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

1.1. Product identifier.

NicBase VPG Optima Mix&Go

A solution of Pharmaceutical Propylene Glycol and Pharmaceutical Vegetable Glycerine and flavor enhancer.

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

Relevant identified uses: production of mixtures (liquid component, e-liquids for electronic cigarettes).

Uses advised against: not determined

1.3. Details of the supplier of the safety data sheet.

Supplier: **CHEMNOVATIC Sp. z o.o. Sp. k.**

Address: Dobrzańskiego 3/BS002, 20-262 Lublin, POLAND

Phone: +48 81 475 44 42

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 Regulation (EC) No. 1272/2008 of 16 December 2008 on classification, labeling and packaging (CLP)

General Hazard:

- The product is not classified as hazardous under current legislation.
- Health Hazards: Not applicable
- Hazardous properties: not applicable
- Environmental hazard: not applicable

2.2. Label elements.

- Pictograms determining the type of hazards: not applicable
- Warning: not applicable
- Phrases indicating type of hazard: H000 - product not classified as posing a hazard pursuant to valid regulations.
- Phrases determining conditions of safe use: not applicable

2.3. Other hazards

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

Section 3: Composition/Information on ingredients

3.1 Substance.

Not applicable.

3.2 Mixtures

No.	Chemical name	Percentage	CAS	EC	Index/ Reach registration	Classification 1272/2008/EC
1.	Glycerol	< 70 %	56-81-5	200-289-5	None/exempted	Not classified
2.	Propane-1,2-diol	< 30 %	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.

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.

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.

Information on relevant personal protection equipment are specified in section 8. Information on waste treatment are specified in section 13.

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.

Glycol:

DNEL value for employees under the conditions of long-term exposure by inhalation (system effect): 50 mg/m^3

DNEL value for employees under the conditions of long-term exposure by inhalation (local effect): 10 mg/m^3

DNEL value for consumers under the conditions of long-term exposure by inhalation (system effect): 168 mg/m^3

DNEL value for consumers under the conditions of long-term exposure by inhalation (local effect): 10 mg/m^3

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:

- TWA: 10 mg/m^3
- NSD, NSDCh - not marked

(According to the Ministry of Labour of 29 November 2002, Journal of Laws No. 217, item. 1833, with later amendments)

Recommendations for procedures of monitoring the content of hazardous components in the air - methodology of measurements:

- Regulation of the Minister Health of 20 February 2005 on tests and measurements of harmful factors for health in the work environment (Journal Of Laws no. 73 item 645)
- PN-89/Z-01001/06. Air purity protection. Names, phrases and units. Terminology concerning tests of air quality on working posts.
- PN Z-04008-7:2002. Air purity protection. Sampling. Principles of sampling air in the working environment and interpretation of results.

- PN-EN-689: 2002. Air at workplace - guidelines of assessment of inhalation exposure to chemical factors by comparison with acceptable ones and measuring strategy.

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.

The recommended initial and periodic examination of workers should be carried out in accordance with the Regulation of the Minister of Health and Social Welfare of 30 May 1996 on medical examinations of workers, the scope of preventive health care workers and medical certificates issued for the purposes provided in the Labour Code (Journal of Laws no. 69/1996item 332, with amendments Journal of Laws No. 37/2001item 451)

Glycerine:

Maximum acceptable concentrations:

- glycerol (aerosols) - NSD 10 mg/m^3

(According to the Ministry of Labour of 29 November 2002, Journal of Laws No. 217, item. 1833, with later amendments).

Recommendations for procedures of monitoring the content of hazardous components in the air - methodology of measurements:

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8.2. Exposure controls.

Used personal protective equipment should comply with the Regulation of the Minister of Economy of 21 December 2005 on essential requirements for personal protective equipment (Journal of Laws No. 259, item 2173).

Protection of the respiratory system: not required under normal conditions, in the case of formation of a mist/aerosol, use a mask with an organic vapour absorber

Eye Protection: safety goggles / sealed safety glasses according to EN 166

Protection of hands: not required. Avoid contact with skin

Technical protective measures: local exhaust ventilation

Other protection equipment: working clothes

General recommendations: Comply with good personal hygiene.

Do not consume, nor store food at the workplace. Before smoking tobacco or eating, wash hands.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties.

a) Appearance:	colourless liquid
b) Odour:	ocharacteristic
c) Odour threshold:	not applicable
d) pH:	no data available
e) Melting/freezing point, [°C]:	no data available
f) Initial boiling point and range of boiling points, [°C]:	no data available
g) Flash point, [°C]:	no data available
h) Evaporation rate:	no data available
i) Flammability (of solid body, gas):	not applicable
j) Upper explosiveness limit, [% V/V]:	no data available
Lower explosiveness limit, [% V/V]:	no data available
k) Vapour Pressure at 20 °C [hPa]:	no data available
l) Relative density relative to air:	no data available
Density, [g/cm^3] at temp.25 °C:	no data available
m) Solubility in water:	no data available
Solubility in other solvents:	soluble in ethanol, acetone, chloroform
n) N-octanol/water breakdown factor:	no data available
o) Autoignition temperature, [°C]:	no data available
p) Temperature of decomposition, [°C]:	no data available
r) Viscosity [mPa s] at temp. 20°C:	no data available
s) Explosive properties:	it is not an explosive substance
t) Oxidising properties:	no data available

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. Circumstances 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 toxicological effects.

Propylene Glycol:

Acute toxicity - alimentary tract: LD50 > 20000 mg/kg (rat). It is believed that oral toxicity of a single dose is extremely low. No hazard is expected after consumption of small amounts, which happens during normal manipulation operations.

Acute toxicity - after application on skin: LD50 > 2000 mg/kg (rabbit). Absorption through the skin, in one-time, long-term exposure, of harmful amounts of this material, is not possible

Acute toxicity - respiratory tract: Based on physical properties it probably does not cause hazard when inhaled.

Acute toxicity - inhalation: 317.042 mg/l/2h (rabbit) at room temperature concentration of vapours is very low due to physical properties. Mists may cause irritation of the upper respiratory tract (nose and throat). At this concentration, no cases of death were recorded.

Caustic/irritating effect on the skin: Long-term contact is generally not irritating for the skin. Repeated exposure may cause the skin to flake and soften.

Serious damage to eyes/ irritating effect on eyes: It may cause very weak, temporary irritation to eyes. Damage to the cornea is improbable. Mists may cause irritation to the eyes

Allergenic effect on the respiratory tract or skin: in the tests it did not induce allergic reactions of skin.

Mutagenic effect on reproductive cells: In vitro mutagenicity studies were negative. Tests of genetic toxicity on animals rendered negative results.

Carcinogenicity: it did not cause occurrence of malignant tumours in laboratory animals.

Reproductive toxicity: in tests on animals it did not show an effect on reproduction capacity. In tests on animals it did not affect fertility.

Development toxicity: No cases of defects in newborns or other harmful effects on the foetus in laboratory animals were observed.

Substance toxic for organs or systems - One-time exposure: no data available

Substance toxic for organs or systems - Repeated exposure: in rare cases, repeated exposure to propylene glycol may cause effects related to the impact on the central nervous system.

Hazard caused by aspiration: no data available

Glycerine:

Acute toxicity - orally: LD50 12600 mg/kg (rat)

Acute toxicity - skin: LD50 > 10000 mg/kg (rat, OECD 402))

Acute toxicity - inhalation: LC50 > 570 mg/m3/1h (rat)

Caustic/irritating effect:

- eyes: does not cause irritation
- skin: does not cause irritation

Sensitisation:

- skin: no data available
- inhalation: no data available

Mutagenic effect: no data available

Carcinogenic effect: no data available

Harmful impact on reproduction capacity: no data available

Toxic effect on target organs - one-time exposure: no data available

Toxic effect on target organs - repeatable exposure: no data available

Hazard caused by aspiration: no data available

Section 12: Ecological Information

12.1. Toxicity.

Glycol:

Toxicity to fish: LC50: 40613 mg/l/96h (Oncorhynchus mykiss)

Toxicity to aquatic invertebrates: LC50: 18340 mg/l/48h (Ceriodaphnia dubia), LC50: 18800 mg/l/96h (Mysidopsis bahia)

Toxicity to algae: ErC50: 19000 mg/l/96h, (Selenastrum capricornutum) inhibiting the growth rate, ErC50: 19100 mg/l/96h, (Skeletonema costatum) inhibiting the growth rate

Toxicity to microorganisms: NOEC> 20,000 mg/l/18h (Pseudomonas putida)

Value of chronic toxicity for water invertebrates: NOEC: 13020 mg/l/7d (Ceriodaphnia), static regeneration, reproduction

Glycerine:

Toxicity to fish: LC50> 10000mg / l (Leuciscus idus); LC50> 5000mg/l/96h

Toxicity to daphnia: EC50> 10000mg/l/24g (Daphnia magna)

Toxicity to algae: EC0> 10000mg/l/7d (Scenedesmus quadricauda); LC0 2900 mg / l (Mocrocystis aeruginosa)

Toxicity to bacteria: EC50> 10000mg/l/16h (Pseudomonas putida)

12.2. Persistence and degradability.

Glycol:

81% after 28 days, OECD 301F test

96% after 64 days, OECD 301F test

Biodegradation may proceed slowly in anaerobic conditions

Glycerine:

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

BZT5 0,87 gO_2/g

ChZT 1,16 gO_2/g

12.3. Bioaccumulative potential.

Glycol:

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

Glycerine:

LogPow breakdown factor: -2.66 -bioaccumulation should not be expected.

12.4. Mobility in soil.

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).

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

Henry's Law Constant (H): 1.2 E-0, 8 atm * m^3/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. Other adverse effects.

This mixture is not included in Appendix I to the Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

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.
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.

Section 14: Transport Information

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 user
Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code
Not applicable.

Section 15: Regulatory Information.

15.1. Safety, health and environmental regulations/legislation specific for the substance and 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 (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures (Text with EEA relevance).
Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Text with EEA relevance).
Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives.

Commission Regulation (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Assessment of chemical safety.

The manufacturer made a Chemical Safety Assessment.

Section 16: Other Information.

a) revised safety data sheet- changes

First version.

b) list of relevant H phrases, hazard statements, safety phrases and/or precautionary statements- full text

not applicable.

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

TWA Time weighted average

CAS Chemical Abstract Service

PBT Persistent, Bioaccumulative and Toxic substance

vPvB very Persistent, very Bioaccumulative substance

EC 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 concentraction, 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

TLV-C Threshold limit value- Ceiling Limit

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 the Regulation 1272/2008/EC (CLP).

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 not classified as hazardous. EXPOSURE SCENARIOS are not required.