



Material Safety Data Sheet (MSDS)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture:

MAGNUM LONG LIFE OAT ANTIFREEZE COOLANT (Magnum LL OAT AFC)

Registration number: -
Synonyms: None
Product code: LLC01
Issue date: 04042023
Version number: 01
Revision date: -
Supersedes date: -

1.2. Relevant identified uses of the substance or mixture and uses advised against:

Identified uses: Antifreeze / Coolant.
Uses advised against: None known.

1.3. Details of the supplier of the safety data sheet

Supplier: Oil4Africa (Pty) Ltd
41 Ilana Street
Delville
Germiston
Gauteng
Telephone: +27 11 024 8888
Email: Larry@oil4africa.co.za

Emergency telephone number
+27 86 155 5777 PIC Garden City Hospital

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

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Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Acute toxicity, oral:	Category 4	H302 - Harmful if swallowed
Reproductive toxicity (the unborn child):	Category 2	H361d - Suspected of damaging the unborn child
Specific target organ toxicity - repeated exposure:	Category 2 (kidney)	H373 - May cause damage to organs through prolonged or repeated exposure.

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

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Ethylene glycol, Sodium 2-ethylhexanoate.

Hazard pictograms:



Signal word: Warning.

Hazard statements

H302 Harmful if swallowed.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (kidney) through prolonged or repeated exposure.

Precautionary statements

Prevention

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

Response

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

Storage

P405 Store locked up.

Disposal

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



Supplemental label information None.

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.1. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Ethylene glycol	80 - 98	107-21-1 203-473-3	- 01-2119456816-28-XXXX	-	#
Classification: Acute Tox. 4;H302, STOT RE 2;H373					
Sodium 2-ethylhexanoate	3 - < 5	19766-89-3 243-283-8	Exempt	-	E
Classification:	Classification: Repr. 2;H361d				

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, Authorisation and Restriction of Chemicals (REACH). This product contains a bittering agent.

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. Rinse with water.

Eye Contact

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: Firefighting measures

General fire hazards

No unusual fire or explosion hazards noted.

5.1. Extinguishing media

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.

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 firefighting 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 materials.

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. Do not breathe mist or vapour. 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 sections

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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits UK. EH40 Workplace Exposure Limits (WELs)

Components	Type	Value	Form
Ethylene glycol (CAS 107-21-1)	STEL	104 mg/m ³	Vapor.
	TWA	40 ppm	Vapor.
		52 mg/m ³	Vapor.
		10 mg/m ³	Particulate.
		20 ppm	Vapor.



EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Ethylene glycol (CAS 107-21-1)	STEL	104 mg/m ³
	TWA	40 ppm
		52 mg/m 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/m ³	10	
Long-term, Systemic, Dermal	53 mg/kg	84	

Workers

Components	Value	Assessment factor	Notes
Ethylene glycol (CAS 107-21-1)			
Long-term, Local, Inhalation	35 mg/m ³	2	
Long-term, Systemic, Dermal	106 mg/kg	42	

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	

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. Full contact: 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. The glove supplier can recommend suitable gloves.

-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.

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

9.1. Information on basic physical and chemical properties (50/50 RTU)

9.2. Appearance

Physical state	Liquid.
Form	Clear liquid.
Colour	Orange.
Odour	Mild.
Odour threshold	Not determined.
pH	8.6 (20°C) (Typical).
Melting point/freezing point	Not determined. / -40 °C (Typical)



Initial boiling point and boiling range 108 °C (Typical)

Flash point Not determined

Evaporation rate Not determined.

Flammability (solid, gas) Not applicable

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not determined.

Flammability limit - upper (%) Not determined.

Vapour pressure Not determined.

Vapour density Not determined.

Relative density Not determined.

Solubility(ies) Miscible.

Partition coefficient (n-octanol/water) Not determined.

Auto-ignition temperature Not determined.

Decomposition temperature Not determined.

Viscosity Not determined.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.3. Other information Density 1.068 kg/l (20 °C) (Typical)

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 reactions No dangerous reaction known under conditions of normal use.

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/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 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.

Product	Species	Test results
Magnum LL OAT AFC		1720 mg/kg, ATE
Acute Oral		

Components	Species	Test results
Ethylene glycol (CAS 107-21-1)		
Acute <i>Dermal</i> LD50	Mouse	> 3500 mg/kg
<i>Inhalation</i> LC50	Rat	> 2.5 mg/l, 6 Hours
<i>Oral</i> LD50	Cat	1600 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 sensitisation

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

Skin sensitisation

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

12.2. Persistence and degradability

Expected to be readily biodegradable.

12.3. Bio accumulative 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.

EU waste code

EWC: 16 01 14

Disposal methods/information

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.

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.
AND	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.

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. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, 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

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, bio accumulative and toxic.
vPvB: Very Persistent and very Bio accumulative.

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.



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.

Training information

Follow training instructions when handling this material.

Disclaimer

Oil4Africa (Pty) Ltd 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.