

# MATERIAL SAFETY DATA SHEET

## MSDS

in accordance with the requirements of GOST 30333-2007,  
Regulation EC 1907/2006 and Regulation EC No. 1272/2008 (CLP)/EU No. 453/2010

Edition: 04/14/2022

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### SECTION 1: Identification of the chemical product and details of the manufacturer or supplier

#### 1.1 Product identifier

Substance identification	Dry extract of the mucous membrane of the small intestine of a pig (heparin 80-90 IU/ME)
Regulatory document	TU 21.20.23-002-40473145-2022
CAS Number	9005-49-6

#### 1.2 Appropriate established uses of the substance or mixture and contraindications to use

Relevant established applications: For biochemical tests; for laboratory purposes

Contraindications to use: Do not use with materials that come into contact with food. Do not use for personal (domestic) purposes.

#### 1.3 Detailed information about the supplier in the safety data sheet

RusSynergy Limited Liability Company  
6 Shcheglovskaya Zaseka str., Tula, Tula Region, 300010, Russia

Phone/fax: +7 (910) 947-89-08

#### 1.4 Emergency phone number: 103; 112 (in the Russian Federation)

### SECTION 2: Hazard identification

#### 2.1 Classification of the substance or mixture Classification as per GHS

This substance does not meet the classification criteria.

#### 2.2 Marking elements

##### Marking

not required

#### 2.3 Other hazards

##### Evaluation of PBT and vPvB results

Based on the evaluation results, this substance is not PBT or vPvB.

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### SECTION 3: Composition (information on components)

#### 3.1 Substances

Substance name	Dry extract of the mucous membrane of the small intestine of a pig (heparin 44 ± 0.5%)
Molecular formula	a complex chemical mixture based on heparin $C_{12}H_{19}NO_{20}S_3$
Molar mass	no data
CAS No.	9005-49-6

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures



##### General remarks

Remove contaminated clothing.

##### When inhaled

Provide fresh air access.

##### Skin contact

Rinse skin with water/take a shower.

##### Eye contact

Rinse carefully with water for several minutes.

##### If swallowed

Rinse out the mouth. Visit a doctor/specialist if you feel unwell.

#### 4.2 Major symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

#### 4.3 Indication of immediate medical attention and special treatment needed

no

### SECTION 5: Measures and means to ensure fire and explosion safety

#### 5.1 Extinguishing media



##### Suitable extinguishing media

coordinate firefighting measures around the fire water, foam, dry extinguishing powder, ABC powder

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### Unsuitable extinguishing media

fire stream

### 5.2 Special hazards posed by the substance or mixture

Combustible.

### Hazardous combustion products

In case of fire, carbon monoxide (CO), carbon dioxide(CO<sub>2</sub>), and minor amounts of sulfur oxides (SO<sub>2</sub>) in a small amount,

### 5.3 Recommendations for firefighters

In the event of fire and/or explosion, avoid inhaling smoke. Extinguish the fire from a sufficient distance, observing the usual precautions. Put on self-contained breathing apparatus.

## SECTION 6: Measures to prevent and

### 6.1 Personal precautions, protective equipment and emergency measures



#### For non-emergency personnel

Dust control.

### 6.2 Environmental precautions

Keep away from drains, surface water and groundwater.

### 6.3 Methods and materials for containment and

#### cleaningTips for preventing leaks

Sewer coverage. Remove mechanically.

#### Tips on how to clean up a leak

Remove mechanically.

#### Other information related to spills and emissions

Place in appropriate containers for disposal.

### 6.4 Link to other sections

Hazardous combustion products: see Section 5. Personal protective equipment: see Section 8.  
Incompatible materials: see Section 10. Disposal guidelines: see Section 13.

## SECTION 7: Rules for storage and

### 7.1 Precautions for safe handling

Ensuring sufficient ventilation.

#### Consultations on industrial hygiene

Keep away from food, drink and animal feed.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

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### Incompatible substances or mixtures

Follow directions for combined storage.

### Consideration of other tips:

### Ventilation requirements

Use local and general ventilation.

### Specific projects for storage areas or ships

Recommended storage temperature: 2 - 8 °C

### 7.3 Specific end use(s)

No information.

## SECTION 8: Hazardous exposure

### 8.1 Control parameters

No data.

### 8.2 Exposure controls

#### Personal protective equipment Eye/face protection



Use safety glasses with side protection.

#### Skin protection



#### • hand protection

Use appropriate protective gloves. You can use chemical protective gloves tested in accordance with EN 374.

#### • material type

NBR (nitrile rubber)

#### • thickness of material

> 0.11 mm

#### • tear time of glove material

> 480 minutes (Permeability: Level 6)

#### • other protective measures

Have recovery periods to regenerate the skin. Preventive skin protection (protective creams/ointments) is recommended.

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### Respiratory protection



When respiratory protection apparatus is required: Dust generation. Particle filter (EN 143). P1 (filters at least 80% of particles in the air, color code: white).

### Environmental impact control

Keep away from drains, surface water and groundwater.

## SECTION 9: Physical and chemical properties

### 9.1 Information about basic physical and chemical properties

#### Appearance

State of matter	solid
Form	Shapeless pieces
Color	Grey or dark-grey

Particle characteristics	no data
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Odour	poorly resolved, significant
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#### Other safety options

pH (value)	not applicable
Melting/freezing point	unknown
Initial boiling point and boiling range	unknown
Flash point	unknown
Evaporation rate	unknown
Flammability	This material is combustible, but does not ignite easily
Lower and upper explosion limits	unknown

#### **Limits of explosibility from dust clouds**

	unknown
Gas pressure	unknown
Density	unknown
Bulk density	0,45 - 0,52 g/l
Vapor density	unknown
Purity (heparin), % by weight	44 ± 0.5

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### Solubility

Solubility in water 50 g/l at 20 °C

### Distribution coefficient

Octanol-water partition coefficient (logarithmic value): unknown Self-

ignition temperature unknown

Decomposition temperature not relevant

Viscosity not relevant  
solid substance

Kinematic viscosity not relevant

Danger of explosion no

Oxidizing properties no

Information about physical hazard classes: hazard classes as per GHS  
(physical hazards): not relevant

**9.2 Other information** No additional information

## **SECTION 10: Stability and reactivity data**

### **10.1 Reactivity**

The product in the supplied form is not capable of a dust explosion.

### **10.2 Chemical stability**

The material is stable under normal environmental conditions and under the storage and handling conditions specified by the manufacturer.

### **10.3 Possibility of hazardous reactions**

**Severe reaction:** may cause fire or explosion; strong oxidizing agent

### **10.4 Situations to avoid**

UV radiation/sunlight.

### **10.5 Incompatible materials**

No additional information.

### **10.6 Hazardous decomposition products**

Hazardous combustion products: see Section 5.

## **SECTION 11: Toxicity information**

### **11.1 Information on toxicological effects Classification**

#### **as per GHS**

This substance does not meet the classification criteria.

#### **Acute toxicity**

Not classified as acutely toxic.

#### **Skin corrosion/irritation**

Not classified as corrosive/skin irritant.

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### **Serious eye damage/eye irritation**

Not classified as an eye irritant, does not cause eye damage.

### **Respiratory or skin sensitization**

Not classified as a respiratory irritant or skin allergen.

### **Germ cell mutagenicity**

Not classified as germ cell mutagenic.

### **Carcinogenicity**

Not classified as carcinogenic.

### **Reproductive toxicity**

Not classified as a reproductive toxin.

### **Specific selective toxicity, affecting individual target organs with a single exposure**

Not classified as a specific target organ toxicant (single exposure).

### **Specific selective toxicity affecting individual target organs upon repeated exposure**

Not classified as a specific target organ toxicant (repeated exposure).

### **Aspiration risk**

Not classified as an inhalation hazard.

### **Symptoms related to physical, chemical and toxicological characteristics**

#### **• If swallowed**

No data.

#### **• Eye contact**

No data.

#### **• When inhaled**

No data.

#### **• Skin contact**

No data.

#### **• Other information**

Health consequences are unknown.

### **11.2 Endocrine disrupting properties**

Not listed.

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### SECTION 12: Environmental impact information

#### 12.1 Toxicity

Not classified as hazardous to the aquatic environment.

#### Biodegradation

No data.

#### 12.2 Decomposition process

No data.

#### 12.3 Bioaccumulation potential

No data.

#### 12.4 Mobility in the soil

No data.

#### 12.5 Evaluation of PBT and vPvB results

No data.

#### 12.6 Endocrine disrupting properties

Not listed.

#### 12.7 Other side effects

No data.

### SECTION 13: Recommendations for waste (residue) disposal

#### 13.1 Waste disposal methods



Consult certified waste disposal experts in the country of application.

#### Wastewater disposal-relevant information

Do not drain into the sewer.

#### 13.3 Notes

Waste shall be disposed of in accordance with local (national) law. Please consider the relevant national or regional provisions.



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### SECTION 14: Transport information

- 14.1 UN number** not subject to transport regulations
- 14.2 UN's own shipping name** not assigned
- 14.3 Transportation hazard class(es)** no
- 14.4 Packing group** not assigned
- 14.5 Environmental hazards** not hazardous to the environment in accordance with current technical regulations
- 14.6 Special precautions for the user**  
No additional information.
- 14.7 Transportation of containers in accordance with Annex II of MARPOL 73/78 and the IBC Code**  
The cargo is not intended for wholesale transportation.

#### **14.8 Information on each of the UN Model Regulations**

**Transportation of dangerous goods by road, rail and inland water transport (ADR / RID / ADN) - Additional information**

Not subject to ADR, RID and ADN.

**International Maritime Dangerous Goods Code (IMDG) - Additional Information**

Not subject to the IMDG Code.

**International Air Transport Association (ICAO-IATA/DGR) - Additional information**

Not subject to ICAO-IATA.

### SECTION 15: Information on national

#### **15.1 Safety, health and environmental laws/regulations specific to the substance or mixture**

No additional information.

##### **National regulations**

Country	Inventory	Status
AU	AICS	substance included
CA	DSL	substance included
CN	IECSC	substance included
EU	ECSI	substance included
JP	CSCL-ENCS	substance included
NZ	NZIoC	substance included
PH	PICCS	substance included
TW	TCSI	substance included
US	TSCA	substance included

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### Designations

AICS	Australian Inventory of Chemical Substances
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	Substance inventory pollutants (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

### 15.2 Chemical safety assessment

Chemical safety assessment was not carried out.

## SECTION 16: Additional information

### Abbreviations

Abbr.	Descriptions of acronyms used
CAS	Chemical Abstracts Service (a service that maintains the most comprehensive list of chemicals)
DGR	Regulations for the Transport of Dangerous Goods (see IATA/DGR)
EINECS	European Register of Existing Commercial Chemicals
ELINCS	European List of detectable chemicals
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for Air Transport (IATA)
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No longer a polymer
PBT	Persistent, biologically accumulating and toxic
vPvB	Very persistent and very bioaccumulative
ADN	Accord europe relatif au transport international des marchandises dangereuses par voie de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (agreement on the international carriage of dangerous goods by road)
ICAO	International Civil Aviation Organization
IMDG Code	International code for the Transport of Dangerous Goods by Sea
RID	Règlement concernant le transport International ferroviaire de marchandises Dangereuses (Regulations for the International Carriage of Dangerous Goods by Rail)
GHS	Globally Harmonized System of Classification and Labeling of Chemicals, developed by the United Nations

### Main references and data sources

Warning labeling of chemical products. General requirements (GOST 31340-2013). Safety data sheet of chemical products. General requirements. GOST 30333-2007.

UN Recommendations on the Transport of Dangerous Goods. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for Air Transport (IATA).

### Disclaimer

This information is based on the current state of our knowledge. This document is designed exclusively for this product.