



SAFETY DATA SHEET

Silverhook Radiator Anti-Rust & Inhibitor

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

1.1. Product identifier

Part No. SGA12 Radiator Anti-Rust & Inhibitor

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 Coolant/Antifreeze treatment for automotive industry etc

1.3. Details of the supplier of the safety data sheet

Supplier Silverhook
Ltd. Bates
Road Harold
Wood London.
RM3 0JH
ENGLAND
+44(0)1708330500
333@silverhook.co.uk

1.4. Emergency telephone number

+44(0) 1708330500 available during office hours Monday - Friday

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; Repr. 2 - H361d; STOT RE 2 - H373
Environment	Not classified.

Classification (1999/45/EEC) Xn;R22.

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.
H361d	Suspected of damaging the unborn child.
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.
P281	Use personal protective equipment as required.

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P301+312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P501	Dispose of contents/container in accordance with local regulations.
Supplementary Precautionary Statements	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe vapour/spray.
P264	Wash contaminated skin thoroughly after handling.
P330	Rinse mouth.
P405	Store locked up.

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	85-99%	
CAS-No.: 107-21-1	EC No.: 203-473-3	Registration Number: 01-2119456816-28- xx
Classification (EC 1272/2008) Acute Tox. 4 - H302 STOT RE 2 - H373	Classification (67/548/EEC) Xn;R22.	
2-ETHYLHEXANOIC ACID	4-8%	
CAS-No.: 149-57-5	EC No.: 205-743-6	Registration Number: 01-2119488942-23-xxxx
Classification (EC 1272/2008) Repr. 2 - H361d	Classification (67/548/EEC) Repr. Cat. 3;R63	

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 2- ethylhexanoic 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

4.1. Description of first aid measures

General information

Remove affected person from source of contamination.

General first aid, rest, warmth and fresh air.

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

CAUTION! First aid personnel must be aware of own risk during rescue!

Inhalation

Remove victim immediately from source of exposure.

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

Get medical attention.

Ingestion

DO NOT INDUCE VOMITING!

When risk of unconsciousness, place and transport the victim in secured side position.

Drink plenty of water.

Do not give victim anything to drink if he is unconscious.

Get medical attention immediately!

Skin contact

Remove contaminated clothing.

Wash the skin immediately with soap and water.

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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

No specific symptoms noted.

Eye contact

No specific symptoms noted.

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

Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Stop flow of material to fire.

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

Dry chemicals, sand, dolomite etc.

Unsuitable extinguishing media

None known

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 from a fire could result in drums bursting

5.3. Advice for firefighters

Special Fire Fighting Procedures

Avoid breathing fire vapours.

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

Keep run-off water out of sewers and water sources. Dike for water control.

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.

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.

Prevent entry into drains.

6.3. Methods and material for containment and cleaning up

Stop leak if possible without risk.

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

Wear necessary protective equipment.

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

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

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not use in confined spaces without adequate ventilation and/or respirator.

Eliminate all sources of ignition.

Keep away from heat, sparks and open flame.

Avoid acids, moisture, and combustible materials.

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

7.2. Conditions for safe storage, including any incompatibilities

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

Keep away from heat, sparks and open flame.

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
EXLC 5 Antifreeze	WEL	60 mg/m ³		125 mg/m ³		
Mono Ethylene Glycol	WEL	20 ppm(Sk)	52 mg/m ³ (Sk)	40 ppm(Sk)	104 mg/m ³ (Sk)	

WEL = Workplace Exposure Limit.

Ingredient Comments

WEL = Workplace Exposure Limits

2-ETHYLHEXANOIC ACID (CAS: 149-57-5)

DNEL					
Industry	Dermal	Long Term	Systemic Effects	12 mg/kg/day	
Industry	Inhalation.	Long Term	Systemic Effects	32 mg/m ³	
Consumer	Dermal	Long Term	Systemic Effects	6 mg/kg/day	
Consumer	Inhalation.	Long Term	Systemic Effects	8 mg/m ³	
Consumer	Oral	Long Term	Systemic Effects	2.5 mg/kg/day	
PNEC					
Freshwater	0.36	mg/l			
Marinewater	0.036	mg/l			
STP	71.7	mg/l			
Sediment	6.37	mg/kg			
Soil	1.06	mg/kg			
Intermittent release	0.493	mg/l			
Sediment (Marinewat	0.637	mg/kg			

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

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Engineering measures

Must not be handled in confined space without sufficient ventilation.

Provide adequate general and local exhaust ventilation.

Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided.

Hand protection

Chemical resistant gloves required for prolonged or repeated contact.

Use protective gloves made of:

Impermeable material.

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

Eye protection

Wear approved safety goggles.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

Provide eyewash station and safety shower.

Hygiene measures

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

Wash promptly with soap & water if skin becomes contaminated.

DO NOT SMOKE IN WORK AREA!

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

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	1.11 @ 20°C
Vapour pressure	0.05 kPa @ 20°C
pH-Value, Conc. Solution	7.5 - 8.5
Flash point (°C)	111°C CC (Closed cup).
Auto Ignition Temperature (°C)	400°C
Partition Coefficient (N-Octanol/Water)	-1.36

9.2. Other information

Not known.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur

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10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials To Avoid

Acids, oxidising. Strong oxidising substances. Sulphuric Acid, Oleum, Phosphorous Pentasulphide, Chlorosulphonic acid

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

Toxicological information on major component only. As Ethanediol

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

Germ cell mutagenicity:

Negative.

Carcinogenicity:

Carcinogenicity

Not available.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Fertility: Dose Level: >1000 mg/kg Oral Rat P

Not expected to be a reproductive toxicant

Reproductive Toxicity - Development

Not available.

A component in the mixture is classified as reprotoxic for development - under the CLP regulations, the mixture also requires classification due to the amount present in the mixture

Specific target organ toxicity - single exposure:

STOT - Single exposure

Not available.

Specific target organ toxicity - repeated exposure:

Target Organs

Kidneys

Inhalation

Not relevant at normal room temperatures. When heated, irritating vapours may be formed.

Ingestion

Harmful if swallowed.

Skin contact

Skin irritation is not anticipated when used normally.

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Eye contact
May cause temporary eye irritation.
Route of entry
Ingestion.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Not regarded as dangerous for 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

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

12.3. Bioaccumulative potential

Bioaccumulative potential

Bioconcentration potential is low.

Partition coefficient -1.36

12.4. Mobility in soil

Mobility:

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

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

12.6. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

This material must be disposed of via an Authorised Waste/Disposal Company in accordance with Local and or National Waste Disposal Regulations.

Waste Class

Waste Code: 07 01 04

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.

UN No. (ADR/RID/ADN) None

14.2. UN proper shipping name

No information required.

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14.3. Transport hazard class(es)

No information required.

ADR/RID/ADN Class Not classified for transportation.

IMDG Class None

ICAO Class/Division None

Transport Labels

No transport warning sign required.

14.4. Packing group

No information required.

ADR/RID/ADN Packing group None

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

No.

14.6. Special precautions for user

No information required.

EMS None

Hazard No. (ADR) Not relevant

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

No information required.

SECTION 15: REGULATORY INFORMATION

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

Uk Regulatory References

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

Health and Safety at Work Act 1974.

Statutory Instruments

Control of Substances Hazardous to Health.

Guidance Notes

Workplace Exposure Limits EH40.

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, labeling 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.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

CLP revision

Issued By R & D

Revision Date 10/01/2014

Revision 2

Supersedes date 10/02/2012

SDS No. SHAR1

Silverhook Radiator Anti-Rust & Inhibitor

Safety Data Sheet Status Approved.

Risk Phrases In Full

R22 Harmful if swallowed.

R63 Possible risk of harm to the unborn child.

Hazard Statements In Full

H302 Harmful if swallowed.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs <<Organs>> through prolonged or repeated exposure if swallowed.

Disclaimer

The information in this document has been compiled on the basis of the best available knowledge in accordance with the legislative requirements. It does not imply that the information is complete or accurate in all cases. It is the user's responsibility to satisfy themselves as to the application of the information and/or the recommendations given for their own use.