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SAFETY DATA SHEET

ACCORDING TO REGULATION (EC) 1907/2006

Product name: Pentylene Glycol

Creation date: 17.12.2023, Revision: 17.12.2023, Version: 1.0

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

1.1 Product identifier

Product name
Pentylene Glycol

Product code
[AL00042]

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

Relevant identified uses
No information.

Uses advised against
No information.

1.3 Details of the supplier of the safety data sheet

Supplier
Farmadria DOO
Heroja Pinkija 44
26300 Vršac, Serbia
+381695565029
info@avenalab.com

1.4 Emergency Telephone Number

Emergency
112

Supplier
+381695565029

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)
According to the regulation, the chemical is not classified as hazardous.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]
Not subject to labelling according to Regulation (EC) 1272/2008.

2.3 Other hazards

PBT/vPvB
No information.

Endocrine disrupting properties
The product does not contain substances with the potential for endocrine disorders.

Additional information
No information.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
For mixtures see 3.2.

3.2 Mixtures

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Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits	Notes for substances
Pentylene Glycol	5343-92-0 226-285-3 -	100	/	/	/

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General notes
In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Following inhalation
Remove patient to fresh air - move out of dangerous area. If symptoms develop and persist, seek medical attention.

Following skin contact
Wash affected skin areas immediately with plenty of water and soap. If symptoms develop and persist, seek medical attention.

Following eye contact
Immediately flush eyes with running water, keeping eyelids apart. If irritation persists, seek professional medical attention.

Following ingestion
Do not induce vomiting! Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. In case of doubt or if feeling unwell seek medical help. Show the physician the safety data sheet or label.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation
Excessive exposure to spray mist, fog, or vapours may cause respiratory irritation.

Following skin contact
Contact with skin may cause irritation (redness, itching).

Following eye contact
Contact with eyes can cause irritation (redness, tearing, pain).

Following ingestion
May cause nausea/vomiting and diarrhea. May cause abdominal discomfort.

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

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
In case of a fire toxic gases can be generated; do not inhale gases/smoke.

5.3 Advice for firefighters

Protective actions
In case of fire or heating do not breathe fumes/vapours. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters
Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (BS EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (BS EN 137).

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Additional information
No information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment
No information.

Precautionary measures
Ensure adequate ventilation.

Emergency procedures
No action shall be taken involving any personal risk or without suitable training. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing.

For emergency responders
Use personal protective equipment.

6.2 Environmental precautions
Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

For containment
Stem the spill if this does not pose risks.

For cleaning up
Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Ventilate the premises. Clean contaminated area with plenty of water.

Other information
No information.

6.4 Reference to other sections
See also sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire
Ensure adequate ventilation.

Measures to prevent aerosol and dust generation
Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment
Do not discharge into drains, surface water and soil. After use immediately close container tightly.

Other measures
No information.

Advice on general occupational hygiene
Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe vapours/mist. Avoid contact with skin, eyes and clothes.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Keep in a cool, dry and well ventilated place. Keep away from food, drink and animal feeding stuffs.

Packaging materials
No information.

Requirements for storage rooms and vessels
Close opened containers after use. Put the containers upright to prevent from leaking. Do not store in unlabelled containers.

Storage class
No information.

Further information on storage conditions

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No information.

7.3 Specific end use(s)

Recommendations
No information.

Industrial sector specific solutions
No information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure limit values
No information.

Information on monitoring procedures
BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product
No information.

For components
No information.

PNEC values

For product
No information.

For components
No information.

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses
Use good personal hygiene practices – wash hands at breaks and when done working with material. Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke while working. Do not breathe vapours/aerosols.

Structural measures to prevent exposure
No information.

Organisational measures to prevent exposure
No information.

Technical measures to prevent exposure
Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

Personal protective equipment

Eye and face protection
No requirements under normal use conditions. If there is risk of splashing into eyes, wear safety glasses with side shields (BS EN ISO 16321-1:2022).

Hand protection
No requirements under normal use conditions. In case of prolonged exposure, wear protective gloves (BS EN ISO 374).

Appropriate materials

Skin protection
No requirements under normal use conditions. With excessive exposure wear protective working clothing (overalls and boots). Cotton protective clothing and shoes that cover the entire foot (EN ISO 20345:2022).

Respiratory protection
Not needed under normal use and adequate ventilation.

Thermal hazards
No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure
No information.

Instruction measures to prevent exposure
No information.

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Organisational measures to prevent exposure
No information.

Technical measures to prevent exposure
Do not allow product to reach drains, sewage systems or ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
colorless

Odour
No information.

Important health, safety and environmental information

Odour threshold	No information.
Melting point/Freezing point	No information.
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	No information.
Flash point	110 °C
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	No information.
Viscosity	No information.
Solubility	Water: Soluble
Partition coefficient	No information.
Vapour pressure	No information.
Density and/or relative density	Relative density: 0.964 — 0.974
Relative vapour density	No information.
Particle characteristics	No information.

9.2 Other information

Explosive properties	No information.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity
No information.

10.2 Chemical stability
Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

No information.

10.4 Conditions to avoid
No information.

10.5 Incompatible materials
No information.

10.6 Hazardous decomposition products
Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released.

SECTION 11: TOXICOLOGICAL INFORMATION

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

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	value	Method	Remark
Pentylene Glycol	oral	LD_{50}	rat	/	> 5000 mg/kg	/	/
Pentylene Glycol	dermal	LD_{50}	rat	/	> 2000 mg/kg	/	/
Pentylene Glycol	inhalation	LC_{50}	rat	4 h	> 7.015 mg/l	/	/

Additional information
The product is not classified as acutely toxic.

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
Pentylene Glycol	rabbit	/	negative	OECD 404	/

Additional information
The product is not classified as irritating to skin and eyes.

(c) Serious eye damage/irritation

For components

Name	Exposure route	Species	Time	result	Method	Remark
Pentylene Glycol	/	rabbit	/	Irreversible damage.	OECD 405	/

(d) Respiratory or skin sensitisation

For components

Name	Exposure route	Species	Time	result	Method	Remark
Pentylene Glycol	/	guinea pig	/	It does not cause sensitization on laboratory animals.	/	/

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Additional information
The product is not classified as sensitising.

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	result	Method	Remark
Pentylene Glycol	in-vitro mutagenicity	/	/	Negative.	OECD 476	/
Pentylene Glycol	in-vitro mutagenicity	/	/	Negative.	OECD 473	/

(f) Carcinogenicity
No information.

(g) Reproductive toxicity
No information.

Summary of evaluation of the CMR properties
The product is not classified as carcinogenic, mutagenic or toxic for reproduction.

(h) STOT-single exposure
No information.

Additional information
STOT SE (single exposure): Not classified.

(i) STOT-repeated exposure
No information.

Additional information
STOT RE (repeated exposure): Not classified.

(j) Aspiration hazard
No information.

Additional information
Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics
No information.

Interactive effects
No information.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	value	Exposure time	Species	organism	Method	Remark
Pentylene Glycol	EC_{50}	> 500 mg/L	48 h	crustacea	*Daphnia magna*	/	/
Pentylene Glycol	EC_{50}	9335 mg/L	72 h	algae	*Desmodesmus subspicatus*	DIN 38412	/

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Name	Type	value	Exposure time	Species	organism	Method	Remark
Pentylene Glycol	EC_{50}	> 10000 mg/L	17 h	microorganisms	*Pseudomonas putida*	/	/
Pentylene Glycol	EC10	> 1000 mg/L	0 h	microorganisms	*Pseudomonas putida*	/	/

Chronic (long-term) toxicity
No information.

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination
No information.

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark
Pentylene Glycol	biodegradability	73 %	28 days	readily biodegradable	OECD 301 E	/

12.3 Bioaccumulative potential

Partition coefficient

For components

Name	Media	value	Temperature °C	pH	Concentration	Method
Pentylene Glycol	Log Pow	0.06	25	/	/	/

Bioconcentration factor (BCF)
No information.

12.4 Mobility in soil

Known or predicted distribution to environmental compartments
No information.

Surface tension
No information.

Adsorption/Desorption
No information.

12.5 Results of PBT and vPvB assessment
No evaluation.

12.6 Endocrine disrupting properties
The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects
No information.

12.8 Additional information

For product
Product is not classified as dangerous for environment. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

SECTION 13: DISPOSAL CONSIDERATIONS

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13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical
Dispose the product to an authorised collector/remover of waste/company performing waste recovery.

Waste codes / waste designations according to LoW
No information.

Packaging
Deliver completely emptied containers to approved waste disposal authorities.

Waste codes / waste designations according to LoW
No information.

Waste treatment-relevant information
No information.

Sewage disposal-relevant information
No information.

Other disposal recommendations
No information.

SECTION 14: TRANSPORT INFORMATION

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.	Not dangerous according to transport regulations.
14.2 UN proper shipping name			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.3 Transport hazard class(es)			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.4 Packing group			
Not given/not applicable	Not given/not applicable	Not given/not applicable	Not given/not applicable
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			
Limited quantities Not given/not applicable	Limited quantities Not given/not applicable		Limited quantities Not given/not applicable
14.7 Maritime transport in bulk according to IMO instruments			
	Not given/not applicable		

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SECTION 15: REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

No information.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: OTHER INFORMATION

Indication of changes

No information.

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW – see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre

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Kow - octanol-water partition coefficient
LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see http://ec.europa.eu/environment/waste/framework/list.htm)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

No information.