

Product name: Biolys  
25kg bags, 1000kg PAL

# SAFETY DATA SHEET

Classified in accordance with 29 CFR 1910.1200

## 1. Identification

**Product identifier:** Biolys  
25kg bags, 1000kg PAL  
**Chemical name:**  
L-Lysine sulphate and its by-products from fermentation

**Other means of identification**  
None.

### Recommended restrictions

**Recommended use:** Feed additive  
**Restrictions on use:** Not known.

### Manufacturer/Importer/Distributor Information

Company Name : Evonik Corporation  
Nutrition & Care  
PO Box 34628  
Richmond, VA 23234  
USA

Telephone : +1 804 727 0700

Fax : +1 804 727 0845

E-mail : product-regulatory-services@evonik.com

### Emergency telephone number:

24-Hour Health : +1 800 424 9300 (CHEMTREC - US & CANADA)  
Emergency : 800 681 9531 (CHEMTREC MEXICO)  
+1 703 527 3887 (CHEMTREC WORLD)

## 2. Hazard(s) identification

### Hazard Classification

#### OSHA hazard(s)

Combustible dust

#### Label Elements

**Hazard Symbol:** No symbol

**Signal Word:** No signal word.

**Hazard Statement:** May form combustible dust concentrations in air.

#### Precautionary Statements

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**Hazard(s) not otherwise classified (HNOC):** None.

### 3. Composition/information on ingredients

**Chemical name:**

L-Lysine sulphate and its by-products from fermentation  
**Mixtures**

**Composition Comments:** The components are not hazardous or are below required disclosure limits.

### 4. First-aid measures

**Description of necessary first-aid measures**

<b>General information:</b>	Pay attention to self-protection. Remove victims from hazardous area. Immediately remove soiled or soaked clothing and remove it to a safe distance. Keep victim warm, in a stabilized position and covered. Do not leave the victim unattended. Place patients who are unconscious but breathing in the stabilized lateral position.
<b>Inhalation:</b>	Inhalation is possible if aerosols, mists, dusts, or smoke form. Move to fresh air. With labored breathing: Provide with oxygen. Consult a doctor immediately. If the casualty is not breathing: Perform mouth-to-mouth resuscitation, notify emergency physician immediately.
<b>Skin Contact:</b>	Wash off affected area immediately with plenty of water for at least 15 minutes. Get medical attention if any discomfort continues.
<b>Eye contact:</b>	With eye held open, thoroughly rinse immediately with plenty of water for at least 10 minutes. In case of persistent discomfort: Consult an ophthalmologist.
<b>Ingestion:</b>	Rinse mouth. Immediately give large quantities of water to drink. Seek medical advice.
<b>Personal Protection for First-aid Responders:</b>	No data available.

**Most important symptoms and effects, both acute and delayed**

<b>Symptoms:</b>	None known.
<b>Hazards:</b>	Other dangerous properties can not be excluded.

**Indication of immediate medical attention and special treatment needed**

**Treatment:** This substance does not have any noteworthy noxious potential. Damage to health is thus not expected.

**5. Fire-fighting measures****Suitable (and unsuitable) extinguishing media****Suitable extinguishing media:** Water. Water fog.**Unsuitable extinguishing media:** Dry powder Carbon Dioxide.**Special hazards arising from the substance or mixture:**

In the case of fire, the following hazardous smoke fumes may be produced: carbon monoxide, carbon dioxide, nitric oxides, hydrocyanic acid. In case of fire and/or explosion do not breathe fumes.

**Special protective equipment and precautions for firefighters****Special fire fighting procedures:**

Contaminated fire-extinguishing water must be disposed of in accordance with the regulations issued by the appropriate local authorities. Fire residues should be disposed of in accordance with the regulations.

**Special protective equipment for fire-fighters:**

In the event of fire, wear self-contained breathing apparatus.

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures:**

Use personal protective equipment. Keep unauthorized personnel away.

**Accidental release measures:**

Avoid dust formation.

**Methods and material for containment and cleaning up:**

Use mechanical handling equipment.

**Environmental Precautions:**

Obey relevant local, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

**7. Handling and storage****Handling****Technical measures (e.g. Local and general ventilation):**

Ensure suitable suction/aeration at the work place and with operational machinery. Earthing of equipment. Take precautionary measures against static discharges.

**Safe handling advice:**

Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used.

**Contact avoidance measures:**

see Precautions for safe handling.

**Storage****Safe storage conditions:**

Store in a cool and shaded area. Keep containers dry and tightly closed to avoid moisture absorption and

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contamination. Keep away from sources of ignition - No smoking. Avoid dust formation. VDI 2263 "Dust fires and dust explosions; dangers, evaluation, preventive measures."

**Safe packaging materials:**

No data available.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

None of the components have assigned exposure limits.

#### Biological Limit Values

No biological exposure limits noted for the ingredient(s).

#### Appropriate Engineering Controls

Ensure suitable suction/aeration at the work place and with operational machinery. Earthing of equipment. Take precautionary measures against static discharges.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection:**

Safety glasses with side-shields conforming to EN166

#### Skin Protection

**Hand Protection:**

Additional Information: Wear protective gloves made of the following materials: rubber or plastics., Change protective gloves regularly.

**Skin and Body Protection:**

Safety showers and eye showers should be easily accessible. In order to determine further specifications applicable to the personal protection equipment, a hazard assessment according to the OSHA standards (29 CFR 1910.132) for personal protection equipment (PPE) is recommended before the product is used.

**Respiratory Protection:**

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

**Hygiene measures:**

Wash face and/or hands before break and end of work. Cleanse and apply cream to skin after work.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

#### Appearance

**Physical state:**

solid

**Form:**

dry, free flowing granules

**Color:**

Light brown

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<b>Odor:</b>	Characteristic
<b>Odor Threshold:</b>	No data available.
<b>Melting Point:</b>	Not determined.
<b>Boiling Point:</b>	Not applicable
<b>Flammability:</b>	Not classified as a flammability hazard comparable product
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Explosive limit - upper:</b>	not to be determined
<b>Explosive limit - lower:</b>	(DIN EN 14034) 60 g/m <sup>3</sup>
<b>Flash Point:</b>	Not applicable solid
<b>Autoignition Temperature:</b>	> 392 °F/200 °C (VDI 2263) (in dm <sup>3</sup> wire basket (IMDG code))
<b>Decomposition Temperature:</b>	No data available.
<b>pH:</b>	Not determined.
<b>Viscosity</b>	
<b>Dynamic viscosity:</b>	Not applicable solid Not applicable solid
<b>Kinematic viscosity:</b>	No data available.
<b>Flow Time:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in Water:</b>	partly soluble > 363 g/l (73 °F/23 °C) comparable product
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	-3.05 tested substance: L-Lysine
<b>Vapor pressure:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Bulk density:</b>	620 - 670 kg/m <sup>3</sup>
<b>Vapor density (air=1):</b>	No data available.
<b>Particle characteristics</b>	
<b>Particle Size:</b>	11 µm
<b>Particle Size Distribution:</b>	No data available.
<b>Specific surface area:</b>	No data available.
<b>Surface charge/Zeta potential:</b>	No data available.
<b>Shape:</b>	No data available.
<b>Crystallinity:</b>	No data available.
<b>Surface treatment:</b>	No data available.
<b>Other information</b>	
<b>Explosive properties:</b>	Dusts of the product are explosible.
<b>Oxidizing properties:</b>	Not to be expected in view of the structure
<b>Burning Number:</b>	Burning Number: 2 Combustibility test in accordance with VDI 2263 BZ 2 - briefly ignites and rapidly extinguishes.
<b>Minimum ignition temperature:</b>	842 °F/450 °C (VDI 2263) (BAM-furnace) grain size < 63µm
<b>Metal Corrosion:</b>	No data available.
<b>Minimum Exposable Concentration (MEC):</b>	60 g/m <sup>3</sup>
<b>Dust explosion properties:</b>	ST-1 ST-1
<b>Dust Explosion Description Number</b>	109 m.b_/s

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**Kst:**  
**Minimum ignition energy:** > 300 mJ (VDI 2263) sieve fraction with inductance > 44 mJ calculated

## 10. Stability and reactivity

**Reactivity:** No data available.

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of hazardous reactions:** Dust may form explosive mixture with air.

**Conditions to avoid:** See chapter Conditions for safe storage, including any incompatibilities

**Incompatible Materials:** No further information available

**Hazardous Decomposition Products:** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on toxicological effects

#### Information on likely routes of exposure

**Inhalation:** Relevant route of exposure. Information on effects are given below.

**Skin Contact:** Relevant route of exposure. Information on effects are given below.

**Eye contact:** Relevant route of exposure. Information on effects are given below.

**Ingestion:** If handled correctly, not a relevant route of exposure. Information on effects are given below.

#### Acute toxicity (list all possible routes of exposure)

**Oral**  
**Product:** LD 50 (Rat): > 5,110 mg/kg (OECD 401) comparable product

**Dermal**  
**Product:** Not classified for acute toxicity based on available data.

**Inhalation**  
**Product:** NOAEL (Rat, 4 h): 5.3 mg/l Not toxic after single exposure; Dust and mist, comparable product

**Repeated dose toxicity**  
**Product:** NOAEL (Rat(Female, Male), Oral): 1,869 mg/kg comparable product

**Skin Corrosion/Irritation**  
**Product:** Not irritating OECD 404 (Rabbit): Not irritating; comparable product

**Serious Eye Damage/Eye Irritation**  
**Product:** Not irritating Rabbit: comparable product

#### Respiratory or Skin Sensitization

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**Product:** Buehler Test, OECD 406 (Guinea Pig): Not a skin sensitizer. comparable product

#### **Carcinogenicity**

**Product:** Not classified Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.

#### **IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogens present or none present in regulated quantities

#### **ACGIH: US.ACGIH Threshold Limit Values:**

No carcinogens present or none present in regulated quantities

#### **US. National Toxicology Program (NTP) Report on Carcinogens:**

No carcinogens present or none present in regulated quantities

#### **US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended:**

No carcinogens present or none present in regulated quantities

#### **Germ Cell Mutagenicity**

Not classified

#### **In vitro**

**Product:** Ames test (OECD 471): negative;  
Chromosomal aberration (OECD 473): negative;

#### **In vivo**

**Product:** No data available.

#### **Reproductive toxicity**

**Product:** Not classified

#### **Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

#### **Specific Target Organ Toxicity - Repeated Exposure**

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

#### **Aspiration Hazard**

**Product:** No data available.

#### **Information on health hazards**

#### **Other hazards**

**Product:** No data available.

## **12. Ecological information**

#### **Ecotoxicity:**

##### **Acute hazards to the aquatic environment:**

#### **Fish**

**Product:** LC 50 (Cyprinus carpio, 96 h): > 200 mg/l  
LC 0 (Cyprinus carpio, 96 h): > 200 mg/l

#### **Aquatic Invertebrates**

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**Product:** EC 50 (Daphnia magna, 48 h): > 1,000 mg/l comparable product  
NOEC (Daphnia magna, 48 h): 340 mg/l comparable product

**Toxicity to Aquatic Plants**

**Product:** EC 50 (Desmodesmus subspicatus (Scenedesmus subspicatus), 72 h): > 2,000 mg/l (OECD 201) growth rate  
EC 50 (Desmodesmus subspicatus (Scenedesmus subspicatus), 72 h): 450 mg/l (OECD 201) Biomass

**Toxicity to microorganisms**

**Product:** No data available.

**Chronic hazards to the aquatic environment:****Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Toxicity to microorganisms**

**Product:** No data available.

**Persistence and Degradability****Biodegradation**

**Product:** No data available.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential****Bioconcentration Factor (BCF)**

**Product:** No data available.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** Log Kow: -3.05 tested substance: L-Lysine

**Mobility in soil:**

**Product** No data available.

**Results of PBT and vPvB assessment:**

**Product** No data available.

**Other adverse effects:****Other hazards**

**Product:** No further information available



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**Additional Information:** No data available.

### 13. Disposal considerations

**Disposal methods:** Waste must be disposed of in accordance with federal, state, provincial and local regulations.

**Contaminated Packaging:** Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

### 14. Transport information

#### Domestic regulation

##### 49 CFR

Not regulated as a dangerous good

#### International Regulations

##### UNRTDG

Not regulated as a dangerous good

##### IATA-DGR

Not regulated as a dangerous good

##### IMDG-Code

Not regulated as a dangerous good

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### 15. Regulatory information

#### US Federal Regulations

##### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

##### US. Toxic Substances Control Act (TSCA) Section 5(a)(2) Final Significant New Use Rules (SNURs) (40 CFR 721, Subpt E)

None present or none present in regulated quantities.

##### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050), as amended

None present or none present in regulated quantities.

##### CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

##### Hazard categories

Combustible dust

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**US. EPCRA (SARA Title III) Section 304 Extremely Hazardous Substances Reporting Quantities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substances**

None present or none present in regulated quantities.

**US. EPCRA (SARA Title III Section 313 Toxic Chemical Release Inventory (TRI) Reporting**

None present or none present in regulated quantities.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):**

None present or none present in regulated quantities.

**Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)**

None present or none present in regulated quantities.

**US State Regulations**

**US. California Proposition 65**

No ingredient requiring a warning under CA Prop 65.

**Inventory Status:**

Canada DSL Inventory List:	Not in compliance with the inventory.	
US TSCA Inventory:	Not in compliance with the inventory.	

**16. Other information, including date of preparation or last revision**

**HMIS Hazard ID**

<b>Health</b>	1
<b>Flammability</b>	2
<b>Physical Hazards</b>	0
<b>PERSONAL PROTECTION</b>	

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe; RNP - Rating not possible; \*Chronic health effect

**Issue Date:** 01/19/2023

**Version #:** 1.0

**Further Information:** No data available.

**Revision Information**

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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