

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

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

**1.1 Product identifier**

**Trade name:** CYCLON RADIATOR G13

**Registration number:** Substances contained in the mixture have already (pre)-registered by the suppliers.

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

No further relevant information available.

**Application of the substance / the mixture:** Antifreeze

**1.3 Details of the supplier of the safety data sheet**

**Manufacturer/Supplier:**

LPC S.A.

Megaridos Avenue 124

Aspropyrgos - Attica , 193 00

Tel.: 210 - 809 3900

Fax: 210 - 809 3999

e-mail: technical@cyclon.gr

**1.4 Emergency telephone number:**



Emergency telephone number: 112

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation EC No 1272/2008 CLP:**



GHS08 health hazard

Repr. 2 H361 Suspected of damaging fertility or the unborn child.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

**2.2 Label elements**

**Labelling according to Regulation EC No 1272/2008 CLP:**

The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 1)

**Hazard pictograms:**

GHS07 GHS08

**Signal word:** Warning**Hazard-determining components of labelling:**

ethanediol

Sodium-2-ethylhexanoate

**Hazard statements:**

H302 Harmful if swallowed.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements**

P102 Keep out of reach of children.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

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

**Regulation (EC) No 648/2004 on detergents / Labelling for contents**

soap

≥30%

**2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures****Description:** Mixture: consisting of the following components.**Ingredients according Regulation (EU) 830/2015:**

CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 Reg.nr.: 01-2119456816-28-XXXX	ethanediol ⚠ STOT RE 2, H373; ⚠ Acute Tox. 4, H302	25-50%
CAS: 19766-89-3 EINECS: 243-283-8	Sodium-2-ethylhexanoate ⚠ Repr. 2, H361	3-<10%

(Contd. on page 3)

GB

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 2)

**Ingredients**

CAS: 56-81-5	glycerol	25-50%
EINECS: 200-289-5		

**SECTION 4: First aid measures****4.1 Description of first aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Take affected persons out into the fresh air.

Seek immediate medical advice.

**After inhalation:**

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air and to be sure call for a doctor.

Seek medical treatment in case of complaints.

**After skin contact:** Remove contaminated clothing.

**After eye contact:** Avoid strong water jet-risk of cornea damage, consult a doctor.

**After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

Seek immediate medical advice.

Never give anything by mouth to an unconscious person.

**4.2 Most important symptoms and effects, both acute and delayed** Not known or expected results.

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

No special measures are required.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray.

Use fire extinguishing methods suitable to surrounding conditions.

**5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide (CO)

Carbon dioxide (CO<sub>2</sub>)

During heating or in case of fire poisonous gases are produced.

**5.3 Advice for firefighters****Protective equipment:**

Wear fully protective suit.

Mouth respiratory protective device.

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

**Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures:**

Mount respiratory protective device.

(Contd. on page 4)

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 3)

Wear protective equipment. Keep unprotected persons away.

**6.1.1 For non-emergency personnel** Avoid contact with skin and eyes.**6.1.2 For emergency responders**

Use chemicals resistant gloves.

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust, silica gel).

Dispose contaminated material as waste according to item 13.

**6.4 Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Use adequate personal protective equipment as required. For more information regarding protective equipment see section 8.

**Information about fire - and explosion protection:**

Keep away from sources of ignition and flammable materials.

**7.2 Conditions for safe storage, including any incompatibilities****Storage:**

Protect from heat and direct sunlight.

Store in cool, dry conditions in well sealed receptacles.

**Requirements to be met by storerooms and receptacles:** Store in a cool location.**Information about storage in one common storage facility:** Not required.**Further information about storage conditions:** Keep container tightly sealed.**7.3 Specific end use(s)** No further relevant information available.**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****107-21-1 ethanediol**

WEL (Great Britain)	Short-term value: 104** mg/m <sup>3</sup> , 40** ppm
	Long-term value: 10* 52** mg/m <sup>3</sup> , 20** ppm
	Sk *particulate **vapour

IOELV (EU)	Short-term value: 104 mg/m <sup>3</sup> , 40 ppm
	Long-term value: 52 mg/m <sup>3</sup> , 20 ppm
	Skin

**56-81-5 glycerol**

WEL (Great Britain)	Long-term value: 10 mg/m <sup>3</sup>
---------------------	---------------------------------------

**8.2 Exposure controls****8.2.1. Appropriate engineering controls** Use of local ventilation is advised.

(Contd. on page 5)

-GB-

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 4)

**Personal protective equipment****General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.  
 Wash hands before breaks and at the end of work.  
 Store protective clothing separately.

**Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

**Protection of hands:**

Protective gloves

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

**Eye protection:**

Safety glasses

**Body protection:**

Protective work clothing

**Environmental exposure controls:** No further recommendations. See section 6.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Light coloured
<b>Odour:</b>	Light
<b>Odour threshold:</b>	Not determined

<b>pH value at 20 °C:</b>	8.35
<b>Melting point/freezing point:</b>	Not determined
<b>Initial boiling point and boiling range:</b>	Not determined

<b>Flash point:</b>	Not Flammable
---------------------	---------------

(Contd. on page 6)

GB

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

Trade name: CYCLON RADIATOR G13

(Contd. of page 5)

<b>Flammability (solid, gas):</b>	Not applicable
<b>Auto-ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Auto-ignition temperature:</b>	Product is not selfigniting.
<b>Explosive properties:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	
<b>Lower:</b>	Not determined
<b>Upper:</b>	Not determined
<b>Oxidising properties</b>	Not considered as oxidising.
<b>Vapour pressure:</b>	Not determined
<b>Density at 20 °C:</b>	1.132 kg/l
<b>Relative density</b>	Not determined
<b>Vapour density</b>	Not determined
<b>Evaporation rate</b>	Not determined
<b>Solubility in / Miscibility with water:</b>	Fully miscible
<b>Partition coefficient: n-octanol/water:</b>	Not determined
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined
<b>Kinematic:</b>	Not determined
<b>9.2 Other information</b>	No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity** Stable under normal conditions**10.2 Chemical stability** Material is stable under normal conditions.**Thermal decomposition / conditions to be avoided** Stable at environment temperature.**10.3 Possibility of hazardous reactions** No dangerous reactions known.**10.4 Conditions to avoid** Oxidising agents**10.5 Incompatible materials** No further relevant information available.**10.6 Hazardous decomposition products** No dangerous decomposition products known.**SECTION 11: Toxicological information****11.1 Information on toxicological effects****Acute toxicity**

Harmful if swallowed.

**LD/LC50 values relevant for classification:****ATE (Acute Toxicity Estimates)**

Oral	LD50	633 mg/kg
------	------	-----------

(Contd. on page 7)

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 6)

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

The mixture is not carcinogenetic, mutagenetic, toxic for reproduction.

Repr. 2

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity**

Suspected of damaging fertility or the unborn child.

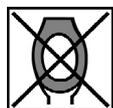
**STOT-single exposure** Based on available data, the classification criteria are not met.**STOT-repeated exposure**

STOT Repeated Exposure Category 2

May cause damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Based on available data, the classification criteria are not met.**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Dispose according to National Regulations.



Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Contact manufacturer for recycling information.

**Uncleaned packaging:****Recommendation:**

Disposal must be made according to official regulations.

Packaging may be reused or recycled after cleaning.

**SECTION 14: Transport information****14.1 UN-Number**

Void

(Contd. on page 8)

GB

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 7)

**ADR, ADN, IMDG, IATA** Void

**14.2 UN proper shipping name** Void

**ADR, ADN, IMDG, IATA** Void

**14.3 Transport hazard class(es)** Void

**ADR, ADN, IMDG, IATA**

**Class** Void

**14.4 Packing group** Void

**ADR, IMDG, IATA** Void

**14.5 Environmental hazards:** Not applicable.

**14.6 Special precautions for user** Not applicable.

**14.7 Transport in bulk according to Annex II of**

**Marpol and the IBC Code** Not applicable.

**UN "Model Regulation":** Void

### SECTION 15: Regulatory information

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

REACH Regulation 1907/2006/EC

Regulation (EU) 2015/830

CLP Regulation 1272/2008/EC

Constituents of the mixture that fall within the scope of REACH Regulation 1907/2006/EC, have been (pre)-registered.

#### Directive 2012/18/EU

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

**National regulations:** No further information available.

#### Other regulations, limitations and prohibitive regulations

#### Substances of very high concern (SVHC) according to REACH, Article 57

It doesn't contain substances of very high concern (SVHC).

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

#### Relevant phrases

H302 Harmful if swallowed.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

#### Training hints

Suitable training on safety in handling, storing and converting the product should be given to the employees based on all the existing information.

(Contd. on page 9)

**Safety Data Sheet**  
**complying with Regulation 1907/2006/EC (REACH Regulation),**  
**EU 2015/830 and Regulation No 1272/2008/EC (CLP)**

Printing date 05.05.2017

Version number 1

Revision: 05.05.2017

**Trade name:** CYCLON RADIATOR G13

(Contd. of page 8)

**Department issuing SDS:**

SUSTCHEM Engineering Ltd  
REACH & Chemical Services Department  
144, 3rd Septemvriou, GR 112 51, Athens, Greece  
Tel.: +30 210 8252510 Fax: +30 210 8252575  
E-mail: info@suschem.gr  
Website: www.sustchem.gr

**Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Acute Tox. 4: Acute toxicity – Category 4  
Repr. 2: Reproductive toxicity – Category 2  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

GB