CHEMICAL PRODUCT SAFETY DATA SHEET

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

SECTION 1 Chemical product and company identification

Chinese name of chemical **Perkins ELC(Extended Life Coolant) Premix 50/50 with Embitterment 冷却液**

English name of chemical **Perkins ELC(Extended Life Coolant) Premix 50/50 with Embitterment**

Product code 1002881

Supplier ARTECO NV
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Product Information +32 (0) 9 397 06 00

Emergency Telephone Number

Transportation Emergency Europe: +44 20 35147487 (24hr) Access code: 335087

Health Emergency Europe: +44 20 35147487 (24hr) Access code: 335087
China (24h): +86 532 83889090

Recommended use and Limitations on use

Recommended use Antifreeze / Coolant.

Limitations on use Uses other than the recommended use.

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SECTION 2 Hazards identification

Emergency overview May be harmful if swallowed. May cause reproductive effects. May cause damage to organs through prolonged or repeated exposure.

GHS hazard categories

Physical hazards Not classified.

Health hazards

Acute toxicity, oral	Category 5
Reproductive toxicity (the unborn child)	Category 1B
Specific target organ toxicity, repeated exposure	Category 2 (kidney)

Environmental hazards Not classified.

Label elements

Pictograms

Signal word Danger

Hazard statement

H303 May be harmful if swallowed.
H360 May damage the unborn child.
H373 May cause damage to organs (kidney) through prolonged or repeated exposure.

Precautionary statement

Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe mist/vapors.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Safety storage

P405 Store locked up.

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. Prolonged inhalation may be harmful. Direct contact with eyes may cause temporary irritation. Prolonged skin contact may cause temporary irritation.

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
2-乙基己酸钠 Sodium 2-ethylhexanoate	0.1 - < 3	19766-89-3
甲基-1H-苯并三唑 Methyl-1H-benzotriazole	0.1 - < 1	29385-43-1

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. 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. Edema. Prolonged exposure may cause chronic effects.

Personal protection for first-aid responders IF exposed or concerned: Get medical advice/attention. 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 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 characterized.

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/vapors. 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 release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Clean-up methods and materials and containment measures	Use water spray to reduce vapors or divert vapor cloud drift. Prevent product from entering drains. 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: Wipe up with absorbent material (e.g. cloth, fleece). 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	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapors. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.
Storage	Store locked up. 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/m3
	PC-TWA	20 mg/m3

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 vapor 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 vapor cartridge and full facepiece.
Skin and body protection	Wash hands thoroughly after handling. Use of an impervious apron is recommended.
Hygiene measures	Observe any medical surveillance requirements. 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.

SECTION 9 Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Clear liquid.
Color	Red.
Odor	Mild.
Odor threshold	Not determined.
pH	8.25 - 8.60 (20°C)
Melting point/freezing point	Not determined. / -32.8 °F (-36 °C)

Boiling point, initial boiling point, and boiling range	228.2 °F (109 °C) (Estimated)
Flash point	Does not flash.
Explosive limit - lower (%)	Not determined.
Explosive limit - upper (%)	Not determined.
Vapor pressure	Not determined.
Vapor density	Not determined.
Relative density	Not determined.
Density	1.070 kg/l (20 °C) (Typical)
Solubility(ies)	
Solubility (water)	Miscible.
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	748.4 °F (398 °C) (Ethylene glycol)
Decomposition temperature	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not applicable.
Other data	
Kinematic viscosity	Not determined.
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 oxidizing 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 ELC(Extended Life Coolant) Premix 50/50 with Embitterment (CAS -)		
Acute		
Oral		
ATEmix		3178 mg/kg bw

Components	Species	Test Results
Ethylene glycol (CAS 107-21-1)		
Acute		
Dermal		
LD50	Mouse	> 3500 mg/kg
Inhalation		
Aerosol		
LC50	Rat	> 2.5 mg/l, 6 Hours
Oral		
LD50	Cat	1600 mg/kg
Methyl-1H-benzotriazole (CAS 29385-43-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	720 mg/kg

Components	Species	Test Results
Sodium 2-ethylhexanoate (CAS 19766-89-3)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	2043 mg/kg

Routes of exposure Ingestion. Inhalation. Skin contact. Eye contact.

Symptoms Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Edema. 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 sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitizer This product is not expected to cause skin sensitization.

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 May damage the unborn child.

Reproductivity

Methyl-1H-benzotriazole (CAS 29385-43-1)	30 mg/kg bw/day OECD 414 Result: LOAEL Species: Rat

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
Acute			
Fish	LC50	Fathead minnow (Pimephales promelas)	72860 mg/l, 96 hours
Methyl-1H-benzotriazole (CAS 29385-43-1)			
Aquatic			
Acute			
Algae	ECr50	Pseudokirchneriella subcapitata	75 mg/l, 72 hours
Crustacea	EC50	Daphnia galeata	8.58 mg/l, 48 hours
	LC50	Arcartia tonsa	55 mg/l, 48 hours
Fish	LC50	Danio rerio	180 mg/l, 72 hours
Chronic			
Crustacea	EC10	Daphnia galeata	0.4 mg/l, 21 days

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

Mobility in soil This product is miscible in water.

Other hazardous effects No data available.

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 (see: Disposal instructions).

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: AICS (Australia), DSL (Canada), EINECS (European Union), ENCS (Japan), IECSC (China), KECI (Korea), PICCS (Philippines), TSCA (United States), TCSI (Taiwan), NZIoC (New Zealand).
For countries not listed above, further action by the importer is needed.

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto Protocol

Not applicable.

Basel Convention

Not applicable.

SECTION 16 Other information

References

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

List of abbreviations

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-TWA: Permissible concentration-time weighed average.
PC-STEL: Permissible concentration-short-term exposure limit.

Disclaimer

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