

SAFETY DATA SHEET

[In accordance with the criteria of Regulation No 1907/2006 (REACH) with further changes]

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

1.1. Product identifier

TRADE NAME: BASE 50PG/50VG

Description: Mixture of 1,2-propanediol and vegetable glycerine.

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

Relevant identified uses: production of mixtures for industry.

Uses advised against: not determined

1.3. Details of the supplier of the safety data sheet

Supplier: CHEMNOVATIC Sp. z o.o.

Address: Ludwika Spiessa 9, 20-270 Lublin, POLAND

Phone: +48 814754442;

E-mail address of the person responsible for the information card: office@chemnovatic.com

1.4. Emergency telephone number

112 (general emergency phone number)

Section 2: Hazards Identification

2.1. Classification of the substance or mixture

Classification according to 1272/2008/EC

This mixture is not classified for its health hazards under CLP.

This mixture is not classified for its physical hazards under CLP.

This mixture is not classified for its environmental hazards under CLP.

2.2. Label elements

Hazard symbols and signal words

Not applicable.

Hazard statements

Not applicable.

Precautionary statements

Not applicable.

2.3. Other hazards

This mixture does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation. Product does not have endocrine disrupting properties. No other hazards to determine. This mixture does not contain "Substances of Very High Concern" on the list published by the European Chemicals Agency (ECHA) pursuant to Art. 57 of the REACH regulation.



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Section 3: Composition/Information on ingredients

3.2. Mixtures

Composition:

No.	Chemical name	Percentage	CAS	EC (EINECS)	Index No./ Registration No.	REACH	Classification according to 1272/2008/EC
1.	Pharmaceutical vegetable glycerine	~ 54,8 %	56-81-5	200-289-5	None/ glycerine is exempt		Not classified
2.	1,2-propanediol	~ 45,2 %	57-55-6	200-338-0	None/ 01-2119456809-23-XXXX		Not classified

Section 4: First aid measures

4.1. Description of first aid measures

As a general rule, in case of doubt, or when symptoms persist, always call a physician. NEVER make an unconscious person vomit.

Inhalation: In the event of inhalation exposure, take the sufferer outdoors. Obtain medical advice.

Skin contact: In the case of skin contact, rinse profusely with water.

Eye contact: In case of contact with eyes, rinse with plenty of water. Remove contact lenses. After 1-2 min continue washing within the next few minutes. If irritation persists seek medical advice.

Consumption: Medical aid is not necessary. Never give fluids, nor cause vomiting, if the patient is unconscious or has convulsions.

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

No additional symptoms or effects are expected.

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

No special antidote. Supporting treatment, based on assessment made by a doctor on the basis of the patient's response.

Section 5: Firefighting measures

5.1. Extinguishing media

Extinguishing agents: fire extinguishing powders, foams resistant to alcohol, carbon dioxide, water mist. Do not use water in a full stream.

5.2. Special hazards arising from the substance or mixture

Under the influence of a high temperature (fire), flammable vapours are developed, that form explosive mixtures with air. Incomplete combustion products may contain carbon monoxide and dioxide. As a result of fire the container may burst and cause a gas leak. Direct addition of water to hot liquid may result in rapid generation of steam or even its eruption.

5.3. Advice for firefighters

Containers exposed to fire or high temperatures are to be cooled down by spraying water from a safe distance. Use protective measures of the respiratory system and full protective clothes.



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Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid direct contact with the released substance. When wet, it may make pavement slippery.

6.2. Environmental precautions

Prevent entry into waterway, sewers, watercourses.

6.3. Methods and material for containment and cleaning up

Stop the leakage, if possible. Cover spillages with non-flammable absorptive material, collect to a lockable container, rinse the contaminated surface with water.

6.4. References to other sections

Appropriate conduct with waste product - see section 13. Personal protective equipment - see section 8.

Section 7: Handling and storage

7.1. Precautions for safe handling

In narrow spaces, provide an adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep in tight packages (of stainless steel or aluminium) in a dry place, in temperature of 10-25 °C, protecting against moisture (hygroscopic product) and sun rays (uV).

7.3. Specific end use(s)

No data available.

Section 8: Exposure control/personal protection

8.1. Control parameters

Propylene Glycol:

DNEL value for employees under the conditions of long-term exposure by inhalation (system effect): 50 mg/m³

DNEL value for employees under the conditions of long-term exposure by inhalation (local effect): 10 mg/m³

DNEL value for consumers under the conditions of long-term exposure by inhalation (system effect): 168 mg/m³

DNEL value for consumers under the conditions of long-term exposure by inhalation (local effect): 10 mg/m³

PNEC value for the environment of fresh waters: 260 mg/l PNEC value for the environment of marine waters: 26 mg/l

PNEC value (temporary release): 183 mg/l PNEC value (sewage treatment plant): 20000 mg/l

PNEC value for the environment of sediment (fresh waters): 572 mg/kg

PNEC value for the environment of sediment (marine waters): 57,2 mg/kg

PNEC value for the environment of soil: 50 mg/kg

Maximum acceptable concentrations:

The Mallinckrodt Baker, Inc. MSDS P6928 for propylene glycol lists the AIHA Workplace Environmental Exposure Limit (WEEL) of 10 mg/m³ TWA. This limit is also posted in the 2010 WEEL Values from AIHA. ACGIH does not have a TLV for propylene glycol. The lesser of the AIHA limits for propylene glycol exposure will be used by COUPP.

- WEL TWA: 474 mg/m³ (UK)

- WEL TWA 150 ppm (UK)



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Propylene Glycol is listed under Paragraph 9, the Ontario (Canada) Table, of Regulation 833 with

1. a TWA of 50 ppm or 155 mg/m³ of vapour or aerosol,
2. or a TWA of 10 mg/m³ of aerosol for assessing the visibility in a work environment where 1,2-propylene glycol aerosol is present.

As no aerosol is being formed the first limit is legally applicable.

Note: When the concentration of substance is determined and known, personal protection equipment should be selected, taking account of the concentration of substances present at a given working post, exposure time and activities performed by the employee. In case of emergency, if the concentration of substances at the work post is unknown, use personal protection equipment with the highest recommended protection class.

The employer is obliged to ensure that any personal protection equipment used, as well as working clothes and footwear have protective and utility properties and provide their appropriate laundering, maintenance, repair and disinfection.

Glycerine:

Maximum acceptable concentrations:

- glycerol (aerosols) - NDS 10 mg/m³

Note: When the concentration of substance is determined and known, personal protection equipment should be selected, taking account of the concentration of substances present at a given working post, exposure time and activities performed by the employee. In case of emergency, if the concentration of substances at the work post is unknown, use personal protection equipment with the highest recommended protection class.

The employer is obliged to ensure that any personal protection equipment used, as well as working clothes and footwear have protective and utility properties and provide their appropriate laundering, maintenance, repair and disinfection.

8.2. Exposure controls

Use the product in accordance with good occupational hygiene and safety practices. Ensure adequate ventilation. When handlings do not eat, drink or smoke. Before break and after work carefully wash hands. In the vicinity of the work should be installed safety showers and separate washer eyewash. At the exit of the room in which you are working with toxic materials should be at least one sink with brought to the warm water - for every twenty employees.

Hand and body protection

Wear the protective gloves (long-term exposure - butyl rubber, thickness: 0,3 mm, penetration time: >480 min., short-term exposure: nitrile rubber, thickness: 0,4 mm, penetration time: >30 min.) and protective clothing.

The material that the gloves are made of must be impenetrable and resistant to the product's effects. The selection of material must be performed with consideration of breakthrough time, penetration speed and degradation. Moreover, the selection of proper gloves depends not only on the material, but also on other quality features and changes depending on the manufacturer. The producer should provide detailed information regarding the exact breakthrough time. This information should be followed.



Eye/face protection

Wear tight safety glasses when there is a danger of possible eye contamination.

Respiratory protection

In case of normal and as intended use, no respirator is needed. If exposure limits are exceeded, apply face mask with appropriate organic vapour cartridge.

Environmental exposure controls

Do not allow the mixture to contaminate surface water/ground water.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- | | |
|--------------------|------------------------------|
| a) Physical state: | liquid |
| b) Colour: | colourless |
| c) Odour: | odourless or almost odorless |



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d) Melting point/freezing point:	not determined
e) Boiling point or initial boiling point and boiling range:	not determined
f) Flammability:	not determined
g) Lower and upper explosion limit:	not determined
h) Flash point:	not determined
i) Auto-ignition temperature:	not applicable
j) Decomposition temperature:	not determined
k) pH:	not determined
l) Kinematic viscosity:	not determined
m) Solubility:	soluble in water
n) Partition coefficient n-octanol/water (log value):	not applicable
o) Vapour pressure:	not determined
p) Density and/or relative density:	1,15 g/cm ³
q) Relative vapour density:	not determined
r) Particle characteristics:	not applicable

9.2. Other information

No additional test results.

Section 10: Stability and reactivity

10.1. Reactivity

Hazardous reactions under conditions of normal use are not known.

10.2. Chemical stability

Stable product under normal conditions. Hygroscopic.

10.3. Possibility of hazardous reactions

Not present.

10.4. Conditions to avoid

The product may decompose at increased temperature. Generation of gases during decomposition may cause pressure in closed systems. Avoid direct impact of sun rays and ultraviolet radiation sources.

10.5. Incompatible materials

Strong oxidants, strong alkali, high temperature.

10.6. Hazardous decomposition products

Dangerous products of decomposition depend on temperature, air access and presence of other materials. Decomposition products may contain, among others, aldehydes, alcohols, ethers, organic acids.

Section 11: Toxicological information

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

a) Acute toxicity

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

b) Skin corrosion/irritation

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

c) Serious eye damage/irritation

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



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d) Respiratory or skin sensitization

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

e) Germ cell mutagenicity

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

f) Carcinogenicity

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

g) Reproductive toxicity

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

h) STOT-single exposure

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

i) STOT-repeated exposure

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

j) Aspiration hazard

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

11.2. Information on other hazards

No data available.

Section 12: Ecological Information

12.1. Toxicity

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

12.2. Persistence and degradability

Propylene glycol: 81% after 28 days of the OECD 301F test

96% after 64 days of the OECD 301F test

Biodegradation may proceed slowly in anaerobic conditions

Biodegradation in water - screening tests: Readily biodegradable (100 %)

Glycerine:

Biodegradation: > 60% after 28 days, closed bottle test.

Biodegradation in water - screening tests: Readily biodegradable (100 %)

12.3. Bioaccumulative potential

Propylene Glycol:

Possibility of bioconcentration is low (BCF <100 or log Pow <3) breakdown factor, n-octanol/water (log Pow): -1.07 @ 20.5 °C and pH 6.2 - 6.4 method EU A.8 Bioconcentration factor: 0,09.

Bioaccumulation potential: No bioaccumulation potential

Glycerine:

Log Pow breakdown factor: -2.66 -bioaccumulation should not be expected.

Log Pow: -1.75 @ 25 °C and pH 7.4

12.4. Mobility in soil

Product mobile in soil and in water. Mobility of components in the mixture depends on the hydrophilic and hydrophobic properties and conditions of biotic and abiotic soil, including its structure, climatic conditions, seasons and soil organisms.

Propylene Glycol:

Considering its very small Henry Constant, it is not expected that volatilization from natural water reservoirs or moist soil is an important natural process.

Potential for mobility in the soil is very high (Poc between 0 and 50).



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Condition of breakdown, organic carbon from soil/water (Koc): <1

Henry's Law Constant (H): 1.2 E-0, 8 atm * m³/mole

Glycerine:

No data available.

12.5. Results of PBT and vPvB assessment

The product does not meet the criteria for PBT or vPvB in accordance with the criteria in Annex XIII of Regulation 1907/2006.

12.6. Endocrine disrupting properties

Does not possess any endocrine disrupting properties.

12.7. Other adverse effects

This product has no influence on the global warming or the ozone layer depletion. Consider other harmful effects of the individual components of the mixture on the environment (eg impact on the growth of global warming).

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods for the product: disposal in accordance with the local legislation. Store remainings in original containers. Do not empty into drains. Submit to neutralization by a licensed waste processing company.

Disposal methods for used packing: reuse/recycling/liquidation of empty containers, dispose in accordance with the local legislation. Do not dispose empty packing with regular household waste. Do not mix with other waste. Submit to neutralization by a licensed waste processing company.

Proper waste management of the mixture and / or container should be determined in accordance with the provisions of Directive 2008/98 / EC.

Section 14: Transport Information

14.1 UN number or ID 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

The mixture is not classified as dangerous for the environment.

14.6 Special precautions for user

Use protective measures according to section 8

14.7 Maritime transport in bulk according to IMO instruments

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 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, 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.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council 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 Regulation (EC) No 1907/2006 (Text with EEA relevance).

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

There is no data concerning chemical safety assessment performed for substances contained in the mixture.

Section 16: Other Information

a) revised safety data sheet- changes

Version 2.0 - Update of all sections based on current information available.

Version 3.0 - New MSDS format update and company address update.

b) legend to abbreviations and acronyms used in the safety data sheet

TWA	Time Weighted Average
PEL	Permissible exposure limit
TLV-C	Threshold limit value- Ceiling Limit
STEL	Short-term exposure limit
PBT	Persistent, Bioaccumulative and Toxic substance
vPvB	very Persistent, very Bioaccumulative substance
CAS	Chemical Abstract Service
EC No.	is a unique seven-digit identifier that is assigned to chemical substances for regulatory purposes within the European Union by the regulatory authorities.
LD50	lethal dose, the point where 50% of test subjects exposed would die
LC50	lethal concentration, the point where 50% of test subjects exposed would die
EC50	half maximal effective concentration
UN number	is four-digit number that identify hazardous substances
ATEmix	Acute Toxicity Estimates for mixture
PEB	permitted exposure for a biological material

c) list of relevant H phrases, hazard statements, safety phrases and/or precautionary statements- full text
not applicable.

d) trainings

Before commencing working with the product, the user should learn the Health & Safety regulations, regarding handling chemicals, and in particular, undergo a proper workplace training.

e) other data

Classification was made on the basis of data on hazardous substances calculation method based on the guidelines of Regulation 1272/2008/EC (CLP).



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The above information is prepared on the basis of current state of knowledge and relates to the product in the form in which it is used. Data relating to the product are presented in order to include safety requirements, and not to guarantee their particular properties.

In the event when conditions of application of the product are beyond control of the manufacturer, responsibility for safe use of the product is borne by the user.

The Employer is obligated to inform all employees who have contact with the product, about hazards and personal protection equipment specified in this material safety data sheet.

This material safety data sheet has been prepared on the basis of MSDS provided by the manufacturer and/or web databases and the binding regulations regarding hazardous substances and chemical agents.

The product is classified as hazardous. EXPOSURE SCENARIOS are not required.

SAMPLE DOCUMENT