

SAFETY DATA SHEET

1. Identification

Product identifier Perkins ELC Advanced (Extended Life Coolant) Premix 50/50 with Embitterment

Other means of identification

Product code 2000755

Recommended use of the chemical and restrictions on use

Recommended use Antifreeze / Coolant.

Recommended restrictions Uses other than the recommended use.

Manufacturer/Importer/Supplier/Distributor information

Supplier ARTECO NV
Metropoolstraat 25
B-2900 Schoten (Antwerpen)
Belgium

e-mail orders@arteco-coolants.com

Product information +32 (0) 9 397 06 00

Emergency telephone number

Transportation emergency Europe: +1 760 476 3962 (24hr) Access code: 335087

Health Emergency Europe: +1 760 476 3962 (24hr) Access code: 335087

2. Hazards identification

Physical hazards Not classified.

Health hazards Acute toxicity, oral Category 5
Specific target organ toxicity - repeated exposure Category 2 (kidney)

Environmental hazards Not classified.

Label elements



Signal word Warning

Hazard statement May be harmful if swallowed. May cause damage to organs (kidney) through prolonged or repeated exposure.

Precautionary statement

Prevention Keep out of reach of children. Do not breathe mist/vapours.

Response If medical advice is needed, have product container or label at hand. IF SWALLOWED: Immediately call a POISON CENTRE/doctor.

Storage Not assigned.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification None known.

Supplemental information None.

3. Composition/information on ingredients

Mixture

Chemical name	CAS number	%
Ethylene glycol	107-21-1	34 - < 80
Sodium benzoate	532-32-1	0.1 - < 3

Composition comments All concentrations are in percent by weight.
This product contains a bittering agent.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists. Continue rinsing.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterised.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Absorb spillage with suitable absorbent material. Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Do not breathe mist/vapours. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Do not taste or swallow. When using, do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities	Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	10 mg/m3	Aerosol, inhalable.
		50 ppm	Vapor fraction
	TWA	25 ppm	Vapor fraction
Sodium benzoate (CAS 532-32-1)	TWA	2.5 mg/m3	Inhalable fraction.

Bahrain. TLVs. Resolution No. 4 Regarding the Management of Hazardous Chemicals, Exposure Limits for Dangerous and Poisonous Chemicals, Annex. 3, as amended

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	STEL	45 mg/m3
		25 ppm

Egypt. OELs. Threshold limits of air pollutants in the workplace (Decree No. 338, Annex 8), as amended

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol
		39.4 ppm	Aerosol

GCC. OELs. Occupational Exposure Limits for Hazardous Chemical Substances (Common System for the Management of Hazardous Chemicals in the Gulf Cooperation Council for the Arab States of the Gulf, Annex 3)

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	STEL	45 mg/m3
		25 ppm

Jordan. Resolution No. 43 (1998) Safety and Protection from Industrial Equipment, Machinery and Workplaces (Table of Permissible Threshold Limits of Workers Exposure to Chemicals)

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	STEL	125 mg/m3
		50 ppm
	TWA	125 mg/m3
		50 ppm

Kuwait. Maximum Limits for Occupational Exposure to Chemical Substances (TLVs) Articles 19 and 20 of the Environmental Protection Law No. 42 of 2014, as amended

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	100 mg/m3	Aerosol
	TWA	125 mg/m3	Aerosol
		50 ppm	Aerosol

UAE. OELs. Maximum Allowable Limits for Air Pollutants in Working Areas [Law to Protect the Air from Pollution, Resolution of the Cabinet of Ministers No. 12 of 2006], as amended

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3
		39.4 ppm

UAE. Abu Dhabi. TLVs. Maximum Allowable Limits for Air Pollutants in Working Areas (AD EHSMS RF - Occupational Standards and Guideline Values, Schedule A)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	Ceiling	100 mg/m3	Aerosol

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

Sodium benzoate (CAS 532-32-1)

Danger of cutaneous absorption

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Neoprene, butyl rubber, nitrile or Viton gloves are recommended. Full contact: Use gloves classified protection index 6 with breakthrough time of 480 minutes. Minimum glove thickness 0.38 mm.

Other

Wash hands thoroughly after handling. Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapour cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Observe any medical surveillance requirements.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Slightly opaque liquid.

Colour

Red.

Odour

Mild.

Odour threshold

Not determined.

pH

> 7.9 - < 8.6 (20 °C (68 °F))

Melting point/freezing point

Not applicable. / ≤ -37 °C (≤ -34.6 °F)

Initial boiling point and boiling range

109 °C (228.2 °F) (Estimated)

Flash point

Does not flash.

Evaporation rate

Not determined.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%)

Not determined.

Explosive limit – upper (%)

Not determined.

Vapour pressure

Not determined.

Vapour density

Not determined.

Relative density

Not determined.

Solubility(ies)

Solubility (water)

Miscible.

Partition coefficient (n-octanol/water)

Not applicable, product is a mixture.

Auto-ignition temperature

398 °C (748.4 °F) (Ethylene glycol)

Decomposition temperature

Not determined.

Viscosity

Not determined.

Other information

Density

1.0740 kg/l (Typical) (20 °C (68 °F))

Kinematic viscosity

Not determined.

Molecular weight

Not applicable (The product is a mixture).

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong acids. Strong oxidising agents. Nitrates. Peroxides. Chlorates.
Hazardous decomposition products	At elevated temperatures: Ketones. Aldehydes.

11. Toxicological information

Information on likely routes of exposure

Inhalation	In high concentrations, mists/vapours may irritate throat and respiratory system and cause coughing.
Skin contact	Prolonged or repeated contact may dry skin and cause irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	May be harmful if swallowed. Ingestion of ethylene glycol may result in nausea, vomiting, abdominal cramps, blindness, liver damage, irritation, reproductive effects, nerve damage, convulsions, oedema of the lung, cardiopulmonary effects (metabolic acidosis), pneumonia and kidney failure which could result in death. The single lethal dose for humans is about 100 ml. Inhalation of high levels of vapour or mists for prolonged periods of time may also result in toxic effects.

Symptoms related to the physical, chemical and toxicological characteristics	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema. Prolonged exposure may cause chronic effects.
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Information on toxicological effects

Acute toxicity	May be harmful if swallowed.
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Product	Species	Test Results
Perkins ELC Advanced (Extended Life Coolant) Premix 50/50 with Embitterment (CAS -)		
<u>Acute</u>		
Oral		
ATEmix		3238 mg/kg bw
Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
<u>Acute</u>		
Dermal		
LD50	Mouse	> 3500 mg/kg
Inhalation		
<i>Aerosol</i>		
LC50	Rat	> 2.5 mg/l, 6 Hours
Oral		
LD50	Cat	1600 mg/kg
Sodium benzoate (CAS 532-32-1)		
<u>Acute</u>		
Oral		
LD50	Rat	3450 mg/kg
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.	
Respiratory or skin sensitisation	Not classified as a sensitiser.	
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	This product is not expected to cause skin sensitisation.	

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Not classifiable as to carcinogenicity to humans.

Kuwait OELs: Carcinogen Category

Ethylene glycol (CAS 107-21-1)

A4 Not classifiable as a human carcinogen.

UAE - Abu Dhabi TLVs: Carcinogen Category

Ethylene glycol (CAS 107-21-1)

GROUP A4 Not classifiable as a human carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure May cause damage to organs (kidney) through prolonged or repeated exposure.

Aspiration hazard Not an aspiration hazard.

Further information No data available.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Aquatic		
Crustacea	EC50	Daphnia magna
		> 100 mg/l, 48 Hours
Acute		
Fish	LC50	Fathead minnow (Pimephales promelas)
		72860 mg/l, 96 hours

Persistence and degradability Ethylene glycol: >90% / 10 days (OECD 301A) Readily biodegradable.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethylene glycol (CAS 107-21-1)

-1.36

Sodium benzoate (CAS 532-32-1)

-2.27

Mobility in soil This product is miscible in water and may not disperse in soil.

Other adverse effects No data available.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Safety, health and environmental regulations specific for the product in question This SDS complies with the requirements of Egyptian Standard (ES) 8398/2020 on Safety Data Sheet for Chemical Products – Content and Order of Sections.

Bahrain. Chemicals Subject to the Prior Informed Consent Procedure under the Rotterdam Convention (Law No. 14 of 2012, Annex III)

Not applicable.

Bahrain. CWC Chemical Substances (Decree No. 6 of 1997, Schedules 1, 2 and 3; Law No. 51 of 2009)

Not listed.

Bahrain. Prohibited Chemicals (Ministry of State for Municipal & Environmental Affairs, Resolution No 7 of 2002, On Control of Importing & Use of Prohibited & Restricted Chemicals, Table 1)

Not listed.

Bahrain. Severely Restricted Chemicals (Ministry of State for Municipal & Environmental Affairs, Resolution No 7 of 2002, On Control of Importing & Use of Prohibited & Restricted Chemicals, Table 2)

Not listed.

Egypt. Non-Restricted Substances (Unified list of hazardous substances, List C)

Not listed.

Egypt. Substances Requiring Permits (Unified list of hazardous substances, List B)

Ethylene glycol (CAS 107-21-1)

Oman. List of Prohibited Chemical Substances (MD 25/2009. Annex 2)

Not listed.

Oman. List of Restricted Chemical Substances (MD 25/2009. Annex 1)

Not listed.

Saudi Arabia. Jubail & Yanbu. Hazardous Air Pollutants (Royal Commission for Jubail & Yanbu Environmental Regulations, V.1. 2004, Table 2C)

Ethylene glycol (CAS 107-21-1)

UAE. Abu Dhabi. CWC (Chemicals Weapons Convention) Banned from Entry/Import (Standard Operating Procedures for Permitting of Chemicals and Hazardous Materials)

Not listed.

UAE. Abu Dhabi. Narcotic Precursors Banned from Entry/Import (Standard Operating Procedures for Permitting of Chemicals and Hazardous Materials)

Not listed.

UAE. Ban on Importing and Circulation of Harmful Pesticides for Health and Environment (Ministerial Decree No. 193)

Not listed.

UAE. Dubai. CWC (Chemicals Weapons Convention) Federal Environmental Agency, Code of Practice

Not listed.

UAE. Dubai. Illicit Drug Traffic, scheduled substances (UN Convention against illicit traffic in narcotic drugs and psychotropic substances), Ministry of Health, Code of Practice

Not listed.

UAE. Dubai. Prohibited and restricted imports. Ministry of Environmental and Water, Code of Practice

Not listed.

International regulations

All components comply with the following chemical inventory requirements: AIIC (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (United States).
For countries not listed above, further action by the importer is needed.

Stockholm Convention

Not listed.

Rotterdam Convention

Not listed.

Montreal Protocol

Not listed.

Kyoto Protocol

Not listed.

Basel Convention

Not listed.

16. Other information, including date of preparation or last revision

Issue date 15-December-2025

Revision date -

Version No. 01

List of abbreviations

ATE: Acute toxicity estimate.
CAS: Chemical Abstract Service.
EC50: Effective Concentration, 50%.
IATA: International Air Transport Association.
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.
IMDG: International Maritime Dangerous Goods.
LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
MARPOL: International Convention for the Prevention of Pollution from Ships.
STEL: Short term exposure limit.
TWA: Time Weighted Average.

References

IARC Monographs. Overall Evaluation of Carcinogenicity
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

ARTECO NV cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.