Material Safety Data Sheet **Rev: 00**
GIANT ANTIFREEZE **Date: 11/08/2021**

Section 1: Chemical and Company Identification

Product Name/Identifier	GIANT ANTIFREEZE
Company Information	Central Auto Parts and Equipment Limited
	84 Armstrong Street, Palmerston North
	New Zealand
Emergency Telephone	(64) 6-3535200
Fax Number	(64) 6-3535201

Section 2: Hazards Identification

GHS CLASSIFICATION

Health		Environmental	Physical
Reproductive Toxicity (Unborn Child)	Cat 2	Not Classified	H361D – Suspect of damaging the unborn child
Acute Toxicity (Oral)	Cat 4		H302 – Harmful if swallowed
Specific Target Organ Toxicity - Repeated Exposure	Cat 2 (Kidney)		H373 – May cause damage to organs (kidney) through prolonged or repeated exposure

Hazard Summary: Harmful if swallowed. May cause damage to organs through prolonged or repeated exposure. Possible reproductive hazard. Occupational exposure to the substance or mixture may cause adverse health effects.

GHS LABEL:

Label according to Regulation (EC) No. 1272/2008 as amended
Contains: Ethylene glycol, Sodium 2-ethylhexanoate

Signal Word: Warning

Hazard Statements

H302	Harmful if swallowed.
H361D	Suspect of damaging the unborn child.
H373	May damage to organs (kidney) through prolonged or repeated exposure.

Prevention Precautionary Statements

P102	Keep out of reach of children.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response Precautionary Statements
P101 If medical advice is needed, have product container or label at hand.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor

Storage Precautionary Statements
P405 Store locked up.

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

Supplemental label information: None

Other Hazards
Not a PBT or vPvB substance or mixture.

Section 3: Compositions / Information on Ingredients

Chemical Identity	Weight %	CAS#	Reach Registration No.	Index No.	Notes
Water	30-40	7732-18-5	Exempt	-	
Ethylene Glycol	60-70	107-21-1 203-473-3	01-2119456816-28-XXXX	-	#
Sodium 2-ethylhexanoate	<3	19766-89-3 243-283-8	Exempt	-	E
Methyl-1H-benzotriazole	<0.5	29385-43-1 249-596-6	01-2119979081-35-XXXX	-	

List of abbreviations and symbols that may be used above:
#: This substance has been assigned Union workplace exposure limit(s).
Composition comments: The full text for all H-statements is displayed in section 16. All concentrations are in percent by weight.
E Exempted from registration as per Annex V of the regulation 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Section 4: First Aid Measures

General information
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.

4.1. Description of 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.

4.2. Most important symptoms and effects, both acute and delayed:
Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema. Prolonged exposure may cause chronic effects.

4.3. Indication of any 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.

Section 5: Fire Fighting Measures

General fire hazards: No unusual fire or explosion hazards noted.

5.1. Extinguishing media
Suitable extinguishing media: Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

Special fire-fighting procedures: 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 material.

Section 6: Accidental Release Measures

6.1. 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. 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.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Use water spray to reduce vapours or divert vapour cloud drift.

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.

6.4. Reference to other

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

Section 7: Handling and Storage

7.1. Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapour. 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.

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Antifreeze / Coolant. Corrosion inhibitor for cooling systems.

Section 8: Exposure Controls / Personal Protection

8.1. Control parameters

UK. EH40 Workplace Exposure Limits (WELs)			
Components	**Type**	**Value**	**Form**
Ethylene glycol (CAS 107-21-1)	STEL	104 mg/g^3	Vapor
	TWA	40 ppm	Vapor
		52 mg/g^3	Vapor
		10 mg/g^3	Particulate

		20 ppm	Vapor
EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU			
Ethylene glycol (CAS 107-21-1)	STEL	104 mg/g^3 40 ppm	
	TWA	52 mg/g^3 20 ppm	

Biological limit values: No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures: Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General Population

Components	Value	Assessment Factor	Notes
Ethylene glycol (CAS 107-21-1)			
Long-term, Local, Inhalation	7 mg/g^3	10	
Long-term, Systemic, Dermal 84	53 mg/kg	84	
Methyl-1H-benzotriazole (CAS 29385-43-1)			
Long-term, Systemic, Dermal	0.25 mg/kg		
Long-term, Systemic, Inhalation	4.25 mg/g^3		
Long-term, Systemic, Oral	0.25 mg/kg		

Workers

Components	Value	Assessment Factor	Notes
Ethylene glycol (CAS 107-21-1)			
Long-term, Local, Inhalation	35 mg/g^3	2	
Long-term, Systemic, Dermal	106 mg/kg	42	
Methyl-1H-benzotriazole (CAS 29385-43-1)			
Long-term, Systemic, Dermal	0.5 mg/kg		
Long-term, Systemic, Inhalation	8.8 mg/g^3		

Predicted no effect concentrations (PNECs)

Components	Value	Assessment Factor	Notes
Ethylene glycol (CAS 107-21-1)			
Freshwater	10 mg/l	10	
Intermittent releases	10 mg/l	10	
Marine water	1 mg/l	100	
Sediment (freshwater)	37 mg/kg		
Sediment (marine water)	3.7 mg/kg		
Soil	1.53 mg/kg		
STP	199.5 mg/l	10	
Methyl-1H-benzotriazole (CAS 29385-43-1)			
Freshwater	0.008 mg/l	50	
Intermittent releases	0.086 mg/l	100	
Marine water	0.008 mg/l	50	
Sediment (freshwater)	0.0025 mg/kg	10	
Sediment (marine water)	0.0025 mg/kg	10	
Soil	0.0024 mg/kg	10	
STP	39.4 mg/l	10	

Exposure guidelines
UK EH40 WEL: Skin designation
Ethylene glycol (CAS 107-21-1) - Can be absorbed through the skin

8.2. Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) 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.
General information: Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
Eye/face protection: Chemical respirator with organic vapour cartridge and full facepiece.

Skin protection/Hand protection:	Wear appropriate chemical resistant gloves. Wear suitable gloves tested to EN374. Use gloves classified protection index 6 with breakthrough time of 480 minutes. Minimum glove thickness 0.38 mm. Neoprene, butyl rubber, nitrile or Viton gloves are recommended. Suitable gloves can be recommended by the glove supplier.
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. Observe any medical surveillance requirements.
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.
Environmental exposure controls:	Environmental manager must be informed of all major releases.

Section 9: Physical and Chemical Properties

Appearance	: Florescent Green Liquid
Odour	: Mild
Odour Threshold	: NA
PH	: 7.8 – 8.8 (20°C)
Melting Point/ Freezing Point (°C)	: -52.8
Initial boiling point and range (°C)	: 109-112
Flash Point (°C) [ISO3679, Closed Cup Testing]	: No Flash Point Detected
Evaporation Rate	: Not determined
Flammability (solid, gas)	: Not applicable
Vapour Pressure	: Not determined
Upper/lower Flammability (Explosive) Limits	: Not determined
Vapour Density	: Not determined
Relative Density	: 1.05 – 1.09 kg/l (20°C)
Solubility in Water	: Soluble
Partition coefficient (N-Octanol/Water)	: Not determined
Auto-ignition Temperature (°C)	: Not determined
Decomposition Temperature	: Not determined
Viscosity (mPa s)	: Not determined

Section 10: Stability and Reactivity

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

10.2. Chemical stability
Material is stable under normal conditions.

10.3. Possibility of hazardous
No dangerous reaction known under conditions of normal use. Reactions

10.4. Conditions to avoid
Contact with incompatible materials.

10.5. Incompatible materials
Strong acids. Strong oxidising agents. Nitrates. Peroxides. Chlorates.

10.6. Hazardous decomposition products
At elevated temperatures: Ketones. Aldehydes.

Section 11: Toxicological Information

General information
Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation

In high concentrations, mists/vapors 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

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

Convulsions. Dizziness. Nausea, vomiting. Abdominal pain. Oedema.

11.1. Information on toxicological effects

Acute toxicity: Harmful if swallowed.

Components	Species	Test Result
Ethylene glycol (CAS 107-21-1)		
Acute		
Dermal		
LD50	Mouse	> 3500 mg/kg
Inhalation		
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

Skin corrosion/irritation

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

Serious eye damage/eye irritation

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

Respiratory sensitization

Due to partial or complete lack of data the classification is not possible.

Skin sensitization

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

Germ cell mutagenicity

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

Carcinogenicity

Due to partial or complete lack of data the classification is not possible.

Reproductive toxicity

Suspected of damaging the unborn child.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

May cause damage to organs (kidney) through prolonged or repeated exposure.

Aspiration hazard

Due to partial or complete lack of data the classification is not possible.

Mixture versus substance information

No information available.

Other information

No data available.

Section 12: Ecological Information

12.1. Toxicity Based on available data, the classification criteria are not met for hazardous to the aquatic environment.

Components		Species	Test Result
Ethylene glycol (CAS 107-21-1)			
Aquatic	EC50	Daphnia magna	> 100 mg/l, 48 Hours
Crustacea	LC50	Fathead minnow (Pimephales promelas)	72860 mg/l, 96 hours
Methyl-1H-benzotriazole (CAS 29385-43-1)			
Aquatic			
Acute			
Algae	EC50	Skeletonema	53 mg/l, 72 hours
Crustacea	LC50	costatum Arcartia	55 mg/l, 48 hours
Fish	LC50	tonsa Cyprinodon variegatus	55 mg/l, 96 hours

12.2. Persistence and degradability

Expected to be readily biodegradable.

12.3. Bioaccumulative potential

Partition coefficient

n-octanol/water (log Kow)

Ethylene glycol (CAS 107-21-1): -1.36

Bioconcentration factor (BCF): Not available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects

No data available.

Section 13: Disposal Considerations

13.1. Waste treatment methods

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.

Disposal methods/information

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

Special precautions

Dispose in accordance with all applicable regulations.

Section 14: Transport Information

ADR 14.1. - 14.6.:

Not regulated as dangerous goods.

RID 14.1. - 14.6.:

Not regulated as dangerous goods.

ADN 14.1. - 14.6.:

Not regulated as dangerous goods.

IATA 14.1. - 14.6.:

Not regulated as dangerous goods.

IMDG 14.1. - 14.6.:

Not regulated as dangerous goods.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code:

Not established.

Section 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended: Not listed.
Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended:
Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: Not listed.
Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: Not listed.
Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended:
Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA:
Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended:
Not listed

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended: Not listed.
Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended: Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended: Not listed.

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. 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. 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).

National regulations

Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended. According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

Section 16: Other Information

Department Issuing Data Sheet	: Central Auto Parts & Equipment Limited
Original Issue Date	: 11 August 2021
Revision No.	:
Revision Date	:

List of abbreviations
TWA: Time weighted average.
STEL: Short term exposure limit.
DNEL: Derived No-Effect Level.
PNEC: Predicted No-Effect Concentration.
STP: Sewage treatment plant.
LD50: Lethal Dose, 50%.

EC50: Effective Concentration, 50%.
LC50: Lethal Concentration, 50%.
PBT: Persistent, bioaccumulative and toxic.
vPvB: Very Persistent and very Bioaccumulative.
References: ECHA CHEM
Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

GHS Hazard Statements
Full text of any H-statements not written out in full under Sections 2 to 15
H302 Harmful if swallowed.
H361D Suspected of damaging the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure by ingestion.
H411 Toxic to aquatic life with long lasting effects.