Safety data sheet

(Regulation 1907/2006/EC, amended by 2015/830/EU)

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

1.1. Product identifier

Material Name:	**DYNAMAX COOL G11**		
CAS:		**EINECS:**	
		ELINCS:	

1.2. Identified uses

Uses:	antifreeze in the cooling systems

1.3. Details of the supplier of the safety data sheet

Manufacturer/Supplier:	EURO-VAT spol. s r.o.
IČO:	18049397
Address:	Alekšince 231
	951 22
	Alekšince (Slovakia)
Phone/fax number:	+421 37 7822 326-7
E-mail:	eurovat@eurovat.sk www.eurovat.sk
Emergency phone number:	Národné toxikologické informačné centrum (NTIC) Klinika pracovného lekárstva a toxikológie, FNsP akad. L.Dérera Limbova 5 833 05 Bratislava Tel. +421 2 5477 4166 ntic@ntic.sk www.ntic.sk

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]
Acute Tox. 4 (*) H302
STOT RE 2 H373

2.2 Label elements

Hazard pictograms (CLP/GHS) :

Signal word: warning

H-phrases:
H302 Harmful if swallowed
H373 May cause damage to organs through prolonged or repeated exposure

P-phrases:
P102 Keep out of reach of children
P260 Do not breathe vapours/spray
P264 Wash hands thoroughly after handling
P270 Do no eat, drink or smoke when using this product
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Contains: ethylene glycol

2.3 Other hazards	**Precautionary statements** **Prevention :** Do not breathe vapour. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. **Response :** Get medical attention if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. **Storage :** Store in original container in a well ventilated area at temperatures up to 40 °C. Protect the product from static electricity. **Disposal :** Not applicable. **Supplemental label elements:** Not applicable. **Special packaging requirements** **Containers to be fitted with child-resistant fastenings:** Not applicable. **Tactile warning of danger:** Applicable. **Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII:** Not available. **Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII:** Not available. **Other hazards which do not result in classification:** Not available.

SECTION 3: COMPOSITION/INFORMATION ON IGREDIENTS

Product /ingredient name	CAS	EC	Symbols	Conc. %	Registr. no REACH	GHS classification	
Ethan-1,2-diol	107-21-1	203-473-3		min. 90	01-2119456816-28-0000	Acute Tox.4 STOT RE 2	H302 H373
Potassium 2-ethylhexanoate	3164-85-0	221-625-7		max. 1	01-2119980714-29-xxxx	Repr. 2 Skin Irrit. 2 Eye Dam. 1	H361d H315 H318
Methyl-1H-benztriazol	29385-43-1	249-596-6		min. 0,05	01-2119979081-35-xxxx	Acute Tox. 4 Aquatic Chronic 2	H302 H411

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures	**Eye contact:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. **Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention following exposure or if feeling unwell. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. **Skin contact:** Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell. Wash clothing before reuse. Clean shoes thoroughly before reuse. **Ingestion:** Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for

	breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. **Protection of first-aiders :** No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
4.2 Most important symptoms and effects, both acute and delayed	**Potential acute health effects** **Eye contact:** No known significant effects or critical hazards. **Inhalation :** No known significant effects or critical hazards. **Skin contact :** No known significant effects or critical hazards. **Ingestion :** Harmful if swallowed. **Over-exposure signs/symptoms** **Eye contact :** No specific data. **Inhalation:** No specific data. **Skin contact:** No specific data. **Ingestion:** No specific data.
4.3 Indication of any immediate medical attention and special treatment needed	**Notes to physician:** Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. **Specific treatments:** No specific treatment.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media	In case of fire, use water spray (fog), foam or dry chemical.
5.2. Unsuitable extinguishing media	None known.
5.3. Specific hazards	**Hazards from the substance or mixture:** In a fire or if heated, a pressure increase will occur and the container may burst. **Hazardous thermal decomposition products:** Decomposition products may include the following materials: carbon dioxide, carbon monoxide.
5.4. Protective equipment for firefighters	**Special protective actions for fire-fighters:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. **Special protective equipment for fire-fighters:** Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions	**For non-emergency personnel:** 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 spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. **For emergency responders:** If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
6.2. Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
6.3. Clean up methods	**Small spill:** Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. **Large spill:** Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1for emergency contact information and section 13 for waste disposal.

SECTION 7: HANDLING AND STORAGE

7.1. Handling	**Protective measures :** Put on appropriate personal protective equipment (see Section 8). Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. **Advice on general occupational hygiene:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 . Storage	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. Storage temperature : 0 – 40°C.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
ethanediol	**EH40/2005 WELs (United Kingdom (UK), 8/2007). Absorbed through skin.**

	TWA: 10 mg/m³ 8 hour(s). Form: Particulate STEL: 104 mg/m³ 15 minute(s). Form: Vapour STEL: 40 ppm 15 minute(s). Form: Vapour TWA: 52 mg/m³ 8 hour(s). Form: Vapour TWA: 20 ppm 8 hour(s). Form: Vapour

Recommended monitoring procedures: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

Product/ ingredient name	Type	Exposure	Value	Population	Effects
ethanediol	DNEL DNEL DNEL DNEL	Long term Dermal Long term inhalation Long term Dermal Long term inhalation	106 mg/kg bw/day 35 mg/m³ 53 mg/kg bw/day 7 mg/m³	Workers Workers Consumers Consumers	Systemic Local Systemic Local

Predicted effect concentrations

Product ingredient name	Type	Compartment Detail	Value	Method Detail
ethanediol	PNEC PNEC PNEC PNEC	Fresh water Marine Fresh water sediment Sewage Treatment Plant	10 mg/l 1 mg/l 20,9 mg/kg dwt 20,9 mg/l	Assessment Factors Assessment Factors - Assessment Factors

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: safety glasses with side-shields

Skin protection

Hand protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. >8 hours (breakthrough time): butyl rubber, nitrile rubber, PVC, Viton®

Body protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is

	necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: organic vapour filter (Type A) **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

Fysical state	liquid
Colour	blue/green
Odour	odourless
pH	7 - 9
Flash point (ASTM-D92) [°C]	not available
Boiling point (ASTM D1120) [°C]	> 150
Freezing point [°C]	- 32 +/-2 (mixed with water 1:1)
Flammability	not available
Temperature of spontaneous combustion [°C]	not available
Lower limit of explosion	not available
Superior limit of explosion	not available
Oxidising properties	not available
Vapour pressure [hPa]	not available
Relative density [g.cm^{-3}] typ.	1,110 – 1,140
Water solubility [g.l^{-1}]	very good mixable
Solubility in solvents [g.l^{-1}]	soluble in alcohols, acetone
9.2 Other information	No additional information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	Stabile under recommended conditions of use and storage.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	Keep away from heat, sparks and flame.
10.5 Incompatible materials	Oxidising agents
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Product/ ingredient name	Result	Species	Dose	Exposure
ethanediol	LC50 Inhalation Vapour LD50 Dermal LD50 Oral	Rat Mouse Rat	>2.5 mg/l >3500 mg/kg 7712 mg/kg	6 hours - -

Conclusion/Summary : Not available.

Irritation/Corrosion
Conclusion/Summary : Not available.

Sensitisation
Conclusion/Summary : Not available.

Mutagenicity

Product/ ingredient name	Test	Experiment	Result
ethanediol	- -	Experiment: In vitro Subject: Bacteria Experiment: In vitro Subject: Bacteria	Negative Negative

Conclusion/Summary : Not available.

Carcinogenicity
Conclusion/Summary : Not available.

Reproductive toxicity

Product/ ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
ethanediol	Negative	-	Negative	Rat	Oral: >1000 mg/kg	-

Conclusion/Summary : Not available.

Teratogenicity
Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)
Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethanediol	Category 2	Oral	kidneys

Aspiration hazard
Not available.

Information on the likely routes of exposure: Not available.

Potential acute health effects
Inhalation : No known significant effects or critical hazards.
Ingestion : Harmful if swallowed.
Skin contact : No known significant effects or critical hazards.
Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics
Eye contact : No specific data.
Inhalation : No specific data.
Skin contact: No specific data
Ingestion: No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.
Potential delayed effects : Not available.

Long term exposure
Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects

Product/ ingredient name	Result	Species	Dose	Exposure
ethanediol	Sub-acute NOAEL Oral Sub-acute NOAEL Dermal	Rat Dog	200 mg/kg 2,22 mg/kg	33 days; 7 days per week 4 weeks; 7 days per week

Conclusion/Summary : Not available.
General : May cause damage to organs through prolonged or repeated exposure if swallowed.
Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Teratogenicity : No known significant effects or critical hazards.
Developmental effects : No known significant effects or critical hazards.
Fertility effects : No known significant effects or critical hazards.

Other information :
Not available.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Product/ ingredient name	Result	Species	Exposure
ethanediol	EC50 6500 to 13000 mg/l	Aquatic plants - Pseudokirchnerella subcapitata	96 hours
	Acute EC50 >100 mg/l Fresh water	Daphnia - Dapnia magna	48 hours
	Acute LC50 72860 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 8590 mg/l Fresh water	Crustaceans - Ceriodaphnia sp.	7 days
	Chronic NOEC 15380 mg/l Fresh water	Fish - Pimephales promelas	7 days

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethanediol	-	-	readily

12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
ethanediol	-1,36	-	low

12.4 Mobility

Soil/water partition coefficient (K_{OC}): 1
Mobility : Not available.

12.5 Results of PBT

PBT : Not available.

and vPvB assessment	P: Not available. B: Not available. T: Yes. **vPvB :** Not available. vP: Not available. vB: Not available.

12. 6 Other adverse effects	No known significant effects or critical hazards.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product

Product

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be Considered when recycling is not feasible.

Special precautions: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

ADR	Not regulated
UN proper shipping name	Nor regulated
Class	Not regulated
Hazard Identification	Not regulated
Packing group	Nor regulated
Label	Not regulated

SECTION 15: REGULATORY INFORMATION

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles: Not applicable.

Other EU regulations

Europe inventory : All components are listed or exempted.
Black List Chemicals : Not listed
Priority List Chemicals : Not listed
Integrated pollution prevention and control list (IPPC) - Air: Not listed

Integrated pollution prevention and control list (IPPC) - Water: Not listed

International regulations

Chemical Weapons Convention List Schedule I Chemicals: Not listed
Chemical Weapons Convention List Schedule II Chemicals: Not listed
Chemical Weapons Convention List Schedule III Chemicals: Not listed

15.2 Chemical Safety Assessment

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: OTHER INFORMATION

Reason for Revision:

20.08.2017 - Classification of the mixture of the European Parliament and Council Regulation (EC) No. 2015/830

16.1 Text of H-phrases (point 3):

H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H361 Suspected of damaging fertility or the unborn child
H411 Toxic to aquatic life with long lasting effects

16.3 Other information:

The information above is based on a current available data concerning the product, but also on the experience and knowledge in this field of the producer. They are neither a quality description of the product nor a guarantee of particular features. They are to be treated as aid to safety in transport, storage and usage of the product. This does not free the user from the responsibility of improper usage of the information above and also of improper compliance with the law norms in the field.