

**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 CYCLONFLU LL G12+

**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

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



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

**2.2 Label elements**

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

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

**Hazard pictograms:**



GHS07 GHS08

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

ethanediol

**Hazard statements:**

H319 Causes serious eye irritation.

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

**Precautionary statements**

P102 Keep out of reach of children.

P280 Wear eye protection / face protection.

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

P264 Wash thoroughly after handling.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/attention if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice/attention.

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

**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%
EINECS: 221-625-7	Potassium 2-ethylhexanoate ☠ Repr. 2, H361; ⚠ Eye Dam. 1, H318; ⚠ Skin Irrit. 2, H315	2.5-<3%
<b>Ingredients</b>		
CAS: 7732-18-5 EINECS: 231-791-2	water, distilled, conductivity or of similar purity	45%

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

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.

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

Seek medical treatment in case of complaints.

**After skin contact:** Generally the product does not irritate the skin.**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.

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.

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### 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

#### 8.2 Exposure controls

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

##### 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.

Avoid contact with the eyes.

##### 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

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**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.

**Eye protection:**

Tightly sealed goggles

**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

**pH value:** Not determined

**Melting point/freezing point:** Not determined

**Initial boiling point and boiling range:** 109 °C (minimum)

**Setting temperature / range:** -39 °C

**Flash point:** >122 °C

**Flammability (solid, gas):** Not applicable

**Auto-ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Auto-ignition temperature:** Product is not selfigniting.

**Explosive properties:** Product does not present an explosion hazard.

**Explosion limits:**

**Lower:** Not determined

**Upper:** Not determined

**Oxidising properties** Not considered as oxidising.

**Vapour pressure:** Not determined

**Density at 20 °C:** 1.051 kg/l

**Relative density** Not determined

**Vapour density** Not determined

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

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

Oral	LD50	3497 mg/kg
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- Skin corrosion/irritation** Based on available data, the classification criteria are not met.  
**Serious eye damage/irritation**  
Causes serious eye irritation.  
**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.  
**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** Based on available data, the classification criteria are not met.  
**STOT-single exposure** Based on available data, the classification criteria are not met.  
**STOT-repeated exposure**  
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.

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**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**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

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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.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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.

**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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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Repr. 2: Reproductive toxicity – Category 2

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

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