



Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 17-5-2018 Revision date: 17-5-2018 Version: 1.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Atlantic 2T DFI
Product code : 05.40.15
Type of product : Lubricants
Product group : Trade product

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
Use of the substance/mixture : Engine oil

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Kroon Oil BV
Dollegoorweg 15
7602 EC Almelo - Netherlands
T 0031 (0)546 81 81 65
vib@kroon-oil.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)	
United Kingdom	National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Llandough Hospital	Penarth CF64 2XX Cardiff	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazardous ingredients

: Isooctadecanoic acid, reaction products with tetraethylenepentamine

Hazard statements (CLP)

: H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H319 - Causes serious eye irritation.

Precautionary statements (CLP)

: P280 - Wear protective gloves, eye protection.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P362+P364 - Take off contaminated clothing and wash it before reuse.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments

: Highly refined mineral oils and additives.

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics	(EC-No.) 926-141-6 (REACH-no) 01-2119456620-43	20 – 25	Asp. Tox. 1, H304
Isooctadecanoic acid, reaction products with tetraethylenepentamine	(CAS-No.) 68784-17-8 (EC-No.) 272-225-4 (REACH-no) 01-2119960832-33	10 – 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Amines, polyethylenepoly-, reaction products with molybdenum oxide (MoO ₂) and succinic anhydride polyisobutenyl derivs., sulfurized	(CAS-No.) 186432-61-1 (EC-No.) 606-084-0	1 – 2,5	Aquatic Chronic 4, H413
Amines, polyethylenepoly-, reaction products with succinic anhydride polyisobutenyl derivatives	(CAS-No.) 84605-20-9 (EC-No.) 617-593-2	0,1 – 2,5	Aquatic Chronic 4, H413
Solvent naphtha (petroleum), heavy arom.	(CAS-No.) 64742-94-5 (EC-No.) 265-198-5 (EC Index-No.) 649-424-00-3 (REACH-no) 01-2119510128-50	0,1 – 2,5	STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,2,4-trimethylbenzene substance with a Community workplace exposure limit	(CAS-No.) 95-63-6 (EC-No.) 202-436-9 (REACH-no) 01-2119472135-42	< 1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411
Distillates (petroleum), solvent-dewaxed light paraffinic substance with a Community workplace exposure limit (Note L)	(CAS-No.) 64742-56-9 (EC-No.) 265-159-2 (EC Index-No.) 649-469-00-9 (REACH-no) 01-2119480132-48	< 1	Asp. Tox. 1, H304

Comments : The highly refined mineral oil contains <3% (w/w) DMSOextract, according to IP346.

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-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
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. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell. Do not induce vomiting.

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

Symptoms/effects	: No additional information available. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: May result in aspiration into the lungs, causing chemical pneumonia.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Combustible liquid.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases.

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.
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Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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 : Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Keep in a cool, well-ventilated place away from heat.
Storage temperature : 0 – 40 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Atlantic 2T DFI

EU - Occupational Exposure Limits

Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended	5 mg/m ³ - ACGIH TLV (inhalable fraction).
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Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)

EU - Occupational Exposure Limits

IOELV TWA (mg/m ³)	5 mg/m ³
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Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1,2,4-trimethylbenzene (95-63-6)

EU - Occupational Exposure Limits

Local name	1,2,4-Trimethylbenzene
IOELV TWA (mg/m³)	100 mg/m³
IOELV TWA (ppm)	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Materials for protective clothing:

Wear suitable protective clothing

Hand protection:

Protective gloves

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

Eye protection:

Safety glasses

Type	Use	Characteristics	Standard
Safety glasses	Droplet	clear	EN 166

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



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	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Melting point	: Not applicable
Freezing point	: -42 °C - ASTM D5950 (pour point)
Boiling point	: No data available
Flash point	: 90 °C - ASTM D92 (COC)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0,871 kg/l (15 °C) - ASTM D4052
Solubility	: Water : Practically not miscible.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: 43,5 mm²/s (40 °C) - ASTM D7279
Viscosity, dynamic	: No data available
Explosive properties	: Presents no particular fire or explosion hazard.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content	: 0 %
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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. Reacts violently with (strong) oxidizers.

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

No decomposition if stored normally.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LD50 oral rat	> 5000 mg/kg bodyweight (OECD 401 method)
LD50 dermal rabbit	> 5000 mg/kg bodyweight 24h - (OECD 402 method)
LC50 inhalation rat (mg/l)	> 5000 mg/m³ 8h - vapours (OECD 403 method)

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	5,53 mg/l/4h

Solvent naphtha (petroleum), heavy arom. (64742-94-5)

LD50 oral rat	> 590 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight
LC50 inhalation rat (Vapours - mg/l/4h)	> 2,7 mg/l/4h

Isooctadecanoic acid, reaction products with tetraethylenepentamine (68784-17-8)

LD50 oral rat	> 5000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight

Amines, polyethylenepoly-, reaction products with molybdenum oxide (MoO₂) and succinic anhydride polyisobutenyl derivs., sulfurized (186432-61-1)

LD50 oral rat	> 2000 mg/kg
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1,2,4-trimethylbenzene (95-63-6)

LD50 oral rat	6000 mg/kg bodyweight
LC50 inhalation rat (Vapours - mg/l/4h)	10,2 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

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

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight/day
NOAEL (subchronic, oral, animal/male, 90 days)	≥ 2000 mg/kg bodyweight
NOAEL (subchronic, oral, animal/female, 90 days)	≥ 2000 mg/kg bodyweight

Aspiration hazard	: Not classified
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Atlantic 2T DFI

Viscosity, kinematic	43,5 mm ² /s (40 °C) - ASTM D7279
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Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

LC50 fish	> 1000 mg/l (OECD 203 method)
EC50 Daphnia	> 1000 mg/l (OECD 202 method)
EC50 72h algae (1)	> 1000 mg/l (OECD 201 method)
NOEC chronic crustacea	1,22 g/l (21d)
NOEC chronic algae	1000 mg/l (OECD 201 method)

12.2. Persistence and degradability

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics

Biodegradation	69 % (28d) (OECD 301F method)
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Distillates (petroleum), solvent-dewaxed light paraffinic (64742-56-9)

Persistence and degradability	Potentially biodegradable.
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12.3. Bioaccumulative potential

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

Partition coefficient n-octanol/water (Log Pow)	> 3
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12.4. Mobility in soil

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

Ecology - soil	Insoluble in water.
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Do not allow into drains or water courses. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW) code	: 13 02 05* - mineral-based non-chlorinated engine, gear and lubricating oils

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ADR	IMDG	IATA	ADN	RID
14.1. UN 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. Transport in bulk according to Annex II of Marpol and the IBC Code

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

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:	
Reference code	Applicable on
3.	Isooctadecanoic acid, reaction products with tetraethylenepentamine ; Solvent naphtha (petroleum), heavy arom.
3(b)	Atlantic 2T DFI ; Isooctadecanoic acid, reaction products with tetraethylenepentamine ; Solvent naphtha (petroleum), heavy arom.
3(c)	Amines, polyethylenepoly-, reaction products with molybdenum oxide (MoO ₂) and succinic anhydride polyisobutenyl derivs., sulfurized ; Solvent naphtha (petroleum), heavy arom.

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

VOC content : 0 %

15.1.2. National regulations

No additional information available

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out

Distillates (petroleum), solvent-dewaxed light paraffinic

SECTION 16: Other information

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
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
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
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
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
EUH066	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Atlantic 2T DFI

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

SDS EU (REACH Annex II)

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.