

	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 1 of 9</b>

## SECTION 1. PRODUCT AND MANUFACTURER IDENTIFICATION.

### 1.1 Product Identification

**Trade Name:** RYU  
**Name of the Active Ingredient:** *Pseudomonas fluorescens; Azotobacter spp; Bacillus spp.*

### 1.2 Identified uses of the substance or mixture

**Use:** Inoculant

### 1.3 Distributor information

**Company:** AGRICULTURA NACIONAL, S.A. DE C.V  
Av. Periférico Sur 3325, Piso 3, Col San Jerónimo Lídice,  
10210 La Magdalena Contreras, CDMX  
Phone No.: (55) 5089-1500 or 01-800-0211-568

**Emergency phone number:** 800-00-214-00  
(55) 55-59-15-88

**Poison Care Center (ATOX):** 800 000 ATOX (2869).

## SECTION 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture: Not considered a hazardous product.

#### Classification according to NOM-018-STPS-2015.

Acute toxicity by ingestion H303	<b>Category 5</b> May be harmful if swallowed
Acute dermal toxicity H313	<b>Category 5</b> May be harmful in contact with skin
Acute toxicity by inhalation H333	<b>Category 5</b> May be harmful if inhaled

### 2.2 GHS label elements, including precautionary phrases:

#### Labeling in accordance with NOM-018-STPS-2015.

#### Hazard-determining components for labeling:

#### Symbol(s)

No pictogram

**Word of caution: CAUTION**

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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 2 of 9</b>

#### **Hazard statements**

H303 May be harmful if swallowed.  
H313 May be harmful in contact with skin  
H333 May be harmful if inhaled

#### **Cautionary advice.**

P101 If medical advice is needed: keep container and product label on hand.

P102 Keep out of reach of children  
P103 Read label before use  
P210 Keep away from heat, sparks, open flames, hot surfaces and other sources of ignition.

P233 Keep container tightly closed.  
P234 Keep only in original container.  
P262 Avoid contact with eyes, skin or clothing.  
P264 Wash hands thoroughly after handling.  
P271 Use only outdoors or in a ventilated area.  
P280 Wear protective equipment for face, eyes and skin.

P301+P330 In case of ingestion, rinse mouth.  
P302+P352 In case of skin contact, wash with plenty of water.  
P304+P340 In case of inhalation, remove person to fresh air and keep in a position that makes it easier to breathe.

P305+P351 In case of contact with eyes, rinse thoroughly with water for several minutes.

P306+P360 In case of contact with clothing, immediately flush contaminated clothing and skin with plenty of water before removing clothing.

P370+P376 In case of fire, stop the leak if it can be done safely.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P410 Protect from sunlight.  
P411 Store at a temperature not exceeding 25°C. Disposal:  
P501 Dispose of contents and container in accordance with local regulations.

#### **2.3 Other hazards that do not contribute to the classification.**

No hazards identified

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	SAFETY DATA SHEET (SDS) RYU	
		Edition 1-00
		Page 3 of 9

### SECTION 3. COMPOSITION/INFORMATION ON COMPONENTS

#### 3.1 Mixtures

##### Type of formulation

Liquid

##### Guaranteed composition

*Pseudomonas fluorescens* content  $1 \times 10^5$  CFU/ml; *Azotobacter spp* content  $1 \times 10^5$  CFU/ml; *Bacillus spp.* content  $1 \times 10^5$  CFU/ml.

##### Guaranteed composition

NAME	CAS No.	CONCENTRATION
<i>Pseudomonas fluorescens</i> ( $1 \times 10^5$ cfu/ml)	N/A	33.30%
<i>Azotobacter spp</i> ( $1 \times 10^5$ cfu/ml)	N/A	16.60%
<i>Bacillus spp</i> ( $1 \times 10^5$ cfu/ml)	N/A	33.30%

##### Other information.

No information available.

N/A: : Not Applicable

N/D: Not Available

### SECTION 4. FIRST AID

#### 4.1 Description of first aid

##### General recommendation

Remove the intoxicated person from the source of exposure and place him/her in a well ventilated area. Keep him/her warm and wrapped up well. Seek immediate medical attention. Keep patient warm and at rest.

##### Inhalation

Take the victim to a well-ventilated place.

##### Skin contact

Flush with plenty of water

##### Eye contact

Flush with plenty of water.

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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 4 of 9</b>

**Ingestion** Induce vomiting immediately and get them to drink plenty of water. If necessary provide medical assistance for any complications that may arise.

#### 4.2 Main symptoms and acute and chronic effects

**Signs and Symptoms**

**Eyes:** May cause irritation.  
**Skin:** May cause irritation.  
**Inhalation:** May cause respiratory tract irritation.  
**Ingestion:** May cause intestinal spasms, diarrhea, nausea, and vomiting and abdominal pain.  
**Exacerbated by overexposure:** May cause hypersensitivity.

#### 4.3 Instructions for any medical care and special treatment to be administered immediately.

**Antidote and treatment** Symptomatic treatment. Consult a physician in all cases. In case of ingestion give the Safety Data Sheet and the product label to the physician.

### SECCIÓN 5. FIRE SAFETY MEASURES

#### 5.1 Extinguishing agents.

**Suitable** Use any convenient means to extinguish the fire such as CO<sub>2</sub>, water, chemical powder, foam and others.

#### 5.2 Specific hazards arising from the substance or mixture

**Fire protection measures:** Not considered a flammable product.  
**Risk of fire, flammability of the product:** Non-flammable.  
**Flash point:** N/A.  
**Flammable limits:** Not considered flammable.  
**Products of combustion:** N/D.  
**Fire risk present with other substances:** No ignition hazard when in contact with any known substance but do not mix with any flammable substance.  
**Explosion hazard:** Not considered a flammable product.  
**Risk of explosion due to static discharge:** No risk of explosion due to static discharge.  
**Risk of fire due to mechanical impact:** No risk of explosion due to mechanical impact. When ignited, it produces fumes that are slightly toxic to the environment.

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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 5 of 9</b>

### 5.3 Recommendations for firefighting personnel

**Special protective equipment for firefighting personnel**

Use firefighting equipment.

**Additional information**

Evacuate personnel and move away from the path of the fire.

## SECTION 6. CONTROL MEASURES IN CASE OF ACCIDENTAL SPILLS OR LEAKS.

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### 6.1 Personal precautions, protective equipment and emergency procedures.

**Safe handling precautions**

Wear safety glasses. Wear appropriate personal protective equipment (full coverall). Use plastic gloves. Wear safety shoes. Wear a face shield or safety mask.

### 6.2 Environmental precautions

Does not produce any effect on the environment. When ignited it produces fumes that are slightly toxic to the environment

### 6.3 Containment and cleaning methods and materials

**Cleaning methods**

Use absorbent material, wash with water and detergent and disinfect the area.

## SECTION 7. HANDLING AND STORAGE

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### 7.1 Safe handling precautions

**Safe handling recommendations**

Store the product in a cool, sheltered and ventilated place, keep out of reach of children and do not allow it to come into contact with animals or food.

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

**Technical requirements for storerooms and containers**

Store the product in cool, covered and ventilated places, do not leave within reach of children and do not allow it to come into contact with animals or food.

**Information for joint storage**

Not compatible with bactericides and materials based on copper and sulfur.

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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 6 of 9</b>

## SECTION 8. EXPOSURE CONTROLS/INDIVIDUAL PROTECTION

### 8.1 Control parameters

N/D

### 8.2 Exposure controls

#### Personal Protection

In normal usage and handling conditions refer to the instructions on the label and/or package insert. In all other cases the following recommendations should be followed.

<b>Respiratory protection</b>	Use a mask or face shield.
<b>Hand protection</b>	Use plastic gloves.
<b>Eye protection</b>	Wear safety glasses.
<b>Skin and body protection</b>	Wear appropriate personal protective equipment (full coverall). Wear safety shoes.
<b>General protective and hygienic measures</b>	Clean and maintain personal protective equipment according to the manufacturer's instructions. Store and wash personal protective equipment separately from other clothing.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Essential physical and chemical properties

<b>Shape</b>	Liquid
<b>Color</b>	Brown
<b>Odor</b>	Sour
<b>pH</b>	6.07-7.70
<b>Flammability</b>	N/A
<b>Vapour pressure</b>	N/D
<b>Relative density</b>	1.000-1.009 g/ml
<b>Solubility in water</b>	Yes
<b>Flash point</b>	N/D
<b>Viscosity</b>	29.2-88.6 cp-s <sup>2</sup>

### 9.2 Other information

N/D

N/A: : Not Applicable

N/D: Not Available

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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 7 of 9</b>

## SECTION 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Stable under normal environmental conditions and not considered reactive.
<b>10.2 Chemical stability</b>	Becomes unstable at conditions over 45°C.
<b>10.3 Possibility of harmful reactions</b>	Not compatible with bactericides and copper and sulfur based materials. Does not polymerize.
<b>10.4 Conditions to avoid</b>	Do not store above 45°C.
<b>10.5 Incompatible materials</b>	Not compatible with bactericides and materials based on copper and sulfur.
<b>10.6 Hazardous decomposition products</b>	The product tends to decompose if not stored properly and at temperatures above 45°C (113°F).

## SECTION 11. TOXICOLOGY INFORMATION

### 11.1 Information on toxicological effects

<b>Acute oral toxicity</b>	N/A
<b>Acute inhalation toxicity</b>	N/D
<b>Acute dermal toxicity</b>	N/D
<b>Skin irritation (rabbit)</b>	N/D
<b>Eye irritation (rabbit)</b>	N/D
<b>Sensitization (guinea pig)</b>	N/D

### Chronic Toxicity/Effects

<b>Symptoms</b>	See section 4.2.
<b>Mutagenicity</b>	No mutagenic effects
<b>Neurological effects</b>	N/A
<b>Reproductive Toxicity</b>	Not known to cause reproductive system problems.

N/A: : Not Applicable

N/D: Not Available

## SECTION 12. ECOTOXICOLOGICAL INFORMATION

### 12.1 Toxicity

<b>Toxicity to fish</b>	N/D
<b>Toxicity to invertebrates</b>	N/D
<b>Toxicity to aquatic plants</b>	N/D

### 12.2 Persistence and degradability

<b>Biodegradability</b>	N/A
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### 12.3 Bio-accumulation potential

<b>Bioaccumulation</b>	N/D
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	<b>SAFETY DATA SHEET (SDS)</b> <b>RYU</b>	
		<b>Edition 1-00</b>
		<b>Page 8 of 9</b>

#### 12.4 Mobility in soil

**Mobility in soil** N/D

#### 12.5 Other adverse effects

**Additional ecological information** No effect on the environment

N/A: : Not Applicable

N/D: Not Available

### SECTION 13. DISPOSAL INFORMATION

#### 13.1 Disposal of the substance (waste):

During product handling, avoid washing or pouring product residues or empty containers into soil, rivers, lagoons, streams, dams, canals or water reservoirs to prevent contamination.

Handle empty containers and product residues in accordance with the provisions of the General Law for the Prevention and Integral Management of Waste, its Regulations or the Empty Container Management Plan, registered with SEMARNAT.

In case of spills, wear personal protective equipment and recover the spilled product with some absorbent material (e.g., earth or clay), collect the waste in an airtight container and take it to the nearest authorized hazardous waste collection center. Triple wash the empty container and pour the rinsing water into the tank or container where the application mixture is prepared.

### SECTION 14. TRANSPORTATION INFORMATION

In accordance with NOM-002-SCT/2011

#### 14.1 UN Number

Not regulated as a hazardous product.

#### 14.2 Official Transport Designation of the United Nations

N/A

#### 14.3 Transport hazard class(es)

Ground Transportation DOT: This product is not classified as hazardous for transport. Maritime Transportation IMDG: This product is not classified as dangerous for transport. Air Transportation ICAO/ IATA: This product is not classified as hazardous for transport.

#### 14.4 Packaging group

#### 14.5 Environmental hazard label

N/D

#### 14.6 Hazard identification number.

Not considered a hazardous product.

N/A

N/A: : Not Applicable

N/D: Not Available

### SECTION 15. REGULATORY INFORMATION (MEXICO)

NOM-182-SSA1-2010. Labeling of plant nutrients.

NOM-002-SCT/2011: List of most commonly transported hazardous substances and materials.

NOM-018-STPS-2015, Harmonized system for the identification and communication of hazards and risks from hazardous chemicals in the workplace.

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	SAFETY DATA SHEET (SDS) RYU	
		Edition 1-00
		Page 9 of 9

## SECTION 16. OTHER INFORMATION

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### Text of the hazard statements mentioned in Section 2

- The information is believed to be correct, but it is not comprehensive and is to be used only as a reference, which is based on the current knowledge of the chemical or mixture and is applicable to the appropriate safety precautions for the product.
- Considering that the use of this information and the products is beyond the manufacturer's control, the company assumes no liability in this regard. Determining the conditions of safe use of the product is the obligation of the user.

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