### SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 3-7-2018 Revision date: 3-7-2018 Version: 1.0





## IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/ UNDERTAKING

Product identifier
Product form: Mixture
Trade name: AREOL LHM+
Product code: AR112

Type of product: Lubricants
Product group: Trade product

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

Relevant identified uses

Main use category: Industrial use, Professional use, Consumer use

Use of the substance/mixture: Hydraulic oil

### Uses advised against

No additional information available

### Details of the supplier of the safety data sheet

Vroman NV Oudenaardestraat 49. 8570 Vichte. Belgium Tel.: +32 56 72 62 29

ATH&S GmbH Bronninghauser Str. 33, 33729 Bielefeld, Deutschland www.areollub.com

**Emergency telephone number Country Organisation:** Germany

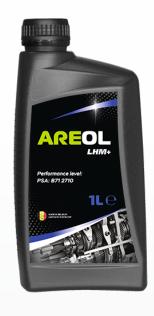
Company: National Poisons Information Service

Berlin

Address: Oranienburger Str. 285

13437 Berlin GERMANY

Emergency number: +49-30-19240 (NL/EN/FR/DE)



AREOL
PREMIUM QUALITY.
SMART PRICE

Trade name AREOL LHM+

## 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 (REACH Annex II)

Aspiration hazard, Category 1: H304

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

Full text of H statements: see section 16

### Adverse physicochemical, human health and environmental effects:

May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

### 2.2. Label elements:

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

Hazard pictograms (CLP): GHS08

Signal word (CLP): Danger



**Hazardous ingredients:** Distillates (petroleum), hydrotreated light paraffinic - Base oil; Hydrocarbons, C13-C16, n- alkanes, isoalkanes, cyclics, < 0.03% aromatics; Gas oils (petroleum), hydrodesulfurized

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

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. P273 - Avoid release to the environment. P301+P310+P331 - IF SWALLOWED: Immediately call a doctor. Do NOT induce vomiting. P405 - Store locked up. 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



Trade name AREOL LHM+

### **COMPOSITION/INFORMATION ON INGREDIENTS**

Substances: Not applicable

**Mixtures** 

Comments: Highly refined mineral oils and additives.

NAME	PRODUCT IDENTIFIER	%	CLASSIFICATION ACCORDING TO REGULATION (EC) NO. 1272/2008 [CLP]
Distillates (petroleum), hydrotreated light paraffinic Base oil	(CAS-No.) 64742-55-8 (EC-No.) 265-158-7 (EC Index-No.) 649-468-00-3 (REACH-no) 01-2119487077-29	25 - 50	Asp. Tox. 1, H304
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	(EC-No.) 934-954-2 (REACH-no) 01-2119826592-36	25 - 50	Asp. Tox. 1, H304
Gas oils (petroleum), hydrodesulfurized	(CAS-No.) 64742-79-6 (EC-No.) 265-182-8 (EC Index-No.) 649-222-00-5 (REACH-no) 01-2119471311-49	5 - 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
2,6-di-tert-butylphenol	(CAS-No.) 128-39-2 (EC-No.) 204-884-0 (REACH-no) 01-2119490822-33	0,1 - 1	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Tris(methylphenyl) phosphate	(CAS-No.) 1330-78-5 (EC-No.) 215-548-8 (REACH-no) 01-2119531335-46	0,1 - 1	Repr. 2, H361fd Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Phenol, dodecyl-, branched	(CAS-No.) 121158-58-5 (EC-No.) 310-154-3 (REACH-no) 01-2119513207-49	< 0,1	Skin Corr. 1C, H314 Eye Dam. 1, H318 Repr. 1B, H360F Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
naphthalene substance with a Community workplace exposure limit substance with national workplace exposure limit(s) (GB)	(CAS-No.) 91-20-3 (EC-No.) 202-049-5 (EC Index-No.) 601-052-00-2 (REACH-no) 01-2119561346-37	< 0,1	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410



Trade name AREOL LHM-

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

Full text of H-statements: see section 16



## FIRST AID MEASURES

### 4.1. Description of first aid measures

First-aid measures general: Call a physician immediately. 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: No irritant effect. Wash skin with plenty of water. First-aid measures after eye contact: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Rinse eyes with water as a precaution. First-aid measures after ingestion: Do not induce vomiting. Call a physician immediately. Do not induce vomiting.

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

Symptoms/effects: Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after ingestion: Risk of lung oedema. May result in aspiration into the lungs, causing chemical pneumonia.

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



### 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.



Trade name AREOL LHM+



### ACCIDENTAL RELEASE MEASURES

### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures: Ventilate spillage area.

### 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

See Heading 7. For further information refer to section 13.



### 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 locked up. Store in a well-ventilated place. Keep cool.

Storage temperature: < 40 °C

### 7.3. Specific end use(s)

No additional information available



8

### **EXPOSURE CONTROLS/PERSONAL PROTECTION**

Trade name AREOL LHM+

### 8.1. Control parameters

EU

Exposure limits/standards for materials that can be formed when handling this product. When mists/aerosols can occur the following is recommended: 5 mg/m³ - ACGIH TLV (inhalable fraction).

naphthalene (91-20-3)		
EU	Local name	Naphthalene
EU	IOELV TWA (mg/m³)	50 mg/m³
EU	IOELV TWA (ppm)	10 ppm
EU	Notes	(Year of adoption 2010)
EU	Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
United Kingdom	WEL TWA (mg/m³)	50 mg/m³

### 8.2. Exposure controls

Appropriate engineering controls: Ensure good ventilation of the work station.

**Hand protection:** Skin cream may be used. waterproof gloves. PVC gloves. Nitrile rubber gloves

Туре	Material	Permeation	Thickness (mm)	Penetration	Standard
Reusable gloves	Nitrile rubber (NBR), Neoprene rubber (HNBR)	5 (> 240 minutes), 6 (> 480 minutes)	>=0,35		EN 374

Eye protection: Safety glasses

	Туре	Use	Characteristics	Standard
•	Safety glasses	Droplet	clear	EN 166



Trade name AREOL LHM+

### 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.

### SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 3-7-2018 Revision date: 3-7-2018 Version: 1.0



Trade name AREOL LHM+

## PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on basic physical and chemical properties

Physical state: Liquid

Colour: Green.

Odour: characteristic.

Odour threshold: No data available

pH: No data available

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

Melting point: Not applicable

Freezing point:-51 °C - ASTM D5950 (pour point)

Boiling point: No data available

Flash point: 193 °C - ASTM D93 (PM)

**Auto-ignition temperature:** No data available **Decomposition temperature:** No data available

Flammability (solid, gas): Not applicable

Vapour pressure: 0,1 hPa (20°C)

Relative vapour density at 20 °C: No data available

Relative density: No data available

**Density:** 0,841 g/cm<sup>3</sup> (15 °C) - ASTM D4052 **Solubility: Water:** Practically not miscible.

Log Pow: No data available

Viscosity, kinematic: 17.9 mm<sup>2</sup>/s (40 °C) - ASTM D7279

Viscosity, dynamic: No data available

Explosive properties: No data available Oxidising properties: No data available Lower explosive limit (LEL): 0,5 vol % Upper explosive limit (UEL): 5 vol %

9.2. Other information: No additional information available

### SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006 (REACH) with its amendment R

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Date of issue: 3-7-2018 Revision date: 3-7-2018 Version: 1.0



Trade name AREOL LHM+

## 10 BILITY AND REACTIVITY

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

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: No dangerous reactions known. Reacts violently with

(strong) oxidizers.

**Conditions to avoid:** No decomposition if stored normally. **Incompatible materials:** No additional information available

Hazardous decomposition products: Under normal conditions of storage and use, hazardous

decomposition products should not be produced.



### TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity (oral): Not classified
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified

Distillates (petroleum), hydrotreated light paraffinic - Base oil (64742-55-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l/4h)	> 5,53 mg/l/4h

Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	
LD50 oral rat	> 5000 mg/kg (OECD 401 method)
LD50 dermal rat	> 3160 mg/kg (24h) [OECD 402]
LC50 inhalation rat (mg/l)	> 5266 mg/l/4h (aerosol, 4h) [OECD 403]

2,6-di-tert-butylphenol (128-39-2)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg

Gas oils (petroleum), hydrodesulfurized (64742-79-6)	
LC50 inhalation rat (mg/l)	1 - 5 mg/l



Trade name AREOL LHM+

Phenol, dodecyl-, branched (121158-58-5)	
LD50 oral rat	2100 mg/kg (OECD 401 method)
LD50 dermal rabbit	15000 mg/kg (OECD 402 method)
Tris(methylphenyl) phosphate (1330-78-5)	

motimosity, priorphisto (1886-78-6)	
LD50 oral rat	> 20000 mg/kg
LD50 dermal rat	> 10000 mg/kg
LC50 inhalation rat (mg/l)	> 11,1 mg/l (aerosol, 1h)

naphthalene (91-20-3)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg

**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

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

AREOL LHM+	
Viscosity, kinematic	17.9 mm²/s (40 °C) - ASTM D7279



Trade name AREOL LHM+

## 12 ECOLOGICAL INFORMATION

### 12.1. Toxicity

**Ecology - general:** Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity: Not classified

Chronic aquatic toxicity: Harmful to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
LC50 fish 1	> 100 mg/l 96h	
LC50 other aquatic organisms 1	> 100 mg/l	
ErC50 (algae)	> 100 mg/l 48h	
NOEC chronic fish	100 mg/l	

Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics				
LC50 fish 1	> 1028 mg/l (Scophthalmus maximus, 96h) [OECD 203]			
EC50 Daphnia 1	> 3193 mg/l (Acartia tonsa, 48h) [ISO 14669]			
EC50 72h algae (1)	> 10000 mg/l (Skeletonema costatum, 72h) [ISO 10253]			
NOEC chronic fish	> 1000 mg/l (Oncorhynchus mykiss - QSAR Petrotox, 28d)			
NOEC chronic crustacea	> 1000 mg/l (Daphnia magna - QSAR Petrotox, 21d)			

2,6-di-tert-butylphenol (128-39-2)			
EC50 Daphnia 1 0,45 mg/l (Daphnia magna, freshwater, 48h)			
EC50 72h algae (1)	1,4 mg/l (Selenastrum capricornutum, freshwater)		



Trade name AREOL LHM+

Gas oils (petroleum), hydrodesulfurized (64742-79-6)		
LC50 fish 1	1 - 10 mg/l	
EC50 Daphnia 1	1 - 10 mg/l	
ErC50 (algae)	1 - 10 mg/l	

Phenol, dodecyl-, branched (121158-58-5)				
LC50 fish 1	40 mg/l (Pimephales promelas, 96h) (OECD 203 method)			
EC50 Daphnia 1	0,037 mg/l (Daphnia magna, 48h) (OECD 202 method)			
EC50 72h algae (1)	0,15 mg/l (Desmodesmus subspicatus, 72h) (OECD 201 method)			
NOEC (chronic)	0,0037 mg/l (Daphnia magna, 21d) (OECD 211 method)			

Tris(methylphenyl) phosphate (1330-78-5)				
LC50 fish 1 0,6 mg/l				
EC50 Daphnia 1	O Daphnia 1 146 μg/l (Daphnia magna, 48h)			
EC50 72h algae (1)	0,4042 mg/l (Desmodesmus subspicatus, 72h)			
NOEC (chronic)	0,01 mg/l (Jordanella floridae, 28d)			

naphthalene (91-20-3)		
LC50 fish 1	0,51 mg/l 96h	
EC50 Daphnia 1	3,4 mg/l Dapnia magna - 48h	

### 12.2. Стойкость и разлагаемость

LHM +		
Persistence and degradability	Readily biodegradable.	
Distillates (petroleum), hydrotreated light paraffinic (64742-55-8)		
Persistence and degradability	Not established.	



Trade name AREOL LHM+

2,6-di-tert	-butylphen	ol (128-39-2)
-------------	------------	---------------

Biodegradation 5 % Sturm (28 d)

### Phenol, dodecyl-, branched (121158-58-5)

Biodegradation 25 % Sturm (28 d)

### Tris(methylphenyl) phosphate (1330-78-5)

Biodegradation 80 % (28d) (OECD 301C method)

### 12.3. Bioaccumulative potential:

Distillates (	(petroleum)	, hydrotreated light	paraffinic (	64742-55-8	1

Log Pow > 6

Bioaccumulative potential Not established.

### 2,6-di-tert-butylphenol (128-39-2)

Log Kow 4,5 Octanol/water (0,1 d)

### Phenol, dodecyl-, branched (121158-58-5)

Bioconcentration factor (BCF REACH)	2,9 (27 d)
Log Kow	7,1 Octanol-water coefficient (0.1 d)
Log Pow	71

### Tris(methylphenyl) phosphate (1330-78-5)

Log Pow 5,93

### naphthalene (91-20-3)

Log Pow 3,01



Trade name AREOL LHM+

### 12.4. Mobility in soil:

No additional information available

#### 12.5. Results of PBT and vPvB assessment:

### Component

Distillates (petroleum), hydrotreated light paraffinic -Base oil (64742-55-8) 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. Other adverse effects:

No additional information available

## 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods:

Dispose of contents/container in accordance with licensed collector's sorting instructions.

### **European List of Waste (LoW) code:**

13 O1 10\* - mineral based non-chlorinated hydraulic oils



## TRANSPORT INFORMATION In accordance with ADR / RID / IMDG / IATA / ADN

Trade name AREOL LHM+

ADR	IMDG	IATA	AND	RID		
UN number	UN number					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
UN proper shippi	ing name					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Transport hazard	l class(es)					
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Packing group						
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
Environmental hazards						
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable		
No supplementary information available						

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

Transport in bulk according to Annex II of Marpol and the IBC Code: Not applicable



Trade name AREOL LHM+



#### REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

### **EU-Regulations**

Contains no REACH substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substances

Directive 2012/18/EU (SEVESO III)

### **National regulations**

No additional information available

### Chemical safety assessment

No chemical safety assessment has been carried out



Trade name AREOL LHM+

## 16 OTHER INFORMATION

### Abbreviations and acronyms:

AND	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



Trade name AREOL LHM+

### Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), 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
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H302	Harmful if swallowed.
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.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H360F	May damage fertility. May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.



Trade name AREOL LHM+

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.

### 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