

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**HIGHTEC ZHM-SYNT**

Revision date: 12.01.2018

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**

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**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 MINERALOELWERK GMBH	
Street:	Langgewann 101	
Place:	D-67547 Worms	
Telephone:	+49 (0)6241 5906-0	Telefax: +49 (0)6241 5906-999
e-mail:	info@rowe-mineraloel.com	
Internet:	www.rowe-mineraloel.com	
Responsible Department:	Kundenservice	

**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:

Acute toxicity: Acute Tox. 4

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if inhaled.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements**
**Regulation (EC) No. 1272/2008**
**Hazard components for labelling**

1-decene, dimer, hydrated

**Signal word:** Warning

**Pictograms:**

**Hazard statements**

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P501 Dispose of contents/container to of the disposal according to local regulations.

**Special labelling of certain mixtures**

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EUH208 Contains Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI), reaction products of P-/N-/S-containing compounds with propionic acid. 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	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
68649-11-6	1-decene, dimer, hydrated			30 - < 60 %
	500-228-5		01-2119537268-33	
	Acute Tox. 4, Asp. Tox. 1; H332 H304			
72623-87-1	Baseoil - unspecified, Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based			15 - < 30 %
	276-738-4	649-483-00-5	01-2119474889-13	
	Asp. Tox. 1; H304			
128-39-2	Alkyl phenol			<0,5 %
	204-884-0		01-2119490822-33	
	Skin Irrit. 2, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 1 (M-Factor = 1); H315 H400 H410			
	2,6-Di-tert-butylphenol			<0,5 %
	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)			<0,2 %
	434-070-2		01-2119658068-31	
	Eye Dam. 1, Skin Sens. 1, Aquatic Chronic 3; H318 H317 H412			
94270-86-7	reaction products of P-/N-/S-containing compounds with propionic acid			<0,2 %
	939-700-4		01-2119982395-25	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1 (M-Factor = 1), Aquatic Chronic 2; H315 H317 H400 H411			

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

**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

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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**

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.  
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 (CO<sub>2</sub>). 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 (CO<sub>2</sub>). Carbon monoxide Sulphur oxides. Phosphorus oxides. Hydrogen sulphide (H<sub>2</sub>S).

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus. 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.

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**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**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. 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**

**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/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

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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
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**Changes in the physical state**

Melting point:	not determined
Initial boiling point and boiling range:	not determined
Pourpoint:.	~-51 °C DIN ISO 3016
Flash point:	>100 °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 oxidizing.

Vapour pressure: (at 20 °C)	<0,1 hPa	calculated.
Density (at 15 °C):	~0,83 g/cm <sup>3</sup>	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 40 °C)	~21 mm <sup>2</sup> /s DIN 51562
Vapour density:	not determined
Evaporation rate:	not determined

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Solvent separation test:

No data available

Solvent content:

none Solvents

**9.2. Other information**

Solid content:

0

none

**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No data available

**10.2. Chemical stability**

No thermal decomposition if properly stored / handled /transported.

Onset of decomposition at elevated temperatures (&gt;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**

No data available

**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**
**Toxicokinetics, metabolism and distribution**

No data available.

**Acute toxicity**

No data available.

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

**ATEmix calculated**

ATE (inhalation vapour) 18,51 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68649-11-6	1-decene, dimer, hydrated				
	oral	LD50 >5000 mg/kg	Rat		
	dermal	LD50 >3000 mg/kg	Rabbit		
	inhalation vapour	ATE 11 mg/l			
	inhalation (4 h) aerosol	LC50 5 mg/l	Rat		
94270-86-7	reaction products of P-/N-/S-containing compounds with propionic acid				
	oral	LD50 >2000 mg/kg	Rat		

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**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.

**Additional information on tests**

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

**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.

**Further information**

No data available.

**SECTION 12: Ecological information****12.1. Toxicity**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. No data available.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68649-11-6	1-decene, dimer, hydrated					
	Acute fish toxicity	LC50 >1000 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 >1000 mg/l	72 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 >1000 mg/l	48 h	Daphnia magna		
	Crustacea toxicity	NOEC 125 mg/l	21 d	Daphnia magna		
72623-87-1	Baseoil - unspecified, Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based					
	Acute fish toxicity	LC50 > 100 mg/l	96 h		OECD 203	
	Acute algae toxicity	ErC50 >= 100 mg/l	72 h		OECD 201	
	Acute crustacea toxicity	EC50 > 10 000 mg/l	48 h		OECD 202	
94270-86-7	reaction products of P-/N-/S-containing compounds with propionic acid					
	Acute fish toxicity	LC50 1-10 mg/l	96 h			
	Acute crustacea toxicity	EC50 1-10 mg/l	48 h			
	Acute bacteria toxicity	(50-100 mg/l)				

**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.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
68649-11-6	1-decene, dimer, hydrated			
	Biodegradable.	50	28	
	2,6-Di-tert-butylphenol			
	Zahn-Wellens	24%	28	
	Sturm	5%	28	

**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
68649-11-6	1-decene, dimer, hydrated	> 6.5
72623-87-1	Baseoil - unspecified, Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based	> 6
	2,6-Di-tert-butylphenol	4,5
94270-86-7	reaction products of P-/N-/S-containing compounds with propionic acid	>6

**12.4. Mobility in soil**

No data available.



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**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**
**Advice on disposal**

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.

**Waste disposal number of waste from residues/unused products**

130111 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste hydraulic oils; synthetic hydraulic oils; hazardous waste

**Waste disposal number of used product**

130111 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste hydraulic oils; synthetic hydraulic 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.

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**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**

**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 juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - clearly water contaminating

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): 1,2,3,4,5,6,7,8,9,11,12,13,15,16.

**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
Acute Tox. 4; H332	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.  
 H332 Harmful if inhaled.

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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.
EUH208	Contains Propanoic acid, 3-[[bis(2-methylpropoxy)phosphinothioyl]thio]-2-methyl-(9CI), reaction products of P-/N-/S-containing compounds with propionic acid. May produce an allergic reaction.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances 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.

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