



SAFETY DATA SHEET

In accordance with Regulation (EC) No 1907/2006 (REACH) and Regulation (EU) 2020/878

Date of issuance: 05.05.2022	Issue: 02/2022
According to Regulation (EU) № 1907/2006 (REACH)	Supersedes issue: 01/2018

1. IDENTIFICATION OF THE MIXTURE AND THE COMPANY

- 1.1. Product identifier:** Commercial name: **Biocidal products family ZHIVASEPT with members: ZHIVASEPT S (red, blue, colourless) and ZHIVASEPT Rapid S**
Unique Formula Identifier (UFI): **JV30-J0DC-500S-KDE8**
- 1.2. Relevant identified uses of the mixture and uses advised against:**
1. **ZHIVASEPT S** - Ready to use solution for hygienic and surgical disinfection of hands and skin (Product type PT1);
2. **ZHIVASEPT RAPID S** – Ready to use solution for disinfection of surfaces (Product Type PT2).
- 1.3. Details of the supplier of the safety data sheet:** ZHIVAS Ltd, 36, Dondukov Blvd, 1000 Sofia, Bulgaria
Postal address: 14, Assen Jordanov Blvd., Sofia 1592
Telephone/Fax: + 359 2 981 78 23
E- mail: zhivas@techno-link.com,
Internet: www.zhivas.com
- 1.4. Emergency telephone :**

2. HAZARDS IDENTIFICATION

- 2.1 Classification of the mixture:** The product is classified as hazardous in accordance with the Regulation (EU) 1272/2008 (CLP) (and subsequent amendments).
Hazard classes and hazard categories:
Flam. Liq. 3, H226
Eye Damm. 1; H318
STOT SE 3; H336
- 2.2 Label elements** **Hazard-determining components of labelling:**
Propan-2-ol; Propan-1-ol; Ethanol
- Pictograms:**
 
(GHS02) (GHS05)
- Signal word: Warning**
- Hazard statements:**
H226– Flammable liquid.
H318-Causes serious eye damage
H336-May cause drowsiness or dizziness

**Precautionary statements:**

P102-Keep out of reach of children.

P210- Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 - Call a POISON CENTER or doctor/physician if you feel unwell.

P305+P351+P338+P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician;

P403+P 233 Store in a well-ventilated place.Keep container tightly closed.

2.3. Other hazards

N- On the basis of the available data, it does not contain substances with PBT or vPvB properties in a percentage more than 0,1 %.

- Ecotoxicological information: The mixture does not contain components considered to have endocrine disrupting properties under REACH Regulation Article 57(f) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

- Toxicological information: The mixture does not contain components that are considered to have endocrine disrupting properties under REACH Regulation , Article 57(f) or Commission Delegated Regulation (EU) 2017/2100, or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.o

3. COMPOSITION/ INFORMATION ON INGREDIENTS**3.2. Mixtures - General description of the components and their concentrations.**

The mixture is an aqueous solution of propan-2-ol (isopropanol), propane-1-ol and ethanol. It contains certain harmless additions of fragrance and colouring agent.

Substance name	CAS Number	EC Number	Concentration, g/100g	Classification Reg.(CE)1272/2008
Propane-1-ol	71-23-8	200-746-9	45.0	Flam.Liq. 2; H225 Eye damm.1; H318 STOT SE 3; H336
Propane-2-ol	67-63-0	200-661-7	30.0	Flam.Liq.2; H225 Eye Irrit.2; H319 STOT SE 3; H336
Ethanol	64-17-5	200-578-6	5.0	Flam.Liq.2; H225 Eye Irrit.2; H319 STOT SE 3; H336

For the wording of the listed H-statements refer to Section 16.

4. FIRST AID MEASURES**4.1. Description of first aid measures**

Inhalation: Take the subject out into fresh air. Maintain normal body



temperature. If symptoms persist call a physician.

Eye contact: Rinse immediately with plenty of water - also under the eyelids - for 15 - 20 minutes. Consult with an ophthalmologist.

Skin contact: Not applicable. If the clothing or shoes are contaminated, they should be removed immediately

Ingestion: Rinse the mouth with plenty of water (if only the person is conscious). Do not induce vomiting. If symptoms persist call a physician

4.2. Most important symptoms and effects, both acute and delayed: Treat symptomatically

Principal routes of exposure:

Eye contact: Irritating to eyes.

Skin contact: May cause irritation by prolonged skin contact. If the clothing or shoes are contaminated, they should be removed immediately

Ingestion: Ingestion of this material may cause irritation to mucous membranes, symptoms such as nausea, vomiting, gastric distress

Inhalation: Inhalation may cause irritation.

4.3. Indication of any immediate medical attention and special treatment needed: In case of eye contact and ingestion with symptoms of irritation, immediately call for medical help. For specialist advice physicians should contact the Poisons Information Service.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media: The mixture is flammable. Water spray jet, alcohol resistant foam, CO₂, dry powder

5.2. Special hazards, arising from the preparation itself Vapors are heavier than air and may spread along floors. In case of fire, toxic gases may be formed: CO, CO₂.
In case of burning of the PE package the following toxic gases may be formed: CO, CO₂, light hydrocarbons.

5.3. Advice for firefighters Do not use water for extinguishing, only for cooling of containers. Cool closed containers exposed to fire with water spray.
Standard protective equipment should be worn by fire-fighters. In the event of a large fire toxic fumes containing oxides of carbon may be formed, which would necessitate the use of a self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions: Avoid direct contact with the eyes and prolonged contact with skin. Remove all sources of ignition.
Ensure good ventilation of the workplace.



- 6.2. Environmental precautions:** Should not be released in large quantities in the environment. Avoid subsoil penetration. The small releases can be diluted with plenty of water.
- If the product contaminates the environment inform respective authorities and proceed according to the local legislation
- 6.3. Methods and material for containment and cleaning up:** Absorb by means of suitable inert materials (cloth, fleece, sand, sawdust or soil). The contaminated material should be collected mechanically for subsequent disposal. Wash with water.
- 6.4. Reference to other sections:** Refer to protective measures, listed in sections 7 and 8

7. HANDLING AND STORAGE

- 7.1. Precautions for safe handling** Follow the operating instructions as specified on the label. Avoid direct contact with the eyes and prolonged contact with skin. Do not allow disposal of the mixture into the environment. Do not use near possible sources of ignition. Do not spray on a naked flame. No smoking. Keep away from children.
- 7.2. Conditions for safe storage, including any incompatibilities** Store in well closed original package, in dry and well ventilated premises. Do not store at temperatures above 30 °C. Do not expose to direct sunlight. Do not store together with strong oxidizers.
- 7.3. Specific end uses** For professional use for hygiene and surgical disinfection, for public hygiene disinfection of hands and skin and surfaces..

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1. Exposure limit values

Limit values for some ingredients in the air of the work environment

Ingredient	CAS Number	EC Number	Exposure 8 hours (Permissible exposure limit)	Exposure 15 min. (Ceiling Limit Value)	Basis
Propane-1-ol n-Propanol	71-23-8	200-746-9	300 mg/m ³ (120 ppm)	500 mg/m ³ (200 ppm)	Bulgarian legislation
Propane-2-ol (Isopropyl alcohol)	67-63-0	200-661-7	980 mg/m ³ (400 ppm)	1225 mg/m ³ (490 ppm)	Bulgarian legislation
Ethyl alcohol Ethanol	64-17-5	200-578-6	1000 mg/m ³ (520 ppm)	-	Bulgarian legislation

DNEL/DMEL and PNEC values

There are no data available on the preparation itself.

DNEL (The derived no-effect level) Values for Propan-1-ol (CAS 71-23-8)

Limit Value type (End use)	Exposure route	Exposure frequency	Limit value
Consumer	Inhalation	Short-term (acute)	1036 mg/m ³
Consumer	Dermal	Long-term (repeated)	81 mg/kg
Consumer	Inhalation	Long-term (repeated)	80 mg/m ³

Consumer	Oral	Long-term (repeated)	61 mg/kg
Industrial	Inhalation	Short-term (acute)	1723 mg/m3
Industrial	Dermal	Long-term (repeated)	136 mg/kg
Industrial	Inhalation	Long-term (repeated)	268 mg/m3

DNEL (The derived no-effect level) Values for Propan-2-ol (CAS 67-63-0)

Limit Value type (End use)	Exposure route	Exposure frequency	Limit value
Consumer	Inhalation	Short-term (acute)	1036 mg/m3
Consumer	Dermal	Long-term (repeated)	319 mg/kg
Consumer	Inhalation	Long-term (repeated)	89 mg/m3
Consumer	Oral	Long-term (repeated)	26 mg/kg
Industrial	Dermal	Long-term (repeated)	888 mg/kg
Industrial	Inhalation	Long-term (repeated)	500 mg/m3

DNEL (The derived no-effect level) Values for Ethanol (CAS 64-17-5)

Limit Value type (End use)	Exposure route	Exposure frequency	Limit value
Consumer	Inhalation	Short-term (acute)	1036 mg/m3
Consumer	Dermal	Long-term (repeated)	319 mg/kg
Consumer	Inhalation	Long-term (repeated)	89 mg/m3
Consumer	Oral	Long-term (repeated)	26 mg/kg
Industrial	Dermal	Long-term (repeated)	888 mg/kg
Industrial	Inhalation	Long-term (repeated)	500 mg/m3

PNEC (The predicted no-effect concentration) Values for Propan-1-ol (CAS 71-23-8)

Limit Value type (End use)	Exposure route	Limit value
Industrial	Fresh water (including sewage plant)	10 mg/l
Industrial	Marine water	1 mg/l
Industrial	Fresh water sediment	2,2 mg/kg
Industrial	Marine sediment	2,2 mg/kg
Industrial	Soil	2,28 mg/kg

PNEC (The predicted no-effect concentration) Values for Propan-2-ol (CAS 67-63-0)

Limit Value type (End use)	Exposure route	Limit value
Industrial	Fresh water (including sewage plant)	140,9 mg/l
Industrial	Marine water	140,9 mg/l
Consumer	Fresh water sediment	552 mg/kg
Consumer	Marine sediment	552 mg/kg
Industrial	Soil	28 mg/kg

PNEC (The predicted no-effect concentration) Values for Ethanol (CAS 64-17-5)

Limit Value type (End use)	Exposure route	Limit value
Industrial	Fresh water (including sewage plant)	140,9 mg/l



Industrial	Marine water	140,9 mg/l
Consumer	Fresh water sediment	552 mg/kg
Consumer	Marine sediment	552 mg/kg
Industrial	Soil	28 mg/kg

8.2. Exposure controls

General protective measures: No further data, see item 7.

Hygiene measures: General and local ventilation is recommended in order to control limit values of alcohols in the air of the workplace.

Respiratory protection: In case of exceeding the limit values for work environment – use filter respiratory devices.

Hand protection: Not applicable

Eye protection: Avoid contact with eyes. Use tight goggles by prolonged manipulation.

Body protection: Protective clothing. Wash off any dirt that gets onto skin with lots of water.

9. CHEMICAL AND PHYSICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state:	Transparent liquid
Color:	Zhivasept S (colorless, red or blue) Zhivasept Rapid S (colorless)
Odour:	Light alcoholic and of the fragrance used
Odour threshold	No data
pH (as supplied)	5,5 – 7,0 (20 °C)
Density	0,83 – 0,88 g/cm ³
Boiling point	About 82 °C (1013 hPa) – azeotrop (propan-2-ol)-water
Flash point	30 °C (closed cup) – for the mixture propan-1-ol : propan-2-ol
Flammability	Sustains combustion
Explosion limits	2,0 – 13,5 % vol.
Ignition temperature	360 °C
Self ignition temperature	400 °C
Oxidizing properties	No
Corrosive to metal	No
Vapours pressure	4,4 kPa by 20 °C (isopropanol)
Density , 20 °C	0,830 g/cm ³
Solubility in organic solvents	Miscible with acetone, benzene, methanol, ethanol
Solubility in water	Fully miscible
Partition coefficient: n-octanol/water	No data
Viscosity	No data
Vapour density (air = 1)	2,1
Evaporation rate	No data

9.2. Other information – None

10. STABILITY AND REACTIVITY

10.1. Reactivity

Flammable. No dangerous reaction known under conditions of normal use.



10.2. Chemical stability	Stable under recommended storage and handling conditions (see section 7).
10.3. Possibility of hazardous reactions	Vapors may form explosive mixtures with air. Reaction with oxidizing agents Exothermic reaction with strong acids.
10.4. Conditions to avoid:	High temperatures over 40 °C, sources of heat and direct sunlight
10.5. Incompatible materials:	Strong oxidizers and acids.
10.6. Hazardous decomposition products:	Not expected, if followed the instructions for use. By burnig toxic gases are released: CO, CO ₂ , nitrous fumes.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Practical experience/human evidence The product does not have any skin irritating or sensitizing properties.

Acute effects

Acute oral toxicity LD₅₀ oral, rat > 2000 mg/kg body weight.

Acute dermal toxicity LD₅₀ dermal, rat > 2000 mg/kg body weight.

Irritant and corrosive effects Rabbit skin: no irritation
Rabbit's eye: mild irritation

Skin sensitization Guinea pig: non-sensitizing

11.2. Additional information The mixture does not contain components considered to have endocrine disrupting properties under REACH , Article 57(e) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12. ECOLOGICAL INFORMATION

12.1. Toxicity

There are no data available for the preparation itself.

Toxicity of the active ingredients:

Aquatic toxicity	Propan-1-ol (CAS No. 71-23-8)	Propan-2-ol (CAS No. 67-63-0)
Acute (short-term) fish toxicity		
Parameter:	LC ₅₀	
Species:	Pimephales promelas (fathead minnow)	
Effective dose:	4480 mg/l	9640
Exposure time:	96 h	96 h
Acute (short-term) daphnia toxicity		
Parameter:	EC ₅₀	
Species:	Daphnia magna (Big water flea)	
Effective dose:	3644 mg/l	13299 mg/l



Exposure time:	48 h	48 h
Acute (short-term) algae toxicity		
Parameter:	EC50	
Species:	Scenedesmus subspicatus	Pseudokirchneriella subcapitata
Evaluation parameter:	Inhibition of growth rate	Acute (short-term) algae toxicity
Effective dose:	3100 mg/l	1000 mg/l
Exposure time:	168 h	72 h
Bacteria toxicity		
Parameter:	EC50	
Species:	Pseudomonas putida	
Evaluation parameter:	Bacteria toxicity	
Effective dose:	2700 mg/l	5175 mg/l
Exposure time:	16 h	18 h

12.2. Persistence and degradability

A biotic degradation No data available

Biodegradation All active agents are biodegradable at the dilution rates arising in the sewage system. Isopropanol is bio instable and dissolves in environmental components. Biodegradability after 4 – 21 days

12.3. Bioaccumulation potential

Bioaccumulation is not expected. The logarithmic coefficient of distribution octanol/water for these alcohols is below 3. Upon overflow in water, the period of half- elimination is expected to be between 5 and 10 days.

Upon evaporating in the air, quick spreading in the atmosphere is expected, depending on the atmospheric ventilation.

12.4. Mobility in soil

Propan-2-ol is mobile in soils. There are no data available on the preparation itself. Upon penetration into the soil, it might be expected that underground waters will be reached; Do not allow access to water sources.

12.5. Results of PBT and vPvB assessment

This mixture contains no substance considered to be persistent, bioaccumulation nor toxic (PBT)

12.6. Endocrine disrupting properties

The mixture does not contain components that are considered to have endocrine disrupting properties under REACH Regulation Article 57(e) or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher

12.7. Other adverse effects

No other adverse environmental impacts are expected (such as ozone destruction, potential for photochemical ozone creation, potential for global warming).

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Do not discharge **concentrate or large quantities** into drains or the environment; dispose to an authorized waste collection point.

Disposal should be in accordance with the local, state or national legislation. **European waste code: 18 01 06*** -



(disinfectants - chemicals consisting of or containing dangerous substances (from humane healthcare)

Contain, absorb and transfer to disposable container.

Dilute with plenty of water. Clean thoroughly.

Must not be disposed of together with household garbage.

Contaminated packaging:

Soiled packages: 15.01.10* - packaging containing residues of or contaminated by dangerous substances. Handle contaminated packages in the same way as the substance itself.

Empty packages: Rinse with water. Non-contaminated packages may be recycled. Empty packages should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

14.1 UN Number	1987
14.2 UN proper shipping name	ALCOHOLS, n.o.s (n-propanol, isopropanol, ethanol)
14.3 Transport hazard class(es)	3 (Flammable liquids)
14.4 Packaging group	II
14.5 Environmental hazards	none
14.6 Special precautions for user	none

Land transport (ADR/RID)

Classification code	F1
ADR/RID hazard label	3
ICAO labels	33
Tunnel restriction code	D/E
Special provisions	LQ 1 / LQ4 E2



For packages up to 5 l

Sea transport (IMDG)

EmS	F-E, S-D
Special provisions	LQ 1 / E2
Hazard label	3



Air transport (ICAO-TI / IATA-DGR)

Special provisions	E2
Hazard label	3



14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

15. REGULATORY INFORMATION

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

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation 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;

REGULATION (EU) 2020/878. amending the annex II of Regulation(EC) 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH);

REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents;

DIRECTIVE 1999/45/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations;

ESIS : European chemical Substances Information System;

COMMISSION DIRECTIVE 2001/60/EC of 7 August 2001 adapting to technical progress Directive 1999/45/EC of the European Parliament and of the Council concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations;

Council Directive 91/689/EEC of 12 December 1991 on hazardous waste;

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste;

DIRECTIVE 2008/112/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending Council Directives 76/768/EEC, 88/378/EEC, 1999/13/EC and Directives 2000/53/EC, 2002/96/EC and 2004/42/EC of the European Parliament and of the Council in order to adapt them to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

15.2. Chemical safety assessment

For this mixture a chemical safety assessment has not been carried out.

16. OTHER INFORMATION

The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product, which conforms to the specification unless otherwise stated. In this case of combinations and mixtures one must make sure, that no new dangers can arise.

In any case the user is not exempt from observing all legal, administrative and regulatory procedures, relating to the product, personal hygiene and protection of human welfare and the environment.

Section 1.1: Added Unique Formula Identifier (UFI)

SDS updated according to the requirements of Regulation (EU) 2020/878

Hazard statements (GHS):

H225 Highly flammable liquid and vapour
H318 Causes serious eye damage
H319 Causes serious eye irritation
H336 May cause drowsiness or dizziness