

CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

Product name: Perkins® ELCA Premix 50/50 with Embitterment

Issue date: 23-January-2026

Revision date: -

Version #: 01

SECTION 1 Chemical product and company identification

Chinese name of chemical	化学品安全技术说明书
English name of chemical	Perkins® ELCA Premix 50/50 with Embitterment
Product code	2000755
	Company identification
	Shanghai Arteco Coolants Science and Technology Co., Ltd
	13A-13F, No. 666 Fu Zhou Rd.
	Shanghai, 200001, PR
	China
	Transportation Emergency Response
	China 24h Chemical Accident Emergency number: +86 532 838 89090
	Europe: +1 760 476 3962 (24hr) Access code: 335087
	Health Emergency
	China 24h Chemical Accident Emergency number: +86 532 838 89090
	Europe: +1 760 476 3962 (24hr) Access code: 335087
	Product information
	email: customerservice-China@arteco-coolants.com
	Technical Information: +86 21 6315 0629

Recommended use and Limitations on use

Recommended use	Antifreeze / Coolant.
Limitations on use	Uses other than the recommended use.
Issue date	23-January-2026
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Supersedes date	-

SECTION 2 Hazards identification

Emergency overview	May be harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.
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GHS hazard categories

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

Pictograms



Signal word	Warning
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Hazard statement

H303	May be harmful if swallowed.
H373	May cause damage to organs (kidney) through prolonged or repeated exposure.

Precautionary statement

Prevention	
P102	Keep out of reach of children.

P260 Do not breathe mist/vapours.

Response

P101 If medical advice is needed, have product container or label at hand.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor.
P319 Get medical help if you feel unwell.

Safety storage Not assigned.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Physical and chemical hazards The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

Health hazards May be harmful if swallowed. May cause damage to organs through prolonged or repeated exposure.

Environmental hazards 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.

Supplemental information None.

SECTION 3 Composition/information on ingredients

Substance/mixture Mixture

Chemical name	Concentration (%)	CAS Number
乙二醇 Ethylene glycol	34 - < 80	107-21-1
苯甲酸钠 Sodium benzoate	0.1 - < 3	532-32-1

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

SECTION 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. Continue rinsing. Get medical attention if irritation develops and persists.

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 and health effects Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema. Prolonged exposure may cause chronic effects.

Personal protection for first-aid responders 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. Show this safety data sheet to the doctor in attendance.

Notes to physician Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

SECTION 5 Fire-fighting measures

Extinguishing media Alcohol resistant foam. Powder. Carbon dioxide (CO2).

Extinguishing media to avoid Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards Thermal decomposition may produce smoke, oxides of carbon and lower molecular weight organic compounds whose composition have not been characterised.

Special fire fighting procedures Move containers from fire area if you can do so without risk.

Protection of fire-fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

General fire hazards No unusual fire or explosion hazards noted.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel 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 emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

Clean-up methods and materials and containment measures 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.

Prevention of secondary hazards None known.

SECTION 7 Handling and storage

Handling Do not breathe mist/vapours. Do not taste or swallow. When using, do not eat, drink or smoke. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Storage Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

SECTION 8 Exposure controls/personal protection

Exposure limits

China

Components

	Type	Value
Ethylene glycol (CAS 107-21-1)	PC-STEL	40 mg/m ³
	PC-TWA	20 mg/m ³

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

Monitoring methods Follow standard monitoring procedures.

Engineering measures 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.

Personal protective equipment

Respiratory protection Chemical respirator with organic vapour cartridge and full facepiece.

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.

Eye protection Chemical respirator with organic vapour cartridge and full facepiece.

Skin and body protection Wash hands thoroughly after handling. Use of an impervious apron is recommended.

Hygiene measures Keep away from food and drink. 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.

SECTION 9 Physical and chemical properties

Appearance

Physical state Liquid.

Form Clear to cloudy, free from foreign matter, 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)
Boiling point, initial boiling point, and boiling range	109 °C (228.2 °F) (Estimated)
Flash point	Does not flash.
Explosive limit - lower (%)	Not determined.
Explosive limit – upper (%)	Not determined.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Density	1.0730 kg/l (Typical) (20 °C (68 °F))
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.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Other data	
Kinematic viscosity	Not determined.
Molecular weight	Not applicable (The product is a mixture).
Viscosity	Not determined.

SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
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.

SECTION 11 Toxicological information

Acute toxicity	May be harmful if swallowed.	
Product	Species	Test Results
Perkins® ELCA 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

Components	Species	Test Results
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
Routes of exposure	Ingestion. Inhalation. Skin contact. Eye contact.	
Symptoms	Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema. Prolonged exposure may cause chronic effects.	
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 sensitiser	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.	
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity following single exposure	Not classified.	
Specific target organ toxicity following repeated exposure	May cause damage to organs (kidney) through prolonged or repeated exposure.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.	
Other information	No data available.	

SECTION 12 Ecological information

Ecotoxicological data			
Components	Species	Test Results	
Ethylene glycol (CAS 107-21-1)			
Aquatic			
Crustacea	EC50	Daphnia magna	> 100 mg/l, 48 Hours
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	72860 mg/l, 96 hours
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.		
Persistence and degradability	Ethylene glycol: >90% / 10 days (OECD 301A) Readily biodegradable.		
Bioaccumulation			
Bioaccumulative potential			
Octanol/water partition coefficient 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 hazardous effects	None known.		

SECTION 13 Disposal considerations

Residual waste	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.
Local disposal regulations	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.

SECTION 14 Transport information

CNDG

Not regulated as dangerous goods.

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.

SECTION 15 Regulatory information

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Classification of occupational disease hazards

Ethylene glycol (CAS 107-21-1)

Regulations on the Control over Safety of Dangerous Chemicals

Not regulated.

Other regulations

This safety data sheet conforms to the following laws, regulations and standards:
Measures for the Safe Use of Chemicals in Workplaces
General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)
Regulations on Labor Protection in Workplaces Where Toxic Products Are Used
Packing Symbol of Dangerous Goods(GB190-2009)
Regulations on the Control over Safety of Dangerous Chemicals
Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)
Packing - Pictorial Marking for Handling of Goods (GB/T191-2008)
Guidance on the compilation of safety data sheet for chemical products (GB/T 17519-2013).

China. National Catalogue of Hazardous Wastes

Ethylene glycol (CAS 107-21-1)

International regulations

All components comply with the following chemical inventory requirements: AIIIC (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.

SECTION 16 Other information

References

GB6944-2012: Classification and Code of Dangerous Goods.
GB12268-2012: List of Dangerous Goods.

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.
PC-STEL: Permissible concentration-short-term exposure limit.
PC-TWA: Permissible concentration-time weighed average.
PMT: Persistent, Mobile, Toxic.

Disclaimer

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