC Index-No.: 604-029-00-5	< 0.1	Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Oral), H302 STOT SE 3, H335 Skin Irrit. 2, H315 Eye Dam. 1, H318

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
N-Phenyl-1-naphthylamin	CAS-No.: 90-30-2 EC-No.: 201-983-0	(10 ≤ C < 100) STOT RE 2, H373
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	EC-No.: 920-901-0 REACH-no: 01-2119456810-40	(1 ≤ C < 100) EUH066

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.

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

No additional information available

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

Fire hazard	: Will ignite if exposed to intensive heat.
Explosion hazard	: Not expected to be a fire/explosion hazard under normal conditions of use. Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity in case of fire	: Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

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5.3. Advice for firefighters

Precautionary measures fire	: Evacuate area.
Firefighting instructions	: Eliminate all ignition sources if safe to do so. 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	: Spill area may be slippery. Prevent soil and water pollution. Prevent entry to sewers and public waters.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Evacuate unnecessary personnel. Avoid any direct contact with the product. Stop leaks if it can be done without personal risk.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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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	: For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
Methods for cleaning up	: Take up liquid spill into absorbent material. Clear up spills immediately and dispose of waste safely. Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation. May be reused following decontamination. Clean contaminated surfaces with an excess of water.
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	: Empty containers retain product residue and can be hazardous.
Precautions for safe handling	: Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe fumes from fires or vapours from decomposition. Avoid breathing dust, fume, gas, mist, spray, vapours. Ensure good ventilation of the work station. Spilled material may present a slipping hazard. Clean spills promptly.
Handling temperature	: ≤ 40 °C
Hygiene measures	: Routine housekeeping should be instituted. 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. Store away from oxidising agents. Protect from sunlight. Store in original container. Always keep in containers made of the same material as the supply container. Do not store in open, inadequate, mislabeled packaging. Opened containers must be carefully closed and kept upright to avoid leakage. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Empty containers retain product residue and can be hazardous.

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Storage temperature	: ≤ 40 °C
Information on mixed storage	: Store away from strong oxidizers, strong bases, strong acids.
Storage area	: Store at ambient temperature.
Special rules on packaging	: Keep container tightly closed and dry.

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/m³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	5 mg/m³ Form: inhalable fraction Ireland. OELVs, Schedule 1 (Code of Practice for Chemical Agents Regulations), as amended (01 2020)
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	5 mg/m³
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA [2]	5 ppm Form: Inhalable fraction
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA [ppm]	1200 ppm
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	Form: Inhalable fraction
OEL TWA [2]	5 ppm
diphenylamine (122-39-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	10 mg/m³
IOEL STEL	20 mg/m³

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diphenylamine (122-39-4)	
Ireland - Occupational Exposure Limits	
OEL TWA [1]	10 mg/m³
OEL STEL	20 mg/m³

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

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

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

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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	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -12 °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	: 215 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	: 894 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.

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

Oxidizing agent.

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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

Residual oils (petroleum), solvent-dewaxed (64742-62-7)

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

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

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

LD50 oral (rat)	> 6318 mg/kg OECD TG 401
LD50 dermal (rat)	> 2000 mg/kg OECD TG 402
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 4.778 mg/l/4h OECD TG 403

N-Phenyl-1-naphthylamin (90-30-2)

LD50 oral (rat)	1625 mg/kg Animal: rat, Animal sex: male, 95% CL: 1201 - 2197
LD50 dermal (rabbit)	> 5000 mg/kg

Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)

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) (mg/l)	5.53 mg/l 403 Acute Inhalation Toxicity
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 5.53 mg/l/4h 403 Acute Inhalation Toxicity Test

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

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

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

diphenylamine (122-39-4)

LD50 oral (rat)	1165 mg/kg
LD50 dermal (rabbit)	> 5000 mg/kg

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1-naphtol (90-15-3)	
LD50 oral (rat)	1870 mg/kg
LD50 dermal (rabbit)	880 mg/kg
LC50 inhalation (rat) (Dust/Mist - mg/l/4h)	> 97 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
N-Phenyl-1-naphthylamin (90-30-2)	
NOAEL (animal/male, F0/P)	< 40 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: EPA OPP 83-4 (Reproduction and Fertility Effects), Guideline: EU Method B.35 (Two-Generation Reproduction Toxicity Test)
NOAEL (animal/female, F0/P)	< 46 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPP 83-4 (Reproduction and Fertility Effects), Guideline: EU Method B.35 (Two-Generation Reproduction Toxicity Test)
STOT-single exposure	: Not classified
1-naphtol (90-15-3)	
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
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight OECD Guideline 408
NOAEL (subchronic, oral, animal/male, 90 days)	300 mg/kg bodyweight
N-Phenyl-1-naphthylamin (90-30-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
NOAEL (subchronic, oral, animal/male, 90 days)	1000 mg/kg bodyweight
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)
diphenylamine (122-39-4)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
1-naphtol (90-15-3)	
NOAEL (subchronic, oral, animal/male, 90 days)	130 mg/kg bodyweight
Aspiration hazard	: Not classified
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Viscosity, kinematic	215 mm²/s @ 40°C (ASTM D7042)

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Residual oils (petroleum), solvent-dewaxed (64742-62-7)	
Viscosity, kinematic	490 mm ² /s @40°C
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Viscosity, kinematic	≈ 98 mm ² /s @ 40°C
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
Viscosity, kinematic	4.25 mm ² /s
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
Viscosity, kinematic	2978 mm ² /s 40°C
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
Viscosity, kinematic	1.77 mm ² /s
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Viscosity, kinematic	< 20.5 mm ² /s @40°C

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
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)
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
LC50 - Fish [1]	3.6 mg/l Oncorhynchus mykiss (OECD 203)
EC50 - Crustacea [1]	1.1 mg/l OECD 202
ErC50 algae	3.8 mg/l 72h (Pseudokirchneriella subcapitata, OECD 201)
NOEC chronic fish	0.103 mg/l 28 d (PETROTOX QSAR)
NOEC chronic crustacea	0.179 mg/l 21 d (Daphnia magna, OECD 211)
NOEC chronic algae	0.179 mg/l 72h (Pseudokirchneriella subcapitata, OECD 201)
N-Phenyl-1-naphthylamin (90-30-2)	
LC50 - Fish [1]	0.44 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	0.3 mg/l Daphnia magna

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N-Phenyl-1-naphthylamin (90-30-2)	
EC50 96h - Algae [1]	0.93 mg/l Pseudokirchneriella subcapitata
NOEC chronic crustacea	0.032 mg/l Daphnia magna (21d)
NOEC chronic algae	0.032 mg/l Daphnia magna (21d)
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
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)
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
LC50 - Fish [1]	> 1000 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Raphidocelis subcapitata
NOEC chronic algae	100 mg/l Raphidocelis 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)
diphenylamine (122-39-4)	
LC50 - Fish [1]	3.79 mg/l Pimephales promelas
EC50 - Crustacea [1]	2 mg/l Daphnia magna (OECD 202)
EC50 72h - Algae [1]	0.43 mg/l Pseudokirchnerella subcapitata
NOEC chronic fish	0.625 mg/l Oryzias latipes (21d)
NOEC chronic crustacea	0.125 mg/l Daphnia magna (OECD Test Guideline 202) (21d)
NOEC chronic algae	0.027 mg/l Pseudokirchnerella subcapitata (72h)
1-naphtol (90-15-3)	
LC50 - Fish [1]	0.33 mg/l M. cavausius
EC50 - Crustacea [1]	2.51 mg/l Daphnia magna
EC50 72h - Algae [1]	> 2.18 mg/l Pseudokirchneriella subcapitata
NOEC chronic crustacea	0.25 mg/l Daphnia magna (21d)
NOEC chronic algae	> 2.18 mg/l Pseudokirchneriella subcapitata (72h)

12.2. Persistence and degradability

Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Persistence and degradability	Not readily biodegradable.

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Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Biodegradation	31 % OECD TG 301 F (28d)
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
Persistence and degradability	Readily biodegradable.
Biodegradation	70 % 28d OECD 301F
N-Phenyl-1-naphthylamin (90-30-2)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	0 % 28d
Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % 28 d OECD 301F
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
Biodegradation	31.3 % 28 d Richtlijn test OECD 301F
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Biodegradation	31 % OECD TG 301 F (28d)
diphenylamine (122-39-4)	
Biodegradation	26 % OECD TG 301 D (28d)
1-naphtol (90-15-3)	
Biodegradation	77.8 % OECD 301B (29d)
12.3. Bioaccumulative potential	
Residual oils (petroleum), solvent-dewaxed (64742-62-7)	
Partition coefficient n-octanol/water (Log Pow)	> 3.5
Distillates (petroleum), hydrotreated heavy paraffinic (64742-54-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 – 6
Hydrocarbons, C10-C13, aromatics, <1% naphthalene	
Bioconcentration factor (BCF REACH)	5780
Partition coefficient n-octanol/water (Log Pow)	6.5
N-Phenyl-1-naphthylamin (90-30-2)	
Bioconcentration factor (BCF REACH)	1424
Partition coefficient n-octanol/water (Log Pow)	4.28
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
Bioconcentration factor (BCF REACH)	2500
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)	
Partition coefficient n-octanol/water (Log Pow)	> 6
diphenylamine (122-39-4)	
Bioconcentration factor (BCF REACH)	151.36
Partition coefficient n-octanol/water (Log Kow)	3.4

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1-naphtol (90-15-3)

Partition coefficient n-octanol/water (Log Pow)	2.85
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12.4. Mobility in soil

Hydrocarbons, C10-C13, aromatics, <1% naphthalene

Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.11 @ 20°C
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Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based (72623-86-0)

Ecology - soil	Adsorbs into the soil.
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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 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	: Recycle product or dispose safely. Recycle the material as far as possible. Recycle or dispose of in compliance with current legislation.
European List of Waste (LoW, EC 2000/532)	: 13 02 05* - mineral-based non-chlorinated engine, gear and lubricating oils

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 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				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

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14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

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)

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): Diphenylamine (122-39-4)

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

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Flammability (solid, gas)	Added	
1.2	Function or use category	Modified	
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Precautionary statements (CLP)	Modified	
4.1	First-aid measures after skin contact	Added	
4.1	First-aid measures after inhalation	Added	
4.1	First-aid measures after ingestion	Added	
4.1	First-aid measures after eye contact	Added	
4.3	Other medical advice or treatment	Added	
5.1	Suitable extinguishing media	Added	
5.2	Reactivity in case of fire	Added	
5.2	Fire hazard	Added	
5.2	Explosion hazard	Added	
5.2	Hazardous decomposition products in case of fire	Added	
5.3	Firefighting instructions	Modified	
5.3	Precautionary measures fire	Modified	
5.3	Protection during firefighting	Added	
6.1	General measures	Added	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Added	
6.2	Environmental precautions	Added	
6.3	For containment	Modified	
6.3	Methods for cleaning up	Added	
6.3	Other information	Added	
6.4	Reference to other sections (8, 13)	Added	
7.1	Additional hazards when processed	Added	
7.1	Precautions for safe handling	Added	
7.1	Hygiene measures	Added	
7.2	Information on mixed storage	Added	
7.2	Special rules on packaging	Modified	
7.2	Storage area	Modified	

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Indication of changes			
Section	Changed item	Change	Comments
7.2	Storage conditions	Added	
8.2	Environmental exposure controls	Added	
8.2	Respiratory protection	Added	
8.2	Personal protective equipment	Modified	
8.2	Hand protection	Modified	
8.2	Eye protection	Modified	
8.2	Appropriate engineering controls	Added	
8.2	Skin and body protection	Modified	
8.2	Materials for protective clothing	Modified	
9.1	Colour	Modified	
9.1	Flash point	Modified	
9.1	Density	Modified	
9.1	Viscosity, kinematic	Modified	
10.1	Reactivity	Added	
10.2	Chemical stability	Added	
10.3	Possibility of hazardous reactions	Added	
10.4	Conditions to avoid	Added	
10.5	Incompatible materials	Added	
10.6	Hazardous decomposition products	Added	
12.1	Ecology - general	Added	
13.1	Waste disposal recommendations	Added	
13.1	Sewage disposal recommendations	Added	
13.1	European List of Waste (LoW, EC 2000/532)	Added	
13.1	Waste treatment methods	Added	
15.2	Chemical safety assessment	Added	
16	Abbreviations and acronyms	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:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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
Asp. Tox. 1	Aspiration hazard, Category 1
EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H301	Toxic if swallowed.

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Full text of H- and EUH-statements:	
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H373	May cause damage to organs through prolonged or repeated exposure.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

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.