Safety Data Sheet

according to Regulation (EC) No 1907/2006

HIGHTEC DIESEL SYSTEM PROTECT

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

1.1. Product identifier

HIGHTEC DIESEL SYSTEM PROTECT

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

Use of the substance/mixture

Additive

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:
Aspiration hazard: Asp. Tox. 1
Hazardous to the aquatic environment: Aquatic Chronic 3
Hazard Statements:
May be fatal if swallowed and enters airways.
Harmful to aquatic life with long lasting effects.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Hydrocarbons, C10-C13, n-alkanes,
Solvent naphtha (petroleum), aromatics heavy

Signal word: Danger

Pictograms:

Hazard statements

H304	May be fatal if swallowed and enters airways.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P501	Dispose of contents/container to of the disposal according to local regulations.
P405	Store locked up.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331	Do NOT induce vomiting.
P273	Avoid release to the environment.
P102	Keep out of reach of children.

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			
1174522-09-8	Hydrocarbons, C10-C13, n-alkanes,			70-90 %
	918-481-9		01-2119457273-39	
	Asp. Tox. 1; H304 EUH066			
27247-96-7	2-ethylhexyl nitrates			1-10 %
	248-363-6		01-2119539586-27	
	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Aquatic Chronic 2; H332 H312 H302 H411			
64742-94-5	Solvent naphtha (petroleum), aromatics heavy			1-10 %
	265-198-5	649-424-00-3	01-2119451151-53	
	Asp. Tox. 1, Aquatic Chronic 2; H304 H411			
104-76-7	2-ETHYL-1-HEXANOL			1-10 %
	203-234-3		01-2119487289-20	
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
91-20-3	naphthalene			<1 %
	202-049-5	601-052-00-2	01-2119561346-37	
	Carc. 2, Acute Tox. 4, Aquatic Acute 1, Aquatic Chronic 1; H351 H302 H400 H410			
121158-58-5	Dodecylphenol, mixed isomers (branched)			<1 %
	310-154-3		01-2119513207-49	
	Repr. 2, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H361fd H315 H319 H400 H410			
95-63-6	1,2,4-trimethylbenzene			<1 %
	202-436-9	601-043-00-3	01-2119472135-42	
	Flam. Liq. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H226 H332 H315 H319 H335 H411			
107-15-3	ethylenediamine; 1,2-diaminoethane			<1 %
	203-468-6	612-006-00-6		
	Flam. Liq. 3, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, Resp. Sens. 1, Skin Sens. 1; H226 H312 H302 H314 H334 H317			

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

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

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an

ophthalmologist immediately.

After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water.

Call a physician in any case!

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

Frequently or prolonged contact with skin may cause dermal irritation.

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. Carbon dioxide. Extinguishing powder. alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air.

5.3. Advice for firefighters

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

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. 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

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment. Remove all sources of ignition.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

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

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.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep only in the original container in a cool,

well-ventilated place. Floors should be impervious, resistant to liquids and easy to clean. Keep away from sources of ignition - No smoking.

Hints on joint storage

No special measures are necessary.

7.3. Specific end use(s)

Additive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
104-76-7	2-ethylhexan-1-ol	1	5.4		TWA (8 h)	WEL
91-20-3	Naphthalene	10	50		TWA (8 h)	EU
95-63-6	Trimethylbenzenes: 1,2,4-Trimethylbenzene	25	125		TWA (8 h)	WEL

8.2. Exposure controls

Appropriate engineering controls

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

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.

Eye/face protection

Suitable eye protection: goggles. Tightly sealed safety glasses.

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

Protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. With correct and proper use, and under normal conditions, breathing protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	light yellow
Odour:	characteristic
pH-Value:	not determined

Changes in the physical state

Initial boiling point and boiling range:	~ 180-280 °C
Flash point:	~ 63 °C

Flammability

Solid:	not applicable
Gas:	not applicable
Lower explosion limits:	0,6 vol. %
Upper explosion limits:	7,0 vol. %
Ignition temperature:	~ 200 °C

Auto-ignition temperature

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

Oxidizing properties

Not oxidising.

Vapour pressure:	not determined
Density (at 15 °C):	~ 0,81 g/cm³
Water solubility:	sparingly soluble.

Solubility in other solvents

miscible with most organic solvents

Partition coefficient:	VOC g/l: 810
Vapour density:	not determined
Evaporation rate:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.2. Chemical stability

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Remove all sources of ignition.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
1174522-09-8	Hydrocarbons, C10-C13, n-alkanes,					
	oral	LD50 mg/kg	>5000	Rat	OECD-Richtlinien 401	
	dermal	LD50 mg/kg	>5000	Rabbit	OECD-Richtlinien 402	
	inhalation (4 h) vapour	LC50	4951 mg/l	Rat	OECD-Richtlinien 403	
27247-96-7	2-ethylhexyl nitrates					
	oral	ATE mg/kg	500			
	dermal	ATE mg/kg	1100			
	inhalation (1 h) vapour	ATE	11 mg/l			
	inhalation aerosol	ATE	1,5 mg/l			
64742-94-5	Solvent naphtha (petroleum), aromatics heavy					
	inhalation vapour	LC50 mg/l	>590	Rat		
91-20-3	naphthalene					
	oral	ATE mg/kg	500			
121158-58-5	Dodecylphenol, mixed isomers (branched)					
	oral	LD50 mg/kg	2100	Rat		
	dermal	LD50 mg/kg	15000	Rabbit		
95-63-6	1,2,4-trimethylbenzene					
	oral	LD50 mg/kg	5000	Rat	RTECS	
	inhalation (4 h) vapour	LC50	18 mg/l	Rat	RTECS	
	inhalation aerosol	ATE	1,5 mg/l			
107-15-3	ethylenediamine; 1,2-diaminoethane					
	oral	LD50 mg/kg	1200	Rat	GESTIS	
	dermal	LD50 mg/kg	656	Rabbit	GESTIS	

Additional information on tests

The mixture is classified as hazardous according to Directive 1999/45/EC.

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
1174522-09-8	Hydrocarbons, C10-C13, n-alkanes,						
	Acute fish toxicity	LC50 mg/l	1000	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 mg/l	1000	72 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 mg/l	1000	48 h	Daphnia magna		
27247-96-7	2-ethylhexyl nitrates						
	Acute fish toxicity	LC50	2 mg/l	96 h	Brachydanio rerio (zebra-fish)		
	Acute algae toxicity	ErC50 mg/l	1-10	72 h			
	Acute crustacea toxicity	EC50	>10 mg/l	48 h	Daphnia magna		
64742-94-5	Solvent naphtha (petroleum), aromatics heavy						
	Acute fish toxicity	LC50	2-5 mg/l	96 h			
	Acute crustacea toxicity	EC50 mg/l	3-10	48 h			
95-63-6	1,2,4-trimethylbenzene						
	Acute fish toxicity	LC50 mg/l	7,72	96 h	Pimephales promelas		
	Acute crustacea toxicity	EC50	3,6 mg/l	48 h	Daphnia	ECOTOX	
107-15-3	ethylenediamine; 1,2-diaminoethane						
	Acute crustacea toxicity	EC50 mg/l	26,5	48 h		GESTIS	

12.2. Persistence and degradability

Product is partially biodegradable.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
27247-96-7	2-ethylhexyl nitrates			
		0%	28	

12.3. Bioaccumulative potential

Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
27247-96-7	2-ethylhexyl nitrates	3,74-5,24
121158-58-5	Dodecylphenol, mixed isomers (branched)	7,1
95-63-6	1,2,4-trimethylbenzene	3,63
107-15-3	ethylenediamine; 1,2-diaminoethane	-2,04

BCF

CAS No	Chemical name	BCF	Species	Source
27247-96-7	2-ethylhexyl nitrates	1332		
64742-94-5	Solvent naphtha (petroleum), aromatics heavy	<100		

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

12.6. Other adverse effects

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

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. Send to a physico-chemical treatment facility under observation of official regulations. Following consultation with waste management company and after physico-chemical pre-treatment, landfill together with household waste.

List of Wastes Code - residues/unused products

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

List of Wastes Code - used product

070704 WASTES FROM ORGANIC CHEMICAL PROCESSES; wastes from the MFSU of fine chemicals and chemical products not otherwise specified; other organic solvents, washing liquids and mother liquors; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

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

Authorisations (REACH, annex XIV):

Substances of very high concern, SVHC (REACH, article 59):
ethylenediamine; 1,2-diaminoethane

Restrictions on use (REACH, annex XVII):

Entry 3: 1,2,4-trimethylbenzene; ethylenediamine; 1,2-diaminoethane
Entry 28: Hydrocarbons, C10-C13, n-alkanes,
Entry 30: Dodecylphenol, mixed isomers (branched)

2004/42/EC (VOC):	810 g/l
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles 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 hazard class (D):	2 - obviously 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): 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
Asp. Tox. 1; H304	Calculation method
Aquatic Chronic 3; H412	

Relevant H and EUH statements (number and full text)

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.

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