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

1.1. Product identifier

HIGHTEC ANTIFREEZE (dunkelblau)

UFI: D42S-CK3N-800C-GNFK

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

Use of the substance/mixture

Radiator anti-freeze

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:
Acute toxicity: Acute Tox. 4
Serious eye damage/eye irritation: Eye Irrit. 2
Hazard Statements:
Harmful if swallowed.
Causes serious eye irritation.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

ethanediol

Signal word: Warning

Pictograms:

Hazard statements

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

Precautionary statements

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

P501 Dispose of contents/container to Dispose of waste according to applicable legislation..

2.3. Other hazards

following inhalation: Vapour and mist concentrations above the allowable levels or unusually high concentrations may cause irritation to the nose and throat as well as headache, nausea and drowsiness.
After skin contact: Brief contact with the product may cause slight skin irritation. Prolonged contact (e.g. through soaked clothing) may result in serious skin irritation with symptoms such as redness and swelling.
Following eye contact: Conjunctival redness.
after ingestion: Oral ingestion of small amounts causes kidney damage.
Caution if victim vomits: Risk of aspiration!

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	ethanediol			60 - <= 100 %
	203-473-3	603-027-00-1		
	Acute Tox. 4; H302			
3164-85-0	2-ethylhexanoic acid, potassium salt			1 - < 2.5 %
	221-625-7		01-2119980714-29	
	Repr. 2, Skin Irrit. 2, Eye Dam. 1; H361d H315 H318			
95193-83-2	1H-Indene-1,3(2H)-dione, 2-(2-quinolinyl)-, sulfonated, sodium salts			< 0.1 %
	305-897-5		01-2120752822-53	

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Take off contaminated clothing.
Self-protection of the first aider

After inhalation

Provide fresh air.
In all cases of doubt, or when symptoms persist, seek medical advice.
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

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

IF ON SKIN: Wash with plenty of water/.?.
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.

Call a physician immediately.
In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids

apart. Subsequently consult an ophthalmologist.

After ingestion

Medical treatment necessary.
If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.
Rinse mouth immediately and drink plenty of water.
Do NOT induce vomiting.

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. Ethylene glycol poisoning may cause initial symptoms such as behavioral disorders, drowsiness, vomiting, diarrhea, thirst and spasms. Kidney damage and kidney failure along with metabolic acidosis are late poisoning symptoms. Prompt medical treatment complemeted by haemodialysis, if necessary, can reduce the toxic effect. Intravenous administration of ethanol in a sodium bicarbonate solution is a recognized antidote. For further treatment information, please consult the Poison Control Centre.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.
Dry extinguishing powder.
Water fog.
Foam.
Carbon dioxide.

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 monoxide
carbon black
Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.
In case of fire and/or explosion do not breathe fumes.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.
Do not allow entering drains or surface water.

Use water spray jet to protect personnel and to cool endangered containers.
Move undamaged containers from immediate hazard area if it can be done safely.
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.

Do not breathe gas/fumes/vapour/spray.

Special danger of slipping by leaking/spilling product.
Ventilate affected area.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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.

Prevent spread over a wide area (e.g. by containment or oil barriers).

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.

Avoid contact with skin and eyes.
Wash hands thoroughly after handling.
Protect skin by using skin protective cream.

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.

Hints on joint storage

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

Further information on storage conditions

Keep away from heat.

7.3. Specific end use(s)

Radiator anti-freeze

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, vapour	20	52		TWA (8 h)	WEL
		40	104		STEL (15 min)	WEL
56-81-5	Glycerol, mist	-	10		TWA (8 h)	WEL

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, drink, smoke, sniff.

Do not eat, drink, smoke or sneeze at the workplace.
Keep away from food, drink and animal feedingstuffs.
Protect skin by using skin protective cream.
Wash hands before breaks and after work.
Apply skin care products after work.
Remove contaminated, saturated clothing immediately.

Eye/face protection

Suitable eye protection: goggles. 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. Avoid contact with skin.
Tested protective gloves are to be worn: Butyl rubber. / NBR (Nitrile rubber).

Skin protection

Use of protective clothing. Body protection: not required.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. With correct and proper use, and under normal conditions, breathing protection is not required.
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, closed-circuit breathing apparatus must be used!

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	blue
Odour:	characteristic

		Test method
pH-Value (at 20 °C):	7,8 - 8,6 (50% in H2O)	
Changes in the physical state		
Melting point:	No data available.	
Initial boiling point and boiling range:	not determined	
Pour point:	-38 (50% in H2O °C	
:		DIN 51794
Flash point:	>100 °C	DIN 51758
Flammability		

Solid:	not applicable	
Gas:	not applicable	

Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined	
Upper explosion limits:	not determined	

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	
Density (at 20 °C):	~ 1,12 g/cm³	DIN 51757
Water solubility:	completely miscible	

Solubility in other solvents

not determined

Partition coefficient:	not determined	
Viscosity / kinematic:		DIN 51562
Vapour density:	not determined	
Evaporation rate:	not determined	

9.2. Other information

Solid content:	0%	

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

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

Oxidizing agents, strong.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

none

Further information

none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

ATEmix calculated

ATE (oral) 596,8 mg/kg

Acute toxicity

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol				
	oral	ATE 500 mg/kg			
	dermal	LD50 10600 mg/kg	Rabbit	GESTIS	

Irritation and corrosivity

Frequently or prolonged contact with skin may cause dermal irritation.

Sensitising effects

not determined

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]. Oral ingestion of small amounts causes kidney damage.
Contact with the eyes causes eye inflammation.
Inhalation of mists and vapours causes impaired consciousness.

Further information

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

SECTION 12: Ecological information

12.1. Toxicity

The product is not: Ecotoxic.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
107-21-1	ethanediol					
	Acute fish toxicity	LC50 18500 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)		
	Acute algae toxicity	ErC50 6500-7500 mg/l	96 h	Pseudokirchneriella subcapitata		
	Acute crustacea toxicity	EC50 >10,000 mg/l	48 h	Daphnia magna		

12.2. Persistence and degradability

According to EU criteria: expected to biodegrade fast
The product basis (ethylene glycol) itself is readily biodegradable.

12.3. Bioaccumulative potential

Biological degradation: Yes, rapidly

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol	-1,34

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Do not allow uncontrolled discharge of product into the environment.

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.

List of Wastes Code - residues/unused products

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing hazardous substances; hazardous waste

List of Wastes Code - used product

160114 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); antifreeze fluids containing hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Contaminated packaging should be emptied to the maximum possible extent. After appropriate cleaning, it can be routed to reuse. Packaging not amenable to cleaning must be disposed of in accordance with the statutory regulations.

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

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).

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): 1,3,9.

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%
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 table at http://abbrev.esdscom.eu

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Eye Irrit. 2; H319	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.

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.)