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Safety Data Sheet (SDS)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name: Penicillin Streptomycin Solution (100x)
Product Code: PS100
CAS Number: -
EC Number: -

1.2 Details of the supplier of the safety data sheet

Company: EcoTech Biotechnology
Address: Universite Mah. Cat Yolu Cad. Ata Teknokent Sitesi B Blok No: 74/113 Yakutiye Erzurum
Turkiye
Telephone: 0090 544 327 34 97
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Emergency
Phone Number: 0090 544 327 34 97

1.3 Product use

For research use only. Not intended for diagnostic or therapeutic use.

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards	Not Hazardous
Health hazards	Respiratory Sensitization (Category 1 (H334)) Skin Sensitization (Category 1 (H317)) Reproductive Toxicity (Category 1B (H360FD))
Environmental hazards	Not Hazardous

2.2 Label elements

Pictogram:



Signal word : Danger

Hazard statement(s)

H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 - May cause an allergic skin reaction
H360FD - May damage fertility. May damage the unborn child

Precautionary statement(s)

P261 : Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
P280 - Wear eye protection/ face protection
P201 - Obtain special instructions before use
P308 + P313 - IF exposed or concerned: Get medical advice/attention
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

Supplemental Hazard

Statement(s) : None

2.3 Other hazards

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
Water	7732-18-5	231-791-2	97 - 98	-
Penicillin G, sodium salt	69-57-8	EEC No. 200-710-2	0.5 - 1.0	Resp. Sens. 1 (H334) Skin Sens. 1 (H317)
Streptomycin sulfate	3810-74-0	EEC No. 223-286-0	1.0	Skin Sens. 1 (H317) Repr. 2 (H361d) Acute Tox. 4 (H302)
Sodium chloride	7647-14-5	231-598-3	0.9	-

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Skin Contact	Rinse skin with water. Immediate medical attention is not required.
Inhalation	Get medical attention. If not breathing, give artificial respiration.
Ingestion	Do NOT induce vomiting. Get medical attention.
Self-protection of the first aider	Use personal protective equipment as required. No special handling advices are necessary.

Most important symptoms and effects, both acute and delayed

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable Extinguishing	No information available

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	Not known
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5.3 Explosion data

Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.

5.4 Protective equipment and precautions for firefighters

Advice for firefighters	Standard procedure for chemical fires.
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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment

6.2 Environmental precautions

Avoid release to the environment. See Section 12 for additional Ecological Information.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Ensure adequate ventilation. Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep in a dry place. Store in freezer. Keep at -20 °C.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure limits

List source(s):

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region-specific regulatory bodies

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands, forearms and face after handling.

Personal protective equipment

Eye/face protection: Tight sealing safety goggles.

Hand protection: Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

Skin and body protection: Wear laboratory coat or impervious clothing. Choose appropriate body protection according to the amount and concentration of the substance at the work place.

Respiratory protection: In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

a) Appearance:	Liquid
b) Odor:	No data available
c) Odor Threshold:	No data available
d) pH:	No data available
e) Melting point/freezing point:	No data available
f) Initial boiling point and boiling range:	No data available
g) Flash point:	No data available
h) Evaporation rate:	No data available
i) Flammability (solid, gas):	No data available
j) Upper / lower flammability or explosive limits:	No data available
k) Vapor pressure:	No data available
l) Vapor density:	No data available

m) Relative density:	No data available
n) Solubility(ies):	No data available
o) Partition coefficient: <i>n</i> -octanol / water:	No data available
p) Auto-ignition temperature:	No data available
q) Decomposition temperature:	No data available
r) Viscosity:	No data available
s) Explosive properties:	No data available
t) Oxidizing properties:	No data available

SECTION 10. STABILITY AND REACTIVITY

Stability and reactivity

Reactivity:	None known, based on information available.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous reactions:	No information available.
Conditions to avoid:	Incompatible products. Excess heat.
Incompatible materials:	Strong oxidizing agents.
Hazardous decomposition products:	Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

a) Acute toxicity:	There is no evidence available indicating acute toxicity.
b) Skin corrosion / irritation:	No data available.
c) Serious eye damage/eye irritation:	No data available.
d) Carcinogenicity:	No data available.
e) Reproductive toxicity:	Category 1B.
Reproductive Effects: Experiments have shown reproductive toxicity effects on laboratory animals.	
Developmental Effects: Substances known to cause developmental toxicity in humans.	
Teratogenicity: Teratogenic effects have occurred in experimental animals.	
f) STOT - SE:	No data available.
g) STOT - RE:	No data available.
h) Aspiration hazard:	No data available.

Other Adverse: Effects Tumorigenic effects have been reported in experimental animals.

Symptoms / effects, both acute and delayed: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	-	-	-
Penicillin G, sodium salt	LD50 = 6916 mg/kg (Rat)	-	-
Streptomycin sulfate	LD50 = 430 mg/kg (Rat)	-	-
Sodium chloride	LD50 = 3 g/kg (Rat)	LD50 > 10000 mg/kg (Rabbit)	LC50 > 42 mg/L (Rat) 1 h

11.2 Potential health effects

Endocrine Disrupting Properties: Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

11.3 Additional Information

No additional information is available

SECTION 12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product contains the following substance(s) which are hazardous.

Component	Freshwater Fish	Water Flea	Freshwater Algae
Sodium chloride	Pimephals prome: LC50: 7650 mg/L/96h	EC50: 1000 mg/L/48h	

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

Endocrine Disruptor Information: This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

Persistent Organic Pollutant: This product does not contain any known or suspected substance

Ozone Depletion Potential: This product does not contain any known or suspected substance

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

Contact a licensed professional waste disposal service to dispose of this material. Dispose of in accordance with federal, state and local requirements.

Contaminated packaging

Dispose of this container to hazardous or special waste collection point.

Section 14. TRANSPORT INFORMATION

14.1 DOT (US)

Not regulated in the meaning of transport regulations.

14.2 IMDG

Not regulated in the meaning of transport regulations

14.3 IATA

Not regulated in the meaning of transport regulations

UN number	Not Applicable
UN proper shipping name	Not Applicable
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable

SECTION 15. REGULATORY INFORMATION

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

International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Water	7732-18-5	231-791-2	-	-	X	X	KE-35400	X	-
Penicillin G, sodium salt	69-57-8	200-710-2	-	-	X	X	KE-11722	X	-
Streptomycin sulfate	3810-74-0	223-286-0	-	-	X	X	KE-09605	-	-
Sodium chloride	7647-14-5	231-598-3	-	-	X	X	KE-31387	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Water	7732-18-5	X	ACTIVE	X	-	X	X	X
Penicillin G, sodium salt	69-57-8	-	-	X	-	-	X	-
Streptomycin sulfate	3810-74-0	X	ACTIVE	X	-	X	X	X
Sodium chloride	7647-14-5	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Water	7732-18-5	-	-	-
Penicillin G, sodium salt	69-57-8	-	Use restricted. See item 75. (see link for restriction details)	-
Streptomycin sulfate	3810-74-0	-	-	-
Sodium chloride	7647-14-5	-	-	-

REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Dir 92/85/EC on the protection of pregnant and breastfeeding women at work

National Regulations

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification Water endangering class = non-hazardous to waters (self classification)

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Sodium chloride	WGK1	

Component	France - INRS (Tables of occupational diseases)
Sodium chloride	Tableaux des maladies professionnelles (TMP) - RG 78

Component	Switzerland - Ordinance on the Reduction of Risk from handling of hazardous substances preparation (SR 814.81)	Switzerland - Ordinance on Incentive Taxes on Volatile Organic Compounds (OVOC)	Switzerland - Ordinance of the Rotterdam Convention on the Prior Informed Consent Procedure
Penicillin G, sodium salt 69-57-8 (0.5 - 1.0)	Prohibited and Restricted Substances		
Sodium chloride 7647-14-5 (0.9)	Prohibited and Restricted Substances		

15.2 Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted.

SECTION 16. OTHER INFORMATION

Key to abbreviations and acronyms

STOT-SE: Specific Target Organ Toxicity - Single Exposure

STOT-RE: Specific Target Organ Toxicity - Repeated Exposure

PBT: Persistent Bioaccumulative and Toxic

vPvB: very Persistent very Bioaccumulative and toxic

ADR: European Agreement concerning the international carriage of Dangerous goods by Road

CAS: Chemical Abstracts Service

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association

IMDG: International Maritime code for Dangerous Goods

REACH: Registration, Evaluation, Authorization and restriction of Chemicals
RID: Regulations concerning the International transport of Dangerous goods by rail