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

1.1. Product identifier

HIGHTEC LHM-PLUS

UFI: 4KQ7-AV1X-G002-1Y79

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

Use of the substance/mixture

Central hydraulic motor

1.3. Details of the supplier of the safety data sheet

Company name:	ROWE Mineralölwerk GmbH	
Street:	Langgewann 101	
Place:	D-67547 Worms	
Telephone:	+49 (0)6241 5906-0	Telefax: +49 (0)6241 5906-999
e-mail:	info@rowe-oil.com	
Internet:	www.rowe-oil.com	
Responsible Department:	sdb@rowe-oil.com	

1.4. Emergency telephone number:

Giftnotruf Mainz (DE; E) +49 (0)6131-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Skin corrosion/irritation: Skin Irrit. 2
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
Causes skin irritation.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Warning

Pictograms:

Hazard statements

H315	Causes skin irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P103	Read carefully and follow all instructions.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P501	Dispose of contents/container to of the disposal according to local regulations.

Special labelling of certain mixtures

EUH208 Contains Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI), 1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl. May produce an allergic reaction.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
64742-53-6	Baseoil - unspecified, Distillates (petroleum), hydrotreated light naphthenic			30 - < 60 %
	265-156-6	649-466-00-2	01-2119480375-34	
	Asp. Tox. 1; H304			
64742-55-8	Complex combination of hydrocarbons			15 - < 30 %
	265-158-7		01-2119487077-29	
	Asp. Tox. 1; H304			
64742-46-7	Distillates (petroleum), hydrotreated middle, Gasoil - unspecified			15 - < 30 %
	265-148-2	649-221-00-X	01-2119489867-12	
	Acute Tox. 4, Skin Irrit. 2, Asp. Tox. 1, Aquatic Chronic 2; H332 H315 H304 H411			
	2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with eicosyl 2-methyl-2-propenoate, hexadecyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, octadecyl 2-methyl-2-propenoate, pentadecyl 2-methyl-2-propenoate, tetradecyl 2-methyl-2-propenoate and			5 - < 15 %
	Eye Irrit. 2; H319			
128-39-2	2,6-di-tert-butylphenol			0.3 - < 1 %
	204-884-0		01-2119490822-33	
	Skin Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H315 H400 H410			
268567-32-4	Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI)			0.1 - < 0.3 %
	434-070-2		01-2119658068-31	
	Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H318 H317 H412			
94270-86-7	1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl			0.1 - < 0.3 %
	939-700-4		01-2119982395-25	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 2; H315 H317 H400 H411			
	Reaction products of triethylenetetramine and fatty acids, C16-18, C18 unsaturated			0.1 - < 0.3 %
	947-263-6		01-2120761103-66	
	Repr. 2, Skin Irrit. 2, Aquatic Chronic 4; H361fd H315 H413			

Full text of H and EUH statements: see section 16.

Further Information

According to EC directives or the corresponding national regulations the product does not have to be labelled.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

Change contaminated clothing.
Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary. In case of inhalation of aerosols/spray mist/splash spots: Consult physician.
Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.
In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth immediately and drink plenty of water.
If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

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

No information available.

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

Treat symptomatically. Caution if victim vomits: Risk of aspiration!
Aspiration hazard: Call a physician immediately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.
Carbon dioxide (CO2). Dry extinguishing powder. Foam.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Special exposure hazards arising from the substance itself, combustion products, resulting gases:
Carbon dioxide (CO2). Carbon monoxide Sulphur oxides. Phosphorus oxides. Hydrogen sulphide (H2S).

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit. carbon black
In case of fire and/or explosion do not breathe fumes.
In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water. Dispose of waste according to applicable legislation.
Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Special danger of slipping by leaking/spilling product.

Wear suitable protective clothing.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13 In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Protect skin by using skin protective cream. Wash hands before breaks and after work.
Conditions to avoid: aerosol or mist generation.

Advice on protection against fire and explosion

No special measures are necessary.
When using do not smoke.
Fire class: B (DIN-/EN-Norms: EN2)

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.
Keep away from heat. Keep/Store only in original container.

Hints on joint storage

Do not store together with:Food and fodder, Oxidizing agents.

Further information on storage conditions

If product enters soil, it will be mobile and may contaminate groundwater. Keep away from heat.

7.3. Specific end use(s)

Central hydraulic motor

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
	Reaction products of triethylenetetramine and fatty acids, C16-18, C18 unsaturated		
,			

PNEC values

CAS No	Substance
Environmental compartment	Value
	Reaction products of triethylenetetramine and fatty acids, C16-18, C18 unsaturated

8.2. Exposure controls

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary . When using do not eat or drink. When using do not eat, drink or smoke.

Protect skin by using skin protective cream.
Keep away from food, drink and animal feedingstuffs.
Do not breathe vapour.

Eye/face protection

Wear eye protection/face protection. In fine dispersion/spraying/misting: Wear protective gloves/protective clothing.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable gloves.

Skin protection

Wear suitable protective clothing. In fine dispersion/spraying/misting: Wear protective gloves/protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	green
Odour:	characteristic

		Test method
pH-Value:	not applicable	DIN 51369
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	not determined	
Pour point:	~ -51 °C	
:		DIN ISO 3016
Flash point:	~ 126 °C	ISO 2592
Flammability		
Solid:	not applicable	
Gas:	not applicable	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Ignition temperature:	No data available	

Auto-ignition temperature

Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	not determined	

Oxidizing properties

Not oxidising.

Vapour pressure: (at 20 °C)	<0,1 hPa	calculated.
Density (at 15 °C):	~ 0,867 g/cm³	DIN 51757
Water solubility: (at 20 °C)	practically insoluble	

Solubility in other solvents

Soluble in hydrocarbons (mineral oil.)

Partition coefficient:	not determined	
Viscosity / kinematic: (at 100 °C)	~ 6,3 mm²/s	DIN 51562
Vapour density:	not determined	
Evaporation rate:	not determined	
Solvent separation test:	No data available	
Solvent content:	none Solvents	

9.2. Other information

Solid content:	not determined

none

SECTION 10: Stability and reactivity

10.1. Reactivity

Oxidizing agents, strong.

10.2. Chemical stability

No thermal decomposition if properly stored / handled /transported.
Onset of decomposition at elevated temperatures (>300°C)

10.3. Possibility of hazardous reactions

possible with strong oxidizing agents.
This product is stable under normal conditions. Hazardous reactions are unlikely.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

none

Further information

No thermal decomposition if properly stored / handled /transported.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

No data available.

Irritant effect on the respiratory tract: Do not breathe gas/vapour.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-55-8	Complex combination of hydrocarbons				
	oral	LD50 > 5000 mg/kg	Rat		
	dermal	LD50 > 3000 mg/kg	Rabbit		
64742-46-7	Distillates (petroleum), hydrotreated middle, Gasoil - unspecified				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >5000 mg/kg	Rabbit		
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 1.72 mg/l	Rat male.		
128-39-2	2,6-di-tert-butylphenol				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >10000 mg/kg	Rabbit		
268567-32-4	Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI)				
	oral	LD50 >2000 mg/kg	Rat		
	dermal	LD50 >2000 mg/kg	Rat		
94270-86-7	1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl				
	oral	LD50 >2000 mg/kg	Rat		
	Reaction products of triethylenetetramine and fatty acids, C16-18, C18 unsaturated				
	oral	LD50 >2000 mg/kg	Ratte		

Irritation and corrosivity

Irritant effect on the skin: none

Frequent and prolonged eye contact may cause eye irritation.

Sensitising effects

Due to the very low concentration of sensitizing substances, the finished product can be assumed not to be skin-sensitizing.

Carcinogenic/mutagenic/toxic effects for reproduction

The product is not classified.

STOT-repeated exposure

Frequently or prolonged contact with skin may cause dermal irritation.

Specific effects in experiment on an animal

No data available.

Practical experience

Observations relevant to classification

Has de-greasing effect on the skin.

Other observations

No special hazards known when the product is properly used and the precautionary measures indicated are observed.

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
268567-32-4	Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI)						
	Acute fish toxicity	LC50	38 mg/l	96 h	Brachydanio rerio (zebra-fish)		
	Acute crustacea toxicity	EC50	53 mg/l	48 h	Daphnia magna		
94270-86-7	1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl						
	Acute fish toxicity	LC50 mg/l	1-10	96 h			
	Acute crustacea toxicity	EC50 mg/l	1-10	48 h			
	Acute bacteria toxicity	(50-100 mg/l)					
	Reaction products of triethylenetetramine and fatty acids, C16-18, C18 unsaturated						
	Acute fish toxicity	LC50 mg/l	1000	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50	496 mg/l	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 mg/l	1000	48 h	Daphnia magna (Big water flea)		
	Acute bacteria toxicity	(1000 mg/l)		3 h			

12.2. Persistence and degradability

Due to its low solubility in water the product is almost completely mechanically separated in biological sewage plants. Poorly eliminated from water.

Not easily bio-degradable (according to OECD-criteria). Product is partially biodegradable. Significant residues remain.

Post-use oils must not be discharged into the sewer system or into surface waters nor must they be allowed to enter the soil.

12.3. Bioaccumulative potential

No data available.

Do not allow uncontrolled discharge of product into the environment.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
94270-86-7	1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl	>6

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

Aquatic organisms: No data available.

Effects in sewage plants No data available.

No data available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation. The waste codes stated are recommendations based on the expected use of the substance and may be re-assigned to other waste codes by the user, if applicable.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

List of Wastes Code - residues/unused products

130205 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; mineral-based non-chlorinated engine, gear and lubricating oils; hazardous waste

List of Wastes Code - used product

130205 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; mineral-based non-chlorinated engine, gear and lubricating oils; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Dispose of this material and its container to hazardous or special waste collection point.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.

14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No dangerous good in sense of this transport regulation.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28: Complex combination of hydrocarbons

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

According to EC directives or the corresponding national regulations the product does not have to be labelled.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 3,9.

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
EUH208	Contains Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI), 1-H benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-methyl. May produce an allergic reaction.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations. The above data are intended to describe our product in terms of any safety requirements to be observed. They reflect the state of our current knowledge and experience and shall not be construed as warranted characteristics. Any warranty for accuracy and completeness shall be expressly excluded.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)