SECTION 1. IDENTIFICATION OF ~~THE SUBSTANCE~~/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name: [G]LINE G12+ ANTIFREEZE

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

Radiator cooling fluid.

1.3. Details of the supplier of the safety data sheet

Manufacturer: UAB "GREENLAB SOLUTIONS"
Address: GEDIMINO 50, VILNIUS, LT-01110
Phone No.: +3706 87 73414
E-mail: info@greenlab.lt

1.4. Emergency telephone number:

+ 3706 87 73414 (in working days from 08:00 to 17:00)

SECTION 2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification / Risks	According to Council Directive No.67/548/EEC:	According to EC Directive No.1272/2008 (CLP):
resulting from physicochemical properties:	Not classified as hazardous	Not classified as hazardous
for humans:	Xn, R22	Acute Tox. 4; H302 STOT RE. 2; H373 Repr. 2, H361d
For the environment:	Not classified as hazardous	Not classified as hazardous

2.2. Label elements

Pictogram:

Signal word: Warning

Hazard statements:

H302 - Harmful if swallowed.

H361d - Suspected of damaging the unborn child

H373 - May cause damage to kidneys through prolonged or repeated exposure after ingestion.

Precautionary statements:

P102 Keep out of reach of children

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

P264 Wash hands thoroughly after handling

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

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P501 - Dispose of contents/container to a licensed waste disposal company.

It contains: Mono ethylene glycol, potassium 2-ethylhexanoate

2.3. Other hazards

According to Annex XIII, the product does not meet PBT or vPvB criteria.

Prolonged exposure or high concentrations of vapor or mist may cause mild irritation of the respiratory respiratory and headache, dizziness, nausea, vomiting, drowsiness, disturbances of the central nervous system, involuntary eye movement and coma. Contact with skin causes mild irritation of the skin. Eye contact under prolonged exposure causes moderate eye irritation.

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. Substances – not applicable

3.2. Mixtures

Substance name	CAS No / EC No	% wt.	Index number	Classification according to 67/548/EC	Classification according to 1272/2008 (CLP)
Mono ethylene glycol 01-2119456816-28	107-21-1 203-473-3	90-93%	603-027-00-1	Xn, R22, R48/22	Acute Tox. 4; H302 STOT RE. 2; H373
2-ethylhexanoic acid	149-57-5 205-743-6	5-7%	607-230-00-6		Repr. 2, H361d
Tolyltriazol , TTA 01-2119979081-35	29385-43-1 249-596-6	2-3%	--		Acute Tox. 4 H302 Aquatic Chronic 2 H411

Description of R, H phrases and full text of classification given in Section 16.
Composition comments
The data shown are in accordance with the latest EC Directives

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General information:

Remove affected person from source of contamination. Get medical attention if any discomfort continues.

Inhalation:

Remove the victim from the exposure area to fresh air and keep person calm under observation. Place an unconscious person in recovery position, loosen tight parts of clothes; control and maintain patency of the airways. Give oxygen in the case of breathing disorders; if not breathing, use artificial ventilation. In the case of loss of consciousness, respiratory disorders or persisting symptoms obtain medical aid immediately.

Ingestion:

Immediatelly rinse mouth and drink plenty of water. Keep person under observation. If person becomes uncomfortable take to hospital along with these instructions.

Skin contact:

Immediately remove contaminated/soaked clothes and shoes. Thoroughly wash contaminated skin with water. Consult a doctor if irritation symptoms appear and persist.

Eye contact:

Immediately flush the contaminated eyes with running water, remove contact lenses (if worn) and continue flushing

for 15 minutes. When flushing, keep the eyelids wide open and move the eyeball. Consult a doctor if symptoms appear and persist.

Swallowing:

Carry the exposed person to fresh air. Give to drink a lot of water. In the case when spontaneous vomiting occurs, keep the victim leaning forward, with her/his face directed to the ground. Obtain medical aid immediately.

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

In the first period of poisoning after ingestion, symptoms similar to alcohol intoxication may occur: agitation, slurred speech, impaired balance and coordination, headaches, dizziness, drowsiness etc., followed by nausea and vomiting, diarrhea, respiratory distress can enjoy, in the case of severe poisoning circulatory problems, fast heart rate, low blood pressure, coma, loss of consciousness with convulsions, collapse, possible death due to breathing stop.

Long-term exposure causes intensity of existing skin, eye, respiratory system disorders. May cause disturbances and damage to kidneys and liver; may damage the brain.

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

Do not induce vomiting and do not administer anything orally to an unconscious person. Show the material safety data sheet or the label/container to the medical staff. A person providing first aid in the area where vapour/fog concentration is unknown should be equipped with the appropriate respiratory protection.

Indications for a doctor: Diethylene glycol poisoning treatment, appropriate to the sick person's condition, should include: stomach wash within 2 hours from poisoning, fighting cardiopulmonary disorders, serving ethyl alcohol (intravenously via infusion - 5-15% ethyl alcohol solution in 5% glucose); in case of acute poisoning - hemodialysis, diuresis.

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: carbon dioxide, dry powder, foam; water spray.
Unsuitable extinguishing media: not known.

5.2. Special hazards arising from the substance or mixture

Fire resistant product. In the fire environment smokes containing carbon oxides and other unidentified thermal decomposition products of higher hydrocarbons are formed. Avoid breathing products being released in the fire environment.

5.3. Advice for firefighters

Proceed in accordance with procedures applicable for extinguishing chemical fire. In the case of fire involving great amounts of the product, remove all bystanders not participating in action; call emergency brigades and the Fire Brigade.

Cool the containers exposed to fire or high temperature with water spray from a safe distance, if possible and remove them from the endangered area.

Prevent the wastewater after fire extinguishing from penetrating sewage and water tanks. Remove wastewater and residue after firefighting in accordance with valid regulations.

People participating in the fire-extinguishing action should be properly trained, equipped with a full protective clothing and a self-containing breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use individual protection measures – see section 8 of the Safety Data Sheet.

Limit the access of bystanders to the endangered area until proper cleaning operations are finished. In the case of great leakage isolate the endangered area. Ensure that breakdown and its results are eliminated by a properly trained staff only.

Avoid contact with the eyes, skin and clothes.

6.2. Environmental precautions

If it is possible and safe, stop or limit product release. Limit spreading of the great leakages by embanking the area. Prevent the product from penetrating drains, waters or soil. Notify respective authorities (occupational safety and hygiene, emergency brigades, environmental brigades and organs of administration).

6.3. Methods and material for containment and cleaning up

Collect with the available equipment and remove the residue having mixed it with soil, sand or other absorbent material, then place in a sealed, properly labelled container. Dispose in accordance to applicable regulations. If necessary, obtain help from specialist companies dealing with waste transport and utilisation in order to remove the product/absorbent material contaminated with the product.

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

Provide effective ventilation. Avoid contact with the eyes, skin and clothes. Keep unused containers tightly closed. Essential hygiene rules should be observed: do not eat, drink or smoke during work, wash hands with soapy water after work/after break in work. Do not use contaminated clothing; Immediately remove contaminated clothing and wash before reuse. NOTE: Take off contaminated/soaked clothes and remove it to a safe place, far from heat and ignition sources. Use individual protection measures in accordance with the information contained in section 8 of the Safety Data Sheet.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed, properly labeled containers, in a cool, well-ventilated place with a non-absorbent surface. Keep away from heat sources, protect from direct sunlight. Recommended storage temperature below 40 ^{0}C.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2

SECTION 8. EXPOSURE CONTROL AND PERSONAL PROTECTION EQUIPMENT

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
MONO ETHYLENE GLYCOL	WEL		10 mg/m3		104 mg/m3	Sk

WEL = Workplace Exposure Limit.
Sk = Can be absorbed through skin.

8.2. Exposure controls

Protective equipment



Process conditions:

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. Engineering measures
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded.

Respiratory equipment:

Wear suitable respiratory protection. Hand protection:

Protective gloves and goggles must be used if there is a risk of direct contact or splash.

Eye protection:

Wear tight-fitting goggles or face shield. Other Protection:

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Hygiene measures

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

Skin protection:
Wear apron or protective clothing in case of contact.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

APPEARANCE:	Liquid
COLOUR:	Pink/ Red
ODOUR:	Odourless
ODOUR THRESHOLD:	No data available
pH:	7-9
MELTING/SOLIDIFICATION TEMPERATURE:	≤ - 37°C (crystallization temperature)
INITIAL BOILING POINT AND BOILING RANGE:	>150 °C 760mm Hg
FLASH POINT:	>110^{O} C
IGNITION POINT:	while testing with standard methods – not applicable
EVAPORATION RATE:	No data available
FLAMMABILITY (SOLID, GAS):	Not applicable
VAPOUR DENSITY:	No data available
RELATIVE DENSITY:	1,06 – 1,16 g/cm^3 at 20°C
SOLUBILITY:	Soluble in water
DISTRIBUTION COEFFICIENT N-OCTANOL/ WATER:	No data available
SELF-IGNITION POINT:	No data available
DECOMPOSITION TEMPERATURE:	No data available
VISCOSITY:	21 cps at 20 °C
EXPLOSIVE PROPERTIES:	Not explosive
OXIDIZING PROPERTIES:	Not oxidizing

9.2. Other information

None

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

Reaction with: Oxidising materials.

10.2. Chemical stability

No particular stability concerns.

10.3. Possibility of hazardous reactions

Not determined.

10.4. Conditions to avoid:

Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid: acids, oxidisers.

10.6. Hazardous decomposition products

in case of fire, toxic gases (CO, CO2, Nox) may be formed.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Toxic Dose 1 - LD 50
5890 - 13400 mg/kg (oral rat)

Toxic Dose 2 - LD 50
5010 mg/kg (ipr-rat)
Toxicological information
No information available.

Specific target organ toxicity - single exposure:
Target Organs
Central nervous system
Heart & cardiovascular system
Kidneys

Inhalation
Unlikely to be hazardous by inhalation because of the low vapour pressure of the substance at ambient temperature. Vapours may irritate throat and respiratory system and cause coughing.

Ingestion
May cause liver and/or renal damage. Irritating. May cause nausea, stomach pain and vomiting. Harmful: possible risk of irreversible effects if swallowed.

Skin contact
Slightly irritating.

Eye contact
May cause temporary eye irritation.

Health Warnings
This chemical can be hazardous when inhaled and/or touched.

Route of entry
Ingestion.

Target Organs
Central nervous system Heart & cardiovascular system Kidneys

Medical Symptoms
Allergic rash. Delayed, often serious breathing problems. Tachycardia, (excessively rapid heart beat, including rapid and weak pulse). Unconsciousness, possibly death.

Specific effects
May cause damage to the kidneys. Contains a substance/a group of substances with possible risk of harm to the unborn child and with possible risk of impaired fertility

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.1. Toxicity

LC50, 96 Hrs, Fish mg/l 22810
mg/l Acute Toxicity - Fish
Not available.
EC50, 48 Hrs, Daphnia, mg/l 41000 mg/l
Acute Toxicity - Aquatic Invertebrates
Not available.

12.2. Persistence and degradability

Degradability
The product is expected to be biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential
The product is not bioaccumulating.
Partition coefficient scientifically unjustified.

12.4. Mobility in soil

Mobility:
The product is soluble in water.
Adsorption/Desorption Coefficient
Not available.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Not applicable

SECTION 13. DISPOSAL CONSIDERATIONS

General information
When handling waste, consideration should be made to the safety precautions applying to handling of the product.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements. Absorb in vermiculite or dry sand and dispose of at a licenced hazardous waste collection point.

SECTION 14. TRANSPORT INFORMATION

The product is not a subject to transport regulations on hazardous goods included in ADR (road transport), RID (rail transport), IMDG (marine transport) and ICAO/IATA (air transport).

14.1. UN number	Not applicable
14.2. UN Proper shipping name	Not applicable
14.3. Transport hazard class(es)	Not applicable
14.4. Packing group	Not applicable
14.5. Environmental hazards	Not applicable
14.6. Special precautions for users	Not applicable

14.7. Transport in bulk according to Annex II of MARPOL

7373/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

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

The Act of 25 February 2011 on chemical substances and preparations (Dz.U. of 2011 No. 63, item 322)

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) and establishing a European Chemicals Agency and 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 (correction OJ L 136 of 29 May 2007 with amendments)

Regulation of the (UE) Commission no. 453/2010 of 20 May 2010 amending the Regulation (EC) No. 1907/2006 of the European Parliament and Council dated December 18, 2006 on registration, evaluation, granting of permissions and restrictions applied in scope of chemicals (REACH) (OJ L 133 of 31.05.2010)

Regulation (UE) of the European Parliament and Council no. 1272/2008 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 the Regulation (EC) No. 1907/2006 (EU OJ L No.353 dated 31.12.2008 with amendments)

Regulation of the Minister of Health of 2 September 2003, on the criteria and classification chemical substances and preparations (Dz. U. of 2003 No.171, item 1666; of 2004 No.243, item 2440; of 2007 No.174, item 1222; of 2009 No.43, item 353)

Regulation of the Minister of Work and Social Policy of 20 April 2005 on testing and measurements of factors hazardous to health at the workplace (Dz.U. of 2005 No.73, item 645; of 2007 Dz.U. No.241, item 1772)

Regulation of the Minister of Economy of 21 December 2005, on the basic requirements for personal protection measures (Dz. U. of 2005 No.259, item 2173)

Regulation of the Council of Ministers of 24 August 2004 on the list of jobs prohibited for young workers and the circumstances in which they might be employed in some of these jobs (Dz.U. of 2004 No.200, item 2047; of 2005 No.136, item 1145; of 2006 No.107, item 724)

Regulation of the Council of Ministers of 10 September 1996 on the list of jobs that are prohibited for women (Dz.U. of 1996 No.114, item 545, of 2002 No.127, item 1092)

Regulation of the Minister of Health and Social Policy of 30 May 1996 on conducting the medical examinations of employees, range of medical prevention and medical decisions given on the purposes specified in the Labour Code (Dz. U. of 1996 No.69, item 332; of 1997 No. 60, item 375; of 1998 No.159, item 1057; of 2001 No.37, item 451; No.128, item 1405)

Regulation of the Minister of Labour and Social Policy of 26 September 1997 on general regulations for hygiene and safety at work (consolidated text Dz.U. of 2003 No.169, item 1650; of 2007 No.49, item 330; of 2008 No.108, item 690)

Regulation of the Minister of Health of 30 December 2004 on safety and hygiene of work related to chemical factors present at the workplace (Dz.U. of 2005 No.11, item 86; of 2008 No.203, item 1275)

The Act of 24 August 1991 on fire protection (consolidated text – appendix to Dz.U. of 2002 No.147, item 1229; of 2003 No.52, item 452; of 2004 No.96, item 959; of 2005 No.100, item 835 and 836; of 2006 No.191, item 1410; of 2007 No.89, item 590; of 2008 No.163, item 1015; of 2009 No.11, item 59)

Act of 31 March 2004, on railway transport of hazardous substances (Dz. U. of 2004 No.97, item 962; of 2005 No.141, item 1184; of 2006 No.249, item 1834; of 2007 No.176, item 1238)

Regulations for the International Rail Transport of Hazardous Goods RID (of 2009 Dz.U. No.167, item 1318)

15.2. Chemical safety assessment

Chemical safety assessment is not required for the mixture.

SECTION 16. OTHER INFORMATION

Abbreviations and acronyms in the Safety Data Sheet

TLV-TWA Threshold Limit Value
TLV-STEL Threshold Limit Value, Short Term Exposure Limit
TLV-C Ceiling exposure limit
vPvB very Persistent, very Bioaccumulative (substance)
PBT Persistent, bioaccumulative, and toxic (substance)
PNEC Predicted No Effect Concentration
DN(M)EL Derived No Effect Level
LD_{50} Dose that will kill 50% of the test animals

LC_{50}	Concentration that will kill 50% of the test animals
EC_X	Concentration at which x% inhibition of growth or growth rate is observed
LOEC	Lowest Observed Effect Concentration
NOEL	No Observed Effect Concentration
RID	Regulations Concerning the International Carriage of Dangerous Goods by Rail
ADR	Agreement on Dangerous Goods by Road
IMDG	International Maritime Transport of Dangerous Goods
IATA	International Air Transport Association
UVCB	Unknown substances, of Variable Composition, or of Biological Origin

References:

Legal regulations quoted in sections 2 – 15 of the Safety Data Sheet.
Chemical safety assessment report for the mixture ingredients.

The list of applicable R-phrases, hazard statements, S-phrases or precautionary statements not specified in whole in sections 2-15 of the Safety Data Sheet.

List of H phrases:
H302 - Harmful if swallowed

H373 - May cause damage to organs through prolonged or repeated exposure
H361d - Suspected of damaging the unborn child

CLP classification:
Acute Tox. 4 – Acute toxicity, No. 4
STOT RE 2 – Toxic to organs - repeated exposure
Repr. 2 – Harmful to reproduction – category 2

List of H phrases:
R22 - Harmful if swallowed.
R63: Possible risk of harm to the unborn child

DSD/ DPD classification:
Xn - harmful
Repro. Cat. 3 – Harmful to reproduction – category 3

Advice on training for employees:

Employees who use the product should be trained on risks for health, hygiene, use of individual protection, accident preventive actions, rescue actions, etc.,

This MSDS is not a quality certificate for the product. All data presented in this sheet are to be taken only as a help in safe handling in transport, distribution, use and storage. Persons handling the product should be informed about risks and precautionary measures. Information in the Safety Data Sheet relates to the above mentioned product and its specified uses only. They may be obsolete or insufficient for this product used in conjunction with other materials or in different applications than those specified in the Safety Data Sheet.
The user is obliged to follow all applicable standards and regulations and is also responsible for inappropriate use of information contained in this sheet or for an inappropriate use of the product. In the case of special applications evaluate exposure and develop the appropriate procedure and training programs in order to ensure safety at work.