

## MATERIAL SAFETY DATA SHEET

Version 1.0

Date of the data sheet: 01.04.2024

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**Product Name: RIZOLINE, AP**

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### **1. Product and Company Identification**

**Product:** RIZOLINE, AP

**Usage:** Biological product for agriculture intended for pre-sowing processing of legume seeds

**Supplier/Manufacturer:** Private Enterprise «BTU-Center»  
street Budivelnykiv, 35  
Ladyzhin, Vinnytsia Region, 24321  
Ukraine

**Telephone:** +38 (04343) 6-96-28, 6-44-84, 6-40-15

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### **2. Composition/Information on Ingredients**

**Product description:** Biopreparation based on two selective strains of tuber bacteria Bradyrhizobium japonicum, Mesorhizobium ciceri and Rhizobium leguminosarum.  
Natural filler – peat.

**Dangerous ingredients:** None

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### **3. Hazards Identification**

**Important hazards:** None

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### **4. First Aid Measures**

**Inhalation:** Remove to fresh air. Visit a doctor if an allergic reaction occurs

**Skin Contact:** Wash with water

**Eye Contact:** Flush with water

**Ingestion:** Drink water

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### **5. Fire Fighting Measures**

**Type of material:** Flammable substance.  
Self-ignition temperature of RIZOLINE, AP - 405 °C,  
smoldering temperature - 187 °C, lower concentration  
limit of flame spread 87 g / m.

**Extinguishing Media:** Fire resulting from the burning of RIZOLINE, AP is  
extinguished by water or chemical foam

**Hazardous Decomposition Products:** None

### **6. Accidental Release Measures**

**Environmental precautions:** Is not toxic  
**Personal precautions:** Respiratory protection is recommended  
**Destruction and clean up:** No special methods of neutralization are needed. Empty packaging  
should be thrice rinsed, punctured and disposed of as household  
waste.

### **7. Handling and Storage**

**Handling:** Ensure adequate ventilation when handling.  
**Storage:** Must be stored in a dry, dark place for 18 months from the date of  
manufacture at 0°C to 14 °C or 12 months from the date of manufacture at  
4°C to 10°C.  
**Incompatible materials:** Incompatible with tare mix with strong chemical protection agents plant  
protection

### **8. Exposure Controls/ Personal Protection**

**Technical measures/precautions:** Adequate ventilation  
**Personal protection**  
**Eye Protection:** The product may cause slight eye irritation. Safety glasses are  
recommended.  
**Skin and body protection:** The product is not a skin irritant although an allergic reaction may  
occur for sensitive people. Wash with soap and water. Visit a doctor  
if reaction persists

### **9. Physical and Chemical Properties**

**Physical state:** Crumbly or semi-crumbly mass  
**Colour:** From brown to black  
**Odour:** Specific  
**pH** 6,0-8,0  
**Moisture content:** Not more than 60%



<b>Density:</b>	Not regulated
<b>Solubility:</b>	Soluble
<b>Solubility in organic solvents:</b>	Soluble
<b>Partition coefficient:</b>	Not applicable
<b>Vapour pressure:</b>	Not applicable
<b>Boiling point:</b>	Not applicable
<b>Melting point:</b>	Not available
<b>Flash point:</b>	Not available
<b>Explosive properties:</b>	Not explosive
<b>Auto-ignition temp:</b>	Not available

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### **10. Stability and Reactivity**

<b>Hazardous decomposition products:</b>	None identified
<b>Materials to avoid:</b>	None
<b>Conditions to avoid:</b>	Avoid very low or high temperatures.

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### **11. Toxicological Information**

<b>Acute oral toxicity (effect, organ damage).</b>	LD50 > 5000 mg / kg. Species of animals: white rats. When injected into the gastrointestinal channel LD50, RIZOLINE, AP exceeds 5000 mg / kg. When the oral route to the body, the biological preparation RIZOLINE, AP belongs to low-risk compounds (Class 4 hazard in accordance with GOST 12.1.007-76).
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**Acute inhalation toxicity (effect, organ damage).**

In the inhalation route to the organism, the biological preparation RIZOLINE, AP belongs to moderately hazardous products - 3 classes of danger ( $LD_{50} > 5001 \text{ mg / m}^3$ ) in accordance with GOST 12.1.007-76.

**Cumulative properties for drugs based on the products of vital activity of microorganisms (antibiotics, toxins, etc.).**

Cumulative effect is not typical for a drug based on live bacteria.

**Irritating effect on the mucous membranes of the eyes and skin:**

Not detected

**Toxicological characteristics of other components of the drug.**

Not toxic

**Sensibilizing effect of the drug in the subchronic experiment.**

Does not show sensitizing properties  
(Does not have sensitizing effect on guinea pig skin).

**Immunomodulatory effect of the drug:**

Allergic reaction is not detected

### **12. Ecological Information**

**Fish toxicity:**

Not known

**Biodegradability:**

Biodegradable.

### **13. Disposal Considerations**

No special methods of neutralization are needed.

### **14. Transport Information**

Follow the safety requirements applied to the vehicle. Transportation with chemical pesticides, pesticides and other chemicals is not allowed. The product is not classified as a dangerous cargo.

### **15. Regulatory Information**

Symbol:

Not applicable to a living organism

Risk Phrases:

None – None toxic

Safety Phrases:

Keep locked up and out of reach of children, uninformed persons and animals

Wash hands after use



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street Budivelnykiv, 35  
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tel./fax: (+3804343) 6-44-84, 6-40-15, e-mail: btucenter@ukr.net, www.btu-center.com

National Legislation: Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act

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#### **16. Packing and Labelling**

- Packages of polymeric materials weighing from 5 g to 1 kg
  - Paper bags with plastic inserts weighing 5 - 15 kg
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#### **17. Other Information**

All information provided in this Material Safety Data Sheet (MSDS) is based on the current state of scientific and technical knowledge and is presented in good faith and believed to be correct. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come into contact with this product.

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