SAFETY DATA SHEET

according to Regulation No. 1907/2006 (REACH) and Commission Regulation (EU) 2020/878

Version: 1.0
Issue date: 2021-11-30

Antifreeze G12+

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

1.1 Product identifier

Chemical name/ trade name: **Antifreeze G12+**

Producer: **OMA CZ, a.s.**
Address: **Stráž pod Ralskem, 47127, Borová 103**

Distributor: **OMA CZ Slovakia s.r.o.**
Address: **Bratislava, 81104, Boženy Nemcovej 8**

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

Intended use: Coolant for car cooling circuits.

Uses advised against: Other then the above mentioned.

1.3 Details of the supplier of the safety data sheet

Supplier of SDS: OMA CZ Slovakia s.r.o.
Address: Bratislava, 81104, Boženy Nemcovej 8
Identification No.: 50299964
Tel: +421903714919
www: www.omacz.sk
Responsible person for this SDS: OMA CZ, a.s., laborator@omacz.cz

1.4 Emergency telephone number

National Poisons Information Service (NPIS), Royal Infirmary of Edinburgh, Edinburgh EH16 4SA, United Kingdom, Tel.: +44 121 507 4123, 844 892 0111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

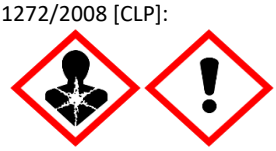
Classification according to the EC Regulation No. 1272/2008 (CLP):

Specific target organ toxicity (repeated exposure), category 2, H373 May cause damage to organs through prolonged or repeated exposure.

Acute Toxicity, category 4, H302 Harmful if swallowed.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]:
Hazard pictogram(s):



Signal word(s): WARNING

Contain: Ethane-1,2-diol

Hazard statement(s):

H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s):

P102 Keep out of reach of children.
P260 Do not breathe mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P314 Get Medical advice/attention if you feel unwell.
P501 Dispose of contents / container as hazardous waste.

Supplemental information: None.

2.3 Other hazards

This mixture does not contain any substances which are classified as PBT or vPvB
This product does not contain SVHC.
This product does not contain endocrine disruptors in a concentration of 0.1% by weight or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Name of the component	Content (weight %)	CAS EINECS Index N° Reg. Number	Classification according to Regulation (EC) No 1278/2008 (CLP)	
Ethane-1,2-diol *	> 90 - < 95	107-21-1 203-473-3 603-027-00-1 01-2119456816-28	Acute Tox. 4 STOT RE 2	H302 H373

** Substance with a Community workplace exposure limit.*

For full text of H-statements see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice: In any case, avoid chaotic action. When medical treatment is required, always take the original package with the label or safety data sheet. For life-threatening conditions, first resuscitate the sufferer and obtain medical assistance. Breathing arrest - perform CPR immediately. Cardiac arrest - perform indirect CPR immediately. Unconscious - place the sufferer in a stable position on the side. It is always necessary to assess the situation in the light of the individual's own safety and that of the person affected.

Inhalation: Move affected person to fresh air, keep him calm, prevent hypothermia.

Skin contact: Take off all contaminated clothing. Wash thoroughly with soap and water and treat with a suitable cream. In case of inadequate washing, further irritation may occur.

Eye contact: Immediately rinse eyes with running water, open eyelids. If the contact lenses are used, remove them carefully and continue to rinse, the affected eye wide open from the inner corner to the outer, so that the second eye is not affected and also under the lids for at least 15 minutes. If symptoms persist, seek medical advice.

Ingestion: Rinse mouth with water, do not induce vomiting. Do not give anything by mouth to an unconscious person.

Protection of first aiders: Pay attention to personal safety during rescue work.

4.2 Most important symptoms and effects, both acute and delayed

Harmful if swallowed. Indigestion, nausea. May cause damage to organs through prolonged or repeated exposure. Headaches.

4.3 Indication of any immediate medical attention and special treatment needed

Decontamination. Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water mist, powder, Alcohol resistant foam, CO2.

Unsuitable extinguishing media: Strong water jet - could cause fire to spread.

5.2 Special hazards arising from the substance or mixture

Combustion products and hazardous gases: smoke, carbon monoxide, carbon dioxide.

5.3 Advice for firefighters

Rescue teams exposed to smoke or gases must be equipped with means for eye and respiratory protection, protective clothing. In confined spaces it is necessary to use a breathing apparatus. Containers exposed to fire cool with water mist. Do not spray water directly into the container to prevent excessive foaming. Collect extinguishing water separately, and avoid its penetration into the soil and water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Prevent contamination of clothing and footwear by product and contact with skin and eyes. Wear suitable protective clothing, replace contaminated clothing. Ensure ventilation of the affected area. All persons not participating in rescue work should be taken to a safe distance. Remove all sources of ignition.

6.2 Environmental precautions

Avoid leakage into the environment, soil, avoid ingress into surface water and sewers. In case of leakage, inform the water / sewer manager and the relevant authorities immediately.

6.3 Methods and material for containment and cleaning up

In case of leakage, locate and, if possible, drain or mechanically remove product, withdraw from the surface of the water. Allow residuals or smaller amounts to be absorbed in a suitable sorbent (kieselguhr, sand) and placed it in suitable and labelled containers and handed over to recycling / disposal of in accordance with applicable regulations.

6.4 Reference to other sections

See section 7, 8 a 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Use appropriate PPE. Use only in well-ventilated areas with fresh air supply. Do not eat, drink, smoke. Wash your hands after work. Do not inhale vapours. Comply with regulations on health and safety at work. All fire precautions must be observed during handling. Take precautions against electrostatic discharge. Use non-sparking tools and tools.

7.2 Conditions for safe storage, including any incompatibilities

Store in a vertical position to prevent leakage. Store in original packaging, in dry, well-ventilated, cool place. Do not store together with strong oxidising agents. Do not store together with food, beverage and medicines. Warehouse must be equipped with a first aid kit and a source of drinking water. Do not expose to the sun, sources of ignition or humidity. Max. storage temperature: 40°C. Suitable materials of storage vessels: stainless steel, HDPE, stained glass.

7.3 Specific end use(s)

see section 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Exposure limits: According to national legislation of target country.

Substance	CAS	Permissible exposure limits (mg/m³)	Maximum permissible concentration (mg/m³)	Note
Ethane-1,2-diol	107-21-1	10 particulate. 52 vapour	- particulate. 104 vapour	
Sodium-hydroxide	1310-73-2	-	2	

Substances with Community Exposure Limits: Union occupational exposure limit values in accordance with Directive 2000/39/EC (as amended).

Substance	CAS	Limit values		Note
		OEL (mg/m³)	STEL (mg/m³)	
Ethylene glycol	107-21-1	52	104	*Dermal*

DNEL:

Ethane-1,2-diol (CAS: 107-21-1)

Exposed group and route of exposure	Duration of exposure	Type of effect	Unit	Value
Workers				
Inhalation	Long-term (chronic)	systemic	mg/m³	-
		local	mg/m³	35
Dermal	Long-term (chronic)	systemic	mg/kg $_{bw/d}$	106
Consumers				
Inhalation	Long-term (chronic)	systemic	mg/m³	-
		local	mg/m³	7
Dermal	Long-term (chronic)	systemic	mg/kg $_{bw/d}$	53

PNEC:

Ethane-1,2-diol (CAS: 107-21-1)

Component of the environment		PNEC	Unit	Value
Water environment	Freshwater	PNEC $_{water, fresh.}$	mg/L	10
	Freshwater, occasional leakage	PNEC $_{water, fresh.}$	mg/L	10
	Freshwater sediment	PNEC $_{sed., fresh.}$	mg/kg $_{sediment dw}$	37
	Seawater	PNEC $_{water, mar.}$	mg/L	1
	Marine sediment	PNEC $_{sed., mar.}$	mg/kg $_{sediment dw}$	3.7
Microbiological activity	Wastewater treatment plant	PNEC $_{sew. treat.}$	mg/L	199.5
Terrestrial environment / organisms	Soil	PNEC $_{soil}$	mg/kg $_{soil dw}$	1.53

8.2 Exposure controls

Technical measures:	Technical measures and appropriate work procedures take precedence over personal protective equipment. Observe the usual hygiene principles. Do not eat, drink, smoke. Before breaks and after work wash your hands with warm water and soap. No smoking and no handling of open fires. Electrical equipment in warehouses must be in non-explosive form. Ensure that there is a safety shower or sink with running water for eye lavage near the workplace.

Individual protection measures

Respiratory protection:	If the exposure limits are exceeds, for mist / dust / vapour / aerosol formation use mask with A/P filter according to EN 14387.
Hand protection:	Protective gloves resistant to chemicals according to EN 374. Observe the manufacturer's exact instructions, including the time of use. Replace damaged gloves. Appropriate material: NBR (Nitrilkauchuk), CR (chloroprene rubber), PVC (Polyvinyl chloride). Intersection time: > 480 min. Protective hand cream.
Eye / face protection:	Wear safety glasses with side shields or face shield according to EN 166.
Skin protection:	Working clothes (EN 340) and footwear (EN 347). Protective clothing against liquid chemicals (EN 14605). Protective clothing against chemicals (EN 14325).
Thermal hazards:	No data available.
Environmental exposure controls:	Avoid unnecessary releases into the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	Pink fluorescent
Odour:	not determined
Odour threshold:	not determined
pH :	7.8 - 8.6 (33%)
Melting point / freezing point (°C):	---- / -37°C (50%)
Boiling point or initial boiling point and boiling range (°C):	> 170
Flash point (°C):	No data available.
Evaporation rate:	not determined
Flammability (gases, liquids and solids):	not determined
Lower and upper explosion limit:	not determined
Vapour pressure (20 °C):	not determined
Vapour pressure (50 °C):	not determined
Relative vapour density:	not determined
Density and/or relative density (g/cm³, 20 °C):	1.11 - 1.15
Solubility (20 °C):	No data available.
Partition coefficient n-octanol/water (log value):	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
Kinematic viscosity:	No data available.
Refractive index (20 °C):	not determined
Oxidising properties:	not determined
Explosive properties:	not determined

9.2 Other information

VOC (%):	cca 91
Dry matter content:	not determined
Additional information:	Reserve alkalinity: ≥ 5 ml 0,1M HCl

9.2.1 Information with regard to physical hazard classes
The product has no physical hazards.

9.2.2 Other safety characteristics:

mechanical sensitivity:	No data available.
self-accelerating polymerisation temperature:	No data available.
formation of explosible dust/air mixtures:	No data available.
acid/alkaline reserve:	No data available.
evaporation rate	No data available.
miscibility:	No data available.
conductivity:	No data available.
corrosiveness:	No data available.
gas group:	No data available.
redox potential:	No data available.
radical formation potential:	No data available.
photocatalytic properties:	No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity The product is stable at the specified conditions of storage, handling and use.

10.2 Chemical stability The product is stable at the specified conditions of storage, handling and use.

10.3 Possibility of hazardous reactions The product may react with oxidising agents, at elevated temperatures with certain metals, acids and bases.

10.4 Conditions to avoid They are not subject to prescribed use and storage.

10.5 Incompatible materials Strong oxidizing agents, strong acids, strong alkalines.

10.6 Hazardous decomposition products See sect. 5.2

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008
Individual components

Ethane-1,2-diol (CAS: 107-21-1)

Acute toxicity:

Test type	Results	Exposure	Tested organisms
key study	7 712 mg/kg bw LD50	oral: gavage	rat
key study	> 3 500 mg/kg bw LD50	dermal	mouse
key study	> 2.5 mg/L air	inhalation: aerosol	rat

Serious eye damage / irritation:

Test type	Results	Exposure	Tested organisms
key study	not irritating	Eye	rabbit

Skin corrosion / irritation:

Test type	Results	Exposure	Tested organisms
key study	not irritating	Skin	rabbit

Respiratory or skin sensitisation:

Test type	Results	Exposure	Tested organisms
weight of evidence	GHS criteria not met	Skin	human

STOT - single exposure:

Test type	Results	Exposure	Tested organisms
	No data available.		

STOT - repeated exposure:

Test type	Results	Exposure	Tested organisms
OECD 408, weight of evidence	150 mg/kg bw/day (nominal) NOEL	oral	rat

Carcinogenicity:

Test type	Results	Exposure	Tested organisms
weight of evidence	1 500 mg/kg bw/day NOAEL	oral: feed	mouse

Germ cell mutagenicity:

Test type	Results	Exposure	Tested organisms
key study	ambiguous	In vitro	Chinese hamster Ovary (CHO)

Reproductive toxicity:

Test type	Results	Exposure	Tested organisms
weight of evidence	> 1 000 mg/kg bw/day NOAEL	oral: feed	rat

Aspiration hazard:

Test type	Results	Exposure	Tested organisms
	No data available.		

Mixture:

Acute toxicity:	Harmful if swallowed.
Serious eye damage / irritation:	The product does not meet the criteria for classification.
Skin corrosion / irritation:	The product does not meet the criteria for classification.
Respiratory or skin sensitisation:	The product does not meet the criteria for classification.
STOT - single exposure:	The product does not meet the criteria for classification.
STOT - repeated exposure:	May cause damage to organs through prolonged or repeated exposure .
Carcinogenicity:	The product does not meet the criteria for classification.
Germ cell mutagenicity:	The product does not meet the criteria for classification.
Reproductive toxicity:	The product does not meet the criteria for classification.
Aspiration hazard:	The product does not meet the criteria for classification.

11.2 Information on other hazards

Endocrine disrupting properties

This product does not contain endocrine disruptors in a concentration of 0.1% by weight or higher.

Other information: No data available.

SECTION 12: Ecological information

12.1 Toxicity

The product does not meet the criteria for classification.

Ethane-1,2-diol (CAS: 107-21-1)

Toxicity	Tested organisms	Results	Test type
Acute toxicity to fish	*Pimephales promelas*	> 72 860 mg/L LC50 / 96 h	
Acute toxicity to invertebrates	*Daphnia magna*	> 100 mg/L EC50 / 48 h	OECD 202
Acute toxicity to aquatic algae	*Pseudokirchneriella subcapitata*	> 100 mg/L NOEC / 72 h	OECD 201

12.2 Persistence and degradability Toxicological data are not available.

12.3 Bioaccumulative potential Ethan-1,2-diol is biodegradable. OECD 301 A test: 90 - 100% reduction in DOC, 10 days, aerobically, exposure to activated sludge. Photochemical elimination: Half-life: 46.3 days. Hydrolysis unlikely due to chemical structure.

12.4 Mobility in soil Toxicological data are not available.

12.5 Results of PBT and vPvB assessment This mixture does not contain any substances which are classified as PBT or vPvB

12.6 Endocrine disrupting properties

This product does not contain endocrine disruptors in a concentration of 0.1% by weight or higher.

12.7 Other adverse effects Avoid uncontrolled leakage into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Catalogue No. of mixture waste: 16 01 14 Antifreeze fluids containing dangerous substances

Waste codes / waste designations according to LoW: 15 01 10 Packaging containing residues of or contaminated by dangerous substances

- cleaned packaging: 15 01 02 Plastic packaging

Recommended procedure for mixture waste disposal: Remains of the mixture to be collected in labelled containers and handed over to a person authorized to handle hazardous waste. Suitable method of disposal: incineration in hazardous waste incineration plant. If possible, regenerate the product.

Recommended procedure for packaging disposal: Empty containers must be disposed of in accordance with valid waste legislation. After perfect cleaning, the packaging can be used as a secondary raw material for the same purpose. Recommended way of disposing of is recycling, burning in a hazardous waste incinerator or storing hazardous waste.

Physical / chemical properties that may affect waste treatment method: No determinated.

Sewage disposal-relevant information: Do not allow to enter into surface water or drains.

Other disposal recommendations: Dispose of waste according to applicable legislation.

SECTION 14: Transport information

	Type of transport	Land transport ADR / RID	Sea transport IMDG	Air Transport ICAO / IATA
14.1	**UN number or ID number**	There is no dangerous good in terms of transport.	There is no dangerous good in terms of transport.	There is no dangerous good in terms of transport.
14.2	**UN proper shipping name**	-	-	-
14.3	**Transport hazard class(es)**	-	-	-
	Classification code	-	-	-
	EmS	-	-	-
	Packaging instructions	-	-	-
	Labels	-	-	-
14.4	**Packing group**	-	-	-

14.5 Environmental hazards No data available.

14.6 Special precautions for user

No data available.

14.7 Maritime transport in bulk according to IMO instruments

Not specified.

Other information

Type of transport	Land transport ADR / RID	Sea transport IMDG	Air Transport ICAO / IATA
Limited quantities:	-	-	-
Excepted quantities:	-	-	-
Transport category:	-	-	-
Tunnel restriction code:	-	-	-
Segregation group:	-	-	-

SECTION 15: Regulatory information

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

Regulation (EC) No. 1272/2008 (CLP) on classification, labelling and packaging of substances and mixtures,…
Regulation (EC) No. 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH),…
Applicable national regulations.

15.2 Chemical safety assessment has been prepared for ethan-1,2-diol.

SECTION 16: Other information

Complete text of all classifications and hazard classes referred to in SECTION 3

Hazard class: Acute Tox. 4 - Acute Toxicity, category 4
STOT RE 2 - Specific target organ toxicity (repeated exposure), category 2

H-statements:

H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure.

Abbreviations:

ADN	Inland waterways
ADR	Accord Dangereuses Route
CAS	Chemical Abstracts Service
DNEL	Derived no-effect level
EC50	Effect concentration for 50%
EINECS	European Inventory of Existing Commercial Chemical Substances
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
LC50	Lethal concentration for 50%
LD50	Lethal dose for 50%
NOAEL	No observable adverse effect level
NOEC	No observable effect concentration
NOEL	No observable effect level
NPK-P	Maximum permissible concentration
OEL	Occupational Exposure Limit (workplace exposure limit - 8 hours / shift)
PBT	Persistent, bioacumulative and toxic
PEL	Permissible exposure limits
PNEC	Predicted no-effect concentration
RID	Regulations for the International Carriage of Dangerous Goods by Rail
STEL	Short Term Exposure Limit (short exposure - corresponds to approx. 15 min.)
VOC	Volatile organic substances
vPvB	Very persistent and very bioacumulative

Indication of changes: first edition

This version is in accordance with Regulations (EC) No. 1907/2006 (REACH) and No. 1272/2008 (CLP).

Key literature references and sources for data: manufacturer information, CASEC database.

Classification was performed by calculation method.

Instructions for training:
Workers who come into contact with hazardous substances/mixtures must be in the necessary extent informed about the effects of these substances/mixtures, about the ways how to deal with them.
Workers must be in the necessary extent informed with protective measures, the principles of first aid, with the necessary sanitation practices and procedures for liquidation of failures and accidents.
A person dealing with this chemical product must be familiar with the safety rules and the data given in the MSDS.

If the hazardous chemical substance / mixture is classified as corrosive or toxic, workers must be familiar with the rules for handling with corrosive / toxic chemical substance/mixture.
Persons transporting hazardous substances must be familiar with the guidelines for emergency response in accordance with the regulations of ADR / RID.

Other information:
The above information describes the conditions for safe handling and corresponds with current knowledge of the manufacturer.

The manufacturer bears responsibility for the above described properties of the product when used according to specifications.
The user is responsible for determining suitability of product for specific purposes and adapt security measures if such application is contrary to the manufacturers recommendations.