SAFETY DATA SHEET

1. Identification

GHS product identifier	**Perkins ELI (Extended Life Inhibitor) Corrosion Inhibitor Concentrate**
Product code	1804110
Version No.	01
Issue date	19-February-2024
Revision date	-
Supersedes date	-
CAS No.	-
Recommended use	Corrosion inhibitor for cooling systems.
Recommended restrictions	Uses other than the recommended use.
Manufacturer	
Supplier	Arteco Coolants India Pvt Ltd #304A, Town Square, Viman Nagar, Pune – 411 014. Maharashtra India
e-mail	customerservice-india@arteco-coolants.com
Product information	+91-(0)20-6728 6000
1.4. Emergency telephone number	
Transportation emergency	Europe: +44 20 35147487 (24hr) Access code: 335087 India: +001 803 015 203 9774 (24hr)
Health Emergency	Europe: +44 20 35147487 (24hr) Access code: 335087 India: +001 803 015 203 9774 (24hr)

2. Hazards identification

GHS classification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 5
	Reproductive toxicity (the unborn child)	Category 1B
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3

GHS label elements

Signal word Danger

Hazard statement May be harmful if swallowed. May damage the unborn child. Harmful to aquatic life.

Precautionary statement

Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. Wash contact area thoroughly after handling.
Response	IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention.
Storage	Store locked up.
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

Components	CAS No.	Percent
Potassium 2-ethylhexanoate	3164-85-0	10 - 30

Components	CAS No.	Percent
Sodium molybdate dihydrate	10102-40-6	0.1 - < 3
Methyl-1H-benzotriazole	29385-43-1	0.1 - < 2.5
Sodium nitrite	7632-00-0	0.1 - < 2.5

Composition comments Exempted from registration as per Annex V of the Regulation 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). E All concentrations are in percent by weight.

4. First aid measures

First aid procedures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye 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 effects, both acute and delayed Exposure may cause temporary irritation, redness, or discomfort. Prolonged exposure may cause chronic effects.

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

General advice 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.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical 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.

Protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Protection of fire-fighters Water runoff can cause environmental damage.

6. Accidental release measures

Personal precautions Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see 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.

Methods for containment Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.

Methods for cleaning up Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. This product is miscible in water. Prevent product from entering drains. Do not allow material to contaminate ground water system.

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.

7. Handling and storage

Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not taste or swallow. 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. Avoid release to the environment. Observe good industrial hygiene practices.

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

8. Exposure controls / personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures	Follow standard monitoring procedures.
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.
Personal protective equipment	
Eye/face protection	Chemical respirator with organic vapour cartridge and full facepiece.
Skin protection	Wash hands thoroughly after handling. Use of an impervious apron is recommended.
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. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Full contact: Use gloves classified protection index 6 with breakthrough time of 480 minutes. Minimum glove thickness 0.38 mm.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Colour	Red.
Form	Liquid.
Odour	Mild.
Odour threshold	Not determined.
pH	8.3 (5%, 20°C) (Typical)
Melting point/freezing point	Not applicable. / -5 °C (23 °F) (Typical)
Boiling point	100 °C (212 °F) (Estimated)
Flash point	Not determined.
Evaporation rate	Not determined.
Flammability	Not applicable. Will burn if involved in a fire.
Vapour pressure	Not determined.
Vapour density	Not determined.
Relative density	Not determined.
Solubility	
Solubility (water)	Miscible.
Partition coefficient (n-octanol/water) (log value)	Not applicable, product is a mixture.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined.
Viscosity	Not determined.
Density	1.091 kg/l (20 °C) (Typical)
Other data	
Explosive limit - lower (%)	Not determined.
Explosive limit – upper (%)	Not determined.
Kinematic viscosity	Not determined.

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

Toxicological data

Product	Species	Test Results
Perkins ELI (Extended Life Inhibitor) Corrosion Inhibitor Concentrate (CAS -)		
Acute		
Dermal		
ATEmix		149300 mg/kg bw
Oral		
ATEmix		4687 mg/kg bw

Components	Species	Test Results
Methyl-1H-benzotriazole (CAS 29385-43-1)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	720 mg/kg
Sodium nitrite (CAS 7632-00-0)		
Acute		
Oral		
LD50	Rat	180 mg/kg

Routes of exposure	Ingestion.
Acute toxicity	May be harmful if swallowed.
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitiser	Not a respiratory sensitiser.
Skin sensitisation	This product is not expected to cause skin sensitisation.
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.
Reproductive toxicity	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 - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Symptoms	Exposure may cause temporary irritation, redness, or discomfort. Prolonged exposure may cause chronic effects.
Other information	No data available.

12. Ecological information

Ecotoxicological data

Components		Species	Test Results
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

Components		Species	Test Results
Fish	LC50	Danio rerio	180 mg/l, 72 hours
Chronic			
Crustacea	EC10	Daphnia galeata	0.4 mg/l, 21 days

Ecotoxicity Harmful to aquatic life.

Environmental effects Harmful to aquatic organisms. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Persistence and degradability Expected to be readily biodegradable.

Bioaccumulation

Aquatic toxicity Harmful to aquatic organisms.

Mobility This product is miscible in water.

Other adverse effects No data available.

13. Disposal considerations

Disposal methods 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.

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

ADR

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to IMO instruments Not established.

15. Regulatory information

Regulatory information All components of this product are compliant with the registration requirements of Regulation (EC) 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals, as amended.
For countries not listed above, further action by the importer is needed.

All components comply with the following chemical inventory requirements: DSL (Canada), EINECS (European Union), IECSC (China), PICCS (Philippines), TCSI (Taiwan), NZIoC (New Zealand).

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

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.

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists.
ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.
CAS: Chemical Abstract Service.
IARC: International Agency for Research on Cancer.
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.
MARPOL: International Convention for the Prevention of Pollution from Ships.
EC50: Effective Concentration, 50%.
LC50: Lethal Concentration, 50%.
RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.
LD50: Lethal Dose, 50%.
STEL: Short term exposure limit.
TWA: Time Weighted Average.
ATE: Acute toxicity estimate.