

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

1.1. Product identifier

Product form : Mixture
Product name : 77820 - Turbine Oil 46
Product code : 77820
Product group : Blend

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only
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 B.V.
Wieldrechtseweg 37
3316 BG Dordrecht - Netherlands
T +31 (0)78 6527652
technical@tnb.nl - www.tnb.nl

1.4. Emergency telephone number

Emergency number : +31 (0)78 6527652
Monday to Friday: 09:00 - 16:00 (CET)

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 London	+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] Mixtures/Substances: SDS EU > 2015: According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

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) : P273 - Avoid release to the environment.
P501 - Dispose of contents and container to an approved waste disposal plant.
EUH-statements : EUH208 - Contains Aryl amine(90-30-2). May produce an allergic reaction.

2.3. Other hazards

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

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 is 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

Component	
Mineral oil	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 is 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

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; Baseoil substance with a Community workplace exposure limit (Note L)	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-25	≥ 75	Asp. Tox. 1, H304
2,6-Di-tert-butylphenol substance with a Community workplace exposure limit	CAS-No.: 128-39-2 EC-No.: 204-884-0 REACH-no: 01-2119490822-33	0.1 – 0.5	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Aryl amine	CAS-No.: 90-30-2 EC-No.: 201-983-0 REACH-no: 01-2119488704-27	0.05 – 0.5	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Mineral oil substance with a Community workplace exposure limit	-	0.01 – 0.1	Not classified
naphthalene substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2 REACH-no: 01-2119561346-37	< 0.01	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Note L : The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346 'Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions — Dimethyl sulphoxide extraction refractive index method', Institute of Petroleum, London. This note applies only to certain complex oil-derived substances in Part 3. 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.

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

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.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

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

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

2,6-Di-tert-butylphenol (128-39-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	3.5 mg/m ³
naphthalene (91-20-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Naphthalene
IOEL TWA	50 mg/m ³
IOEL STEL	15 mg/m ³
Notes	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m ³
Mineral oil	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 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

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

No additional information available

8.2.2.2. Skin protection

No additional information available

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

8.2.2.3. Respiratory protection

No additional information available

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	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: -21 °C
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: > 185 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 46 mm ² /s @40°C
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 868.2 kg/m ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: 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.

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

2,6-Di-tert-butylphenol (128-39-2)

LD50 oral (rat) > 5000 mg/kg bodyweight

LD50 dermal (rabbit) > 10 g/kg

naphthalene (91-20-3)

LD50 oral (rat) > 533 mg/kg

LD50 dermal (rat) > 200 mg/kg

ATE CLP (oral) 500 mg/kg bodyweight

Aryl amine (90-30-2)

LD50 oral (rat) > 1625 mg/kg

LD50 dermal (rabbit) > 2000 mg/kg

ATE CLP (oral) 500 mg/kg bodyweight

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

LD50 oral (rat) > 5000 mg/kg bodyweight

LD50 dermal (rabbit) > 5000 mg/kg

LC50 inhalation (rat) (Dust/Mist - mg/l/4h) > 5.53 mg/l/4h

Mineral oil

LD50 oral (rat) > 5000 mg/kg

LD50 dermal (rabbit) > 5000 mg/kg

LC50 inhalation (rat) (Dust/Mist - mg/l/4h) > 5000 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

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

naphthalene (91-20-3)	
LOAEL (animal/female, F0/P)	50 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
LOAEL (animal/female, F1)	450 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)
NOAEL (animal/female, F0/P)	120 mg/kg bodyweight Animal: rabbit, Animal sex: female, Guideline: other:OECD Guideline 414 (Prenatal Developmental Toxicity Study)

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

naphthalene (91-20-3)	
LOAEL (oral, rat, 90 days)	400 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
LOAEC (inhalation, rat, vapour, 90 days)	0.011 mg/l air Animal: rat, Guideline: EPA OPP 82-4 (90-Day Inhalation Toxicity), Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Aryl amine (90-30-2)	
STOT-repeated exposure	May cause damage to organs (liver, kidneys) through prolonged or repeated exposure (in contact with skin).

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (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 in Rodents)

Aspiration hazard : Not classified

77820 - Turbine Oil 46	
Viscosity, kinematic	46 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.

2,6-Di-tert-butylphenol (128-39-2)	
LC50 - Fish [1]	1.4 mg/l Pimephales promelas
LC50 - Fish [2]	13 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	0.45 mg/l Daphnia
LOEC (chronic)	0.086 mg/l Daphnia magna Duration: '21 d'

naphthalene (91-20-3)	
LC50 - Fish [1]	0.51 mg/l Pimephales promelas
EC50 - Crustacea [1]	3.4 mg/l Daphnia magna

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

Aryl amine (90-30-2)	
LC50 - Fish [1]	0.44 mg/l
EC50 - Crustacea [1]	0.3 mg/l
EC50 72h - Algae [1]	> 0.25 mg/l

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (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
NOEC chronic crustacea	10 mg/l Daphnia magna
NOEC chronic algae	> 100 mg/l Pseudokirchneriella subcapitata

Mineral oil	
LC50 - Fish [1]	> 100 mg/l Pimephales promelas
EC50 - Crustacea [1]	> 10000 mg/l
EC50 72h - Algae [1]	> 100 mg/l Scenedesmus quadricauda

12.2. Persistence and degradability

2,6-Di-tert-butylphenol (128-39-2)	
Biodegradation	24 % 28 Days

naphthalene (91-20-3)	
Persistence and degradability	Not readily biodegradable.

Aryl amine (90-30-2)	
Persistence and degradability	Not readily biodegradable.

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	31 % 28 d OECD 301F

Mineral oil	
Biodegradation	31 %

12.3. Bioaccumulative potential

2,6-Di-tert-butylphenol (128-39-2)	
Partition coefficient n-octanol/water (Log Kow)	4.5 0.1d

naphthalene (91-20-3)	
Partition coefficient n-octanol/water (Log Pow)	3.4 @ 25 °C and pH 7 - 7.5

Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil (64742-54-7)	
Partition coefficient n-octanol/water (Log Kow)	> 4

12.4. Mobility in soil

No additional information available

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

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.

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				
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				

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

77820 - Turbine Oil 46

Safety Data Sheet

SDS EU format according to COMMISSION REGULATION (EU) 2020/878

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

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

Full text of H- and EUH-statements

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
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
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
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
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.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Aryl amine(90-30-2). May produce an allergic reaction.

Safety Data Sheet (SDS), EU

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness