

Safety Data Sheet

according to Regulation (EC) No 1907/2006

HIGHTEC ANTIFREEZE COOLANT AN 12++

Revision date: 30.01.2024

Product code: 21033

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

1.1. Product identifier

HIGHTEC ANTIFREEZE COOLANT AN 12++

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

Use of the substance/mixture

Radiator antifreeze

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

Acute Tox. 4; H302
STOT RE 2; H373

Full text of hazard statements: see SECTION 16.

2.2. Label elements

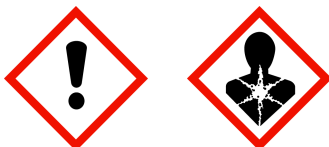
Regulation (EC) No 1272/2008

Hazard components for labelling

ethanediol; ethylene glycol

Signal word: Warning

Pictograms:



Hazard statements

H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P501 Dispose of contents/container to of the disposal according to local regulations.

2.3. Other hazards

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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
Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
107-21-1	ethanediol; ethylene glycol			60 - < 100 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			1 - < 2.5 %
	299-890-3			
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
29385-43-1	methyl-1H-benzene triazole			0.1 - < 0.3 %
	249-596-6		01-2119979081-35	
	Repr. 2, Acute Tox. 4, Aquatic Chronic 2; H361d H302 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	
107-21-1	203-473-3	ethanediol; ethylene glycol	60 - < 100 %
		oral: ATE = 500 mg/kg	
93918-10-6	299-890-3	Potassium 3,5,5-trimethylhexanoate	1 - < 2.5 %
		oral: LD50 = >= 2000 mg/kg	
29385-43-1	249-596-6	methyl-1H-benzene triazole	0.1 - < 0.3 %
		inhalation: LC50 = >1730 mg/l (vapours); dermal: LD50 = > 4000 mg/kg; oral: LD50 = 720 mg/kg	

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

Provide fresh air. Medical treatment necessary.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

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

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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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.

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

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****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. Remove persons to safety.

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**

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.

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Advice on general occupational hygiene

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.

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)

Radiator antifreeze

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
107-21-1	(OLD) 1,2-Dihydroxyethane, particulate	-	10		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
107-21-1	ethanediol; ethylene glycol			
Worker DNEL, long-term		inhalation	local	35 mg/m ³
Worker DNEL, long-term		dermal	systemic	106 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	53 mg/kg bw/day
29385-43-1	methyl-1H-benzene triazole			
Worker DNEL, long-term		inhalation	systemic	21,2 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,3 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	0,01 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,01 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
107-21-1	ethanediol; ethylene glycol	
Freshwater		10 mg/l
Freshwater (intermittent releases)		10 mg/l
Marine water		1 mg/l
Freshwater sediment		37 mg/kg
Marine sediment		3,7 mg/kg
Micro-organisms in sewage treatment plants (STP)		199,5 mg/l
Soil		1,53 mg/kg
29385-43-1	methyl-1H-benzene triazole	
Freshwater		0,008 mg/l
Freshwater (intermittent releases)		0,086 mg/l
Marine water		0,02 mg/l
Freshwater sediment		0,117 mg/kg
Marine sediment		0,292 mg/kg
Micro-organisms in sewage treatment plants (STP)		39,4 mg/l
Soil		0,0187 mg/kg

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.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

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

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Colour: magenta
 Odour: characteristic

Test method

Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	not determined	
Flammability:	Non-flammable.	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	>100 °C	DIN 51758
Auto-ignition temperature:	not determined	
Decomposition temperature:	not determined	
pH-Value:	~ 7,5-8,8 (33%)	in H ₂ O
Viscosity / kinematic:	not determined	ISO 3219
Water solubility:	completely miscible	
Solubility in other solvents:		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	<0,1 hPa	
(at 20 °C)		
Density (at 20 °C):	~ 1,12 g/cm ³	DIN 51757
Relative vapour density:	not determined	
Particle characteristics:	not relevant	

9.2. Other information

pH pur (pH pure) ~8

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

Harmful if swallowed.

ATEmix calculated

ATE (oral) 537,4 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol; ethylene glycol				
	oral	ATE 500 mg/kg			
93918-10-6	Potassium 3,5,5-trimethylhexanoate				
	oral	LD50 >= 2000 mg/kg	Rat	Study report (1986)	OECD Guideline 401
29385-43-1	methyl-1H-benzene triazole				
	oral	LD50 720 mg/kg	Rat	Study report (1983)	OECD Guideline 401
	dermal	LD50 > 4000 mg/kg	Rabbit		
	inhalation (1 h) vapour	LC50 >1730 mg/l	Rat		

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

May cause damage to organs through prolonged or repeated exposure. (ethanediol; ethylene glycol)

Aspiration hazard

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

Additional information on tests

The mixture is classified as 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
107-21-1	ethanediol; ethylene glycol					
	Acute fish toxicity	LC50 > 72860 mg/l	96 h	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	EPA 600/4-90/027. U.S. Environmental Pro
	Acute algae toxicity	ErC50 6500 - 13000 mg/l	96 h	Pseudokirchneriella subcapitata	Study report (1982)	other: EPA 600/9-78-018, 1978
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna	Study report (1998)	OECD Guideline 202
	Fish toxicity	NOEC 15380 mg/l	7 d	Pimephales promelas	Environ. Toxicology and Chemistry, Vol.	other: EPA 600/4-89/001. U.S. Environmen
	Algae toxicity	NOEC > 100 mg/l	8 d	Scenedesmus quadricauda	REACH Registration Dossier	OECD Guideline 201
	Crustacea toxicity	NOEC 7500 - 15000 mg/l	21 d	Daphnia magna	REACH Registration Dossier	other: ASTM
93918-10-6	Potassium 3,5,5-trimethylhexanoate					
	Acute algae toxicity	ErC50 189,87 mg/l	72 h	Raphidocelis subcapitata	Study report (2016)	OECD Guideline 201
29385-43-1	methyl-1H-benzene triazole					
	Acute fish toxicity	LC50 55 mg/l	96 h	Cyprinodon variegatus	Study report (2003)	other: The test procedure is based on te
	Acute algae toxicity	ErC50 75 mg/l	72 h	Pseudokirchneriella subcapitata	Study report (1994)	OECD Guideline 201
	Acute crustacea toxicity	EC50 15,8 mg/l	48 h	other aquatic crustacea: Daphnia galeata	Environ Sci Pollut Res 19:1781-1790 (201)	OECD Guideline 202
	Crustacea toxicity	NOEC <0,4 mg/l	21 d	Daphnia magna	Study report (1995)	other: "Daphnia Reproduction Test" of OE

12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
93918-10-6	Potassium 3,5,5-trimethylhexanoate			
	OECD 301B	87,9	28	
	Readily biodegradable (according to OECD criteria).			

12.3. Bioaccumulative potential

The product has not been tested.

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol; ethylene glycol	-1,36
93918-10-6	Potassium 3,5,5-trimethylhexanoate	-0,47
29385-43-1	methyl-1H-benzene triazole	1,079

12.4. Mobility in soil

The product has not been tested.

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

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

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

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information
Land transport (ADR/RID)

14.1. UN number or ID 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 or ID 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 or ID 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.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID 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. 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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to Directive 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.

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Abbreviations and acronyms

Acute Tox: Acute toxicity
 Skin Irrit: Skin irritation
 Eye Irrit: Eye irritation
 Repr: Reproductive toxicity
 STOT RE: Specific target organ toxicity - repeated exposure
 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).

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

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

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H373 May cause damage to organs through prolonged or repeated exposure.
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 data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)