

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**HIGHTEC FORMULA SAE 10W-40 TS-Z**

Revision date: 06.04.2023

Product code: 20049

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

HIGHTEC FORMULA SAE 10W-40 TS-Z

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

Motor oil

**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	
Contact person:	Product Compliance	
E-mail:	sdb@rowe-oil.com	
Internet:	www.rowe-oil.com	

**1.4. Emergency telephone number:**

Ireland: Public (8am-10pm) +353 180 921 66, Healthcare Professionals +353 1809 2566 other Countries: Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

**2.2. Label elements****2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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**Relevant ingredients**

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
68649-12-7	1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	2.5 - < 5 %
	01-2119527646-33	
	Asp. Tox. 1; H304	
163149-28-8	1-Dodecene, polymer with 1-decene and 1-octene, hydrogenated	2.5 - < 5 %
	605-315-2	
	01-2119543695-30	
	Asp. Tox. 1; H304	
151006-60-9	1-Dodecene, polymer with 1-decene, hydrogenated	2.5 - < 5 %
	604-767-8	
	01-2119523580-47	
	Asp. Tox. 1; H304	
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	1 - < 2.5 %
	288-917-4	
	01-2119521201-64	
	Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 2; H315 H318 H411	

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

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
68649-12-7		1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	2.5 - < 5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
85940-28-9	288-917-4	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	1 - < 2.5 %
		dermal: LD50 = > 20000 mg/kg; oral: LD50 = 3080 mg/kg Skin Irrit. 2; H315: >= 15 - 100 Eye Dam. 1; H318: >= 20 - 100 Eye Irrit. 2; H319: >= 15 - < 20	

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**After inhalation**

Provide fresh air.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

**After ingestion**

Rinse mouth immediately and drink 1 glass of water.

**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.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

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**5.2. Special hazards arising from the substance or mixture**

Non-flammable.

**5.3. Advice for firefighters**

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

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid contact with skin, eyes and clothes. Do not breathe mist/vapours/spray.

**For non-emergency personnel**

Provide adequate ventilation. Use personal protection equipment.

**For emergency responders**

Wear personal protection equipment (refer to section 8).

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up****For containment**

Stop leak if safe to do so. Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers).

**For cleaning up**

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

**Other information**

Clean contaminated articles and floor according to the environmental legislation.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

No special measures are necessary.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed.

**Hints on joint storage**

No special measures are necessary.

**7.3. Specific end use(s)**

Motor oil

**SECTION 8: Exposure controls/personal protection**

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**8.1. Control parameters**
**DNEL/DMEL values**

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts		
Worker DNEL, long-term	inhalation	systemic	6,6 mg/m <sup>3</sup>
Worker DNEL, long-term	dermal	systemic	9,6 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	1,67 mg/m <sup>3</sup>
Consumer DNEL, long-term	dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term	oral	systemic	0,19 mg/kg bw/day

**PNEC values**

CAS No	Substance	
Environmental compartment	Value	
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	
Freshwater	0,002 mg/l	
Freshwater (intermittent releases)	0,02 mg/l	
Marine water	0 mg/l	
Freshwater sediment	19,3 mg/kg	
Marine sediment	1,93 mg/kg	
Micro-organisms in sewage treatment plants (STP)	100 mg/l	
Soil	15,7 mg/kg	

**8.2. Exposure controls**
**Individual protection measures, such as personal protective equipment**
**Eye/face protection**

Wear eye/face protection.

**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.

**Skin protection**

Use of protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**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:	light brown
Odour:	characteristic

Melting point/freezing point:

 Test method  
 not determined

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Boiling point or initial boiling point and boiling range:	not determined
Flammability:	Not readily combustible.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	>190 °C DIN ISO 2592
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not applicable DIN 51369
Viscosity / kinematic: (at 100 °C)	~ 14,5 mm <sup>2</sup> /s DIN 51562
Water solubility:	practically insoluble
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure: (at 20 °C)	<0,1 hPa calculated.
Density (at 15 °C):	~ 0,860 g/cm <sup>3</sup> DIN 51757
Relative vapour density:	not determined
Particle characteristics:	not relevant

**9.2. Other information**
**Other safety characteristics**

Pour point:	~ -30 °C DIN ISO 3016
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**SECTION 10: Stability and reactivity**
**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

none

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information**
**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**
**Acute toxicity**

Based on available data, the classification criteria are not met.

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
68649-12-7	1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1994)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1995)	OECD Guideline 402
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts				
	oral	LD50 3080 mg/kg	Rat	REACH Dossier	
	dermal	LD50 > 20000 mg/kg	Rabbit	REACH Dossier	

**Irritation and corrosivity**

Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Additional information on tests**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

**11.2. Information on other hazards**
**Other information**

No information available.

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

Based on available data, the classification criteria are not met.

The product is not: Ecotoxic.

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
68649-12-7	1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated					
	Acute fish toxicity	LL50 > 1000 mg/l	96 h	Oncorhynchus mykiss	Study report (1995)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 1000 mg/l	96 h	Raphidocelis subcapitata	Study report (1995)	OECD Guideline 201
	Acute crustacea toxicity	EL50 > 1000 mg/l	48 h	Daphnia magna	Study report (1995)	OECD Guideline 202
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts					
	Acute fish toxicity	LL50 4,5 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	REACH Dossier	OECD 203
	Acute algae toxicity	ErC50 2,1 mg/l	72 h	Selenastrum capricornutum	REACH Dossier	OECD 201
	Acute crustacea toxicity	EC50 5,4 mg/l	48 h	Daphnia magna (Big water flea)	REACH Dossier	OECD 202
	Crustacea toxicity	NOEC 0,4 mg/l	21 d	Daphnia magna (Big water flea)	REACH Dossier	OECD 211
	Acute bacteria toxicity	EC50 mg/l ( ) > 10000	3 h	Activated sludge	REACH Dossier	OECD 209

**12.2. Persistence and degradability**

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts			
	OECD 301B	1,5 %	28	Pre-supplier/manufacturer
	Not easily bio-degradable (according to OECD-criteria).			

**12.3. Bioaccumulative potential**

The product has not been tested.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
68649-12-7	1-Decene, tetramer, mixed with 1-decene trimer, hydrogenated	> 6,5
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	8,87

**BCF**

CAS No	Chemical name	BCF	Species	Source
85940-28-9	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu and iso-Pr) esters, zinc salts	< 1000		REACH Dossier

**12.4. Mobility in soil**

No data available.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

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No information available.

#### Further information

Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### 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

Wash with plenty of water. Completely emptied packages can be recycled.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

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

#### Inland waterways transport (ADN)

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

#### Marine transport (IMDG)

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

#### Air transport (ICAO-TI/IATA-DGR)

<b><u>14.1. UN number or ID number:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.2. UN proper shipping name:</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.3. Transport hazard class(es):</u></b>	No dangerous good in sense of this transport regulation.
<b><u>14.4. Packing group:</u></b>	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. Maritime transport in bulk according to IMO instruments

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



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**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 75

Information according to Directive  
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**

Water hazard class (D):

1 - slightly hazardous to water

**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): 3,9,12,16.

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**Abbreviations and acronyms**

Asp. Tox: Aspiration hazard  
Skin Irrit: Skin irritation  
Eye Dam: Eye damage  
Aquatic Chronic: Chronic aquatic hazard  
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%  
CLP: Classification, labelling and Packaging  
REACH: Registration, Evaluation and Authorization of Chemicals  
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
UN: United Nations  
DNEL: Derived No Effect Level  
DMEL: Derived Minimal Effect Level  
PNEC: Predicted No Effect Concentration  
ATE: Acute toxicity estimate  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
PBT: persistent, bioaccumulative, toxic  
vPvB: very persistent, very bioaccumulative  
RID: Regulations concerning the international carriage of dangerous goods by rail  
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)  
EmS: Emergency Schedules  
MFAG: Medical First Aid Guide  
ICAO: International Civil Aviation Organization  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
SVHC: Substance of Very High Concern  
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

**Relevant H and EUH statements (number and full text)**

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.

**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.

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