

SAFETY DATA SHEET

Maxol Antifreeze

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

REACH Registration notes This material is a mixture. All components have been registered under REACH by the Manufacturer or Supplier.

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

Identified uses Automotive Industry.

1.3. Details of the supplier of the safety data sheet

Supplier Maxol Lubricants Ltd.
Unit D, Airport Business
Campus,
Santry,
Dublin 9
+353 1 806 1054
Contact Person lubricants@maxol.ie

1.4. Emergency telephone number

Please contact SHE Department on +44(0) 1255 502372

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Not classified.
Human health Acute Tox. 4 - H302; Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; STOT RE 2 - H373
Environment Not classified.

Classification (1999/45/EEC)

Xn; R22. Xi; R36/38.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Contains Mono Ethylene Glycol

Label In Accordance With (EC) No. 1272/2008



Signal Word

Warning

Hazard Statements

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs Kidneys through prolonged or repeated exposure if swallowed.

Precautionary Statements

P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

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P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501	Dispose of contents/container in accordance with local regulations.
Supplementary Precautionary Statements	
P260	Do not breathe vapour/spray.
P264	Wash contaminated skin thoroughly after handling.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash before reuse.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Mono Ethylene Glycol		
CAS-No.: 107-21-1	EC No.: 203-473-3	
Classification (EC 1272/2008) Acute Tox. 4 - H302 STOT RE 2 - H373	Classification (67/548/EEC) Xn;R22.	
Glycerine 99.5% Tech		10-25%
CAS-No.: 56-81-5	EC No.: 200-289-5	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Not classified.	
Boric Acid		1-5%
CAS-No.: 10043-35-3	EC No.: 233-139-2	Registration Number: 01-2119486683-25-0006
Classification (EC 1272/2008) Repr. 1A - H360FD	Classification (67/548/EEC) Repr. Cat. 1;R60,R61.	
POTASSIUM HYDROXIDE		0.1-1.0%
CAS-No.: 1310-58-3	EC No.: 215-181-3	Registration Number: 01-2119487136-33-xxxx
Classification (EC 1272/2008) Acute Tox. 4 - H302 Skin Corr. 1A - H314	Classification (67/548/EEC) C;R35 Xn;R22	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

REACH Registration notes This material is a mixture. All components have been registered under REACH by the Manufacturer or Supplier.

Composition Comments

The potassium hydroxide and boric acid are neutralised in the formulation so that although they are both corrosive materials the final formulation is non-corrosive

SECTION 4: FIRST AID MEASURES

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4.1. Description of first aid measures

General information

Remove victim immediately from source of exposure.

General first aid, rest, warmth and fresh air.

Place unconscious person on the side in the recovery position and ensure breathing can take place.

Do not give victim anything to drink if they are unconscious.

Inhalation

Move the exposed person to fresh air at once.

If breathing stops, provide artificial respiration.

When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Get medical attention if any discomfort continues.

Ingestion

Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs.

Get medical attention.

Rinse mouth thoroughly.

Give small quantities of water to drink

Skin contact

Remove contaminated clothes and rinse skin thoroughly with water.

Get medical attention if any discomfort continues.

Eye contact

Promptly wash eyes with plenty of water while lifting the eye lids.

Make sure to remove any contact lenses from the eyes before rinsing.

Continue to rinse for at least 15 minutes.

Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed

Inhalation

No specific symptoms noted.

Ingestion

Harmful if swallowed

Skin contact

Skin irritation.

Eye contact

Irritation of eyes and mucous membranes.

4.3. Indication of any immediate medical attention and special treatment needed

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

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

Hazardous combustion products

During fire, toxic gases (CO, CO₂) are formed.

Unusual Fire & Explosion Hazards

Heat may cause the containers to explode.

Specific hazards

Fire creates:

Toxic gases/vapours/fumes of:

Carbon monoxide (CO).

Carbon dioxide (CO₂).

5.3. Advice for firefighters

Special Fire Fighting Procedures

Keep people away. Isolate fire and deny unnecessary entry.

Use water to keep fire exposed containers cool and disperse vapours.

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Protective equipment for fire-fighters

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective clothing as described in Section 8 of this safety data sheet.

No action shall be taken involving any personal risk or without suitable training.

Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering.

Do not touch or walk through spilled material.

Avoid inhalation of vapours and aerosol spray.

Provide adequate ventilation.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground.

Avoid discharge to the aquatic environment.

Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air)

6.3. Methods and material for containment and cleaning up

Stop leak if possible without risk.

Remove sources of ignition.

Absorb in vermiculite, dry sand or earth and place into containers.

Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid inhalation of vapours/spray and contact with skin and eyes.

Do not ingest

Good personal hygiene is necessary. Wash hands and contaminated areas with water and soap before leaving the work site.

Provide good ventilation.

Do not eat, drink or smoke when using the product.

7.2. Conditions for safe storage, including any incompatibilities

Keep separate from food, feedstuffs, fertilisers and other sensitive material.

Store in tightly closed original container in a dry, cool and well-ventilated place.

Keep upright.

Store in closed original container at temperatures between 0°C and 40°C.

Protect from light, including direct sunrays.

Storage Class

Unspecified storage.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
Maxol Antifreeze	WEL	60 mg/m ³		125 mg/m ³		
Glycerine 99.5% Tech	WEL	10 mg/m ³				
Mono Ethylene Glycol	WEL	20 ppm(Sk)	52 mg/m ³ (Sk)	40 ppm(Sk)	104 mg/m ³ (Sk)	
POTASSIUM HYDROXIDE	WEL				2 mg/m ³	

WEL = Workplace Exposure Limit.

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Sodium Nitrate (CAS: 7631-99-4)

No DNEL available

No PNEC available

Boric Acid (CAS: 10043-35-3)

DNEL

Consumer	Oral	Short Term	Systemic Effects	0.98 mg/kg/day
Consumer	Oral	Long Term	Systemic Effects	0.98 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	8.28 mg/m ³
Consumer	Inhalation.	Long Term	Systemic Effects	4.15 mg/m ³
Industry	Dermal	Long Term	Systemic Effects	392 mg/kg/day
Consumer	Dermal	Long Term	Systemic Effects	196 mg/kg/day

PNEC

Freshwater	2.02	mg/l
Marinewater	2.02	mg/l
Intermittent release	13.7	mg/l
Soil	5.4	mg/kg
STP	10	mg/l

Mono Ethylene Glycol (CAS: 107-21-1)

DNEL

Industry	Inhalation.	Long Term	Local Effects	35 mg/m ³
Industry	Dermal	Long Term	Systemic Effects	106 mg/kg
Consumer	Inhalation.	Long Term	Local Effects	7 mg/m ³
Consumer	Dermal	Long Term	Systemic Effects	53 mg/m ³

PNEC

Freshwater	10	mg/l
Marinewater	1	mg/l
STP	199.5	mg/l
Sediment Freshwater	20.9	mg/kg
Soil	1.53	mg/kg

8.2.Exposure controls

Protective equipment



Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

It is recommended to use respiratory equipment with combination filter, type A2/P2.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

Butyl rubber gloves are recommended.

Neoprene gloves are recommended.

Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Polyvinyl alcohol gloves are recommended.

EN 474 gloves with a protective index of 6 or greater are recommended.

Eye protection

Use approved safety goggles or face shield.

EN 166 recommended

Other Protection

Provide eyewash station and safety shower.

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash hands at the end of each work shift and before eating, smoking and using the toilet.

When using do not eat, drink or smoke.

Wash contaminated clothing before reuse.

Environmental Exposure Controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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9.1. Information on basic physical and chemical properties

Appearance	Liquid Hygroscopic Viscous
Colour	May be colourless or dyed in various colours depending on customer requirements
Odour	Odourless.
Solubility	Miscible with water Miscible with: Acetone Alcohol
Initial boiling point and boiling range (°C)	197°C 760 mm Hg
Melting point (°C)	-12°C
Relative density	1.10 @ 20°C
Vapour pressure	0.05 kPa @ 20°C
Flash point (°C)	111°C CC (Closed cup).
Auto Ignition Temperature (°C)	400°C
Flammability Limit - Lower(%)	3.2
Partition Coefficient (N-Octanol/Water)	-1.36

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No specific test data related to reactivity available for this product

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidisers.

10.5. Incompatible materials

Materials To Avoid

Strong oxides. Strong alkalis. Strong acids.

10.6. Hazardous decomposition products

During fire, toxic gases (CO, CO₂) are formed.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

Toxicological information on major component only.

Acute toxicity:

Acute Toxicity (Oral LD₅₀)

7712 mg/kg Rat

Acute Toxicity (Dermal LD₅₀)

> 3500 mg/kg Mouse

Acute Toxicity (Inhalation LC₅₀)

> 2.5 mg/l (vapours) Rat

6 hrs

Skin Corrosion/Irritation:

Not irritating.

Serious eye damage/irritation:

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Not Irritating.

Respiratory or skin sensitisation:

Skin sensitisation

Guinea pig maximization test (GPMT): Guinea Pig

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

Not mutagenic

Negative.

Carcinogenicity:

Carcinogenicity

Not available.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Fertility: >1000 mg/kg Oral Rat

Not expected to be a reproductive toxicant

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEL 200 mg/kg Oral Rat

Ingestion

Harmful if swallowed.

Route of entry

Ingestion.

Target Organs

Kidneys

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment. Ecotoxicological data on main component only

12.1.Toxicity

Acute Toxicity - Fish

LC50 96 hours 72860 mg/l Pimephales promelas (Fat-head Minnow)

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours > 100 mg/l Daphnia magna

Acute Toxicity - Aquatic Plants

EC50 96 hours > 6500 mg/l Selenastrum capricornutum

Acute Toxicity - Microorganisms

EC20 > 1995 mg/l Activated sludge

30 Mins

Chronic Toxicity - Fish Early life Stage

NOEC 15380 mg/l Pimephales promelas (Fat-head Minnow)

7 days

12.2.Persistence and degradability

Degradability

Readily biodegradable

Hydrolysis is not expected / probable

12.3.Bioaccumulative potential

Bioaccumulative potential

Bioconcentration potential is low.

Partition coefficient -1.36

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12.4. Mobility in soil

Mobility:

This material has low volatility and is water soluble hence the potential for mobility is high.

Adsorption/Desorption Coefficient

Soil Koc 1

Henry's Law Constant

0.1327 atm m³/mol

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

The user must be aware that the waste category of this product may be affected by the conditions of use. Please refer to Directive 2001/118/EC for waste nomenclature.

Waste is suitable for incineration.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

Waste Class

This material and container must be disposed of as a HAZARDOUS WASTE.

SECTION 14: TRANSPORT INFORMATION

General

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

No information required.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: REGULATORY INFORMATION

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

Uk Regulatory References

Health and Safety at Work Act 1974.

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

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EU Legislation

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments.

Authorisations (Title VII Regulation 1907/2006)

This product contains a substance listed in the candidate list for authorisation established in accordance with article 59(1)

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

Issued in new format for REACH compliance Amend database classification errors.

Issued By PCL Technical Team

Revision Date 13/08/2013

Revision 8

Supersedes date 08/07/2013

SDS No. 12307

Safety Data Sheet Status Approved.

Date 20/09/2007

Risk Phrases In Full

R35	Causes severe burns.
R22	Harmful if swallowed.
R36/38	Irritating to eyes and skin.
R61	May cause harm to the unborn child.
R60	May impair fertility.
NC	Not classified.

Hazard Statements In Full

H319	Causes serious eye irritation.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H373	May cause damage to organs <<Organs>> through prolonged or repeated exposure if swallowed.
H360FD	May damage fertility or the unborn child.

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.