

	SAFETY DATA SHEET (SDS) ARDYAN	
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SECTION 1. PRODUCT AND MANUFACTURER IDENTIFICATION.

1.1 Product Identification

Trade Name: ARDYAN
Name of the Active Ingredient: Jasmonates; Chitosan.

1.2 Identified uses of the substance or mixture

Use: Fungicide

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
Tel.: (55) 5089-1500 or 01-800-0211-568

Telephone number in case of emergency: 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	Category 5 May be harmful if swallowed
Acute dermal toxicity H313	Category 5 May be harmful if in contact with the skin

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

Hazard statements

H303	May be harmful if swallowed
H313	May be harmful in contact with skin

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Cautionary advice

P101	If medical advice is needed: keep the container and the product label at 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 and 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 breathing easier.
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 leak if it can be done without risk.
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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SECTION 3. COMPOSITION/INFORMATION ON COMPONENTS

3.1 Mixtures

Type of formulation

Emulsifiable liquid

Active ingredients

Jasmonates; Chitosan

Formulation components

NAME	CAS No.	CONCENTRATION
Jasmonates	N/A	0.5% equivalent to 6.50 g/L
Chitosan	9012-76-4	2.0% equivalent to 26 g/L

Other information.

No information available.

N/A: No Aplica

N/D: No Disponible

SECTION 4. FIRST AID

4.1 Description of first aid

General recommendation	Remove the victim from the source of exposure by placing him/her in a well ventilated area and keeping him/her warm. Seek immediate medical attention. Keep patient warm and at rest.
Inhalation	Move victim to a ventilated area.
Contact with the skin	Flush with plenty of water.
Contact with the eyes	Flush with plenty of water.
Ingestion	Provoke vomiting immediately and drink plenty of water. Seek medical attention in case of any complications.

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4.2 Main acute and chronic symptoms and effects

Signs and symptoms	Eyes: May cause irritation.
	Skin: May cause irritation.
	Inhalation: May cause irritation of the respiratory tract.
	Ingestion: May cause intestinal spasms, diarrhea, nausea, vomiting and abdominal pain.
	Aggravated by overexposure: May cause hypersensitivity.

4.3 Indication of any medical care and special treatments to be immediately administered

Antidote and treatment	Treat symptomatically. Consult a physician in all cases. In case of ingestion provide the physician with the Safety Data Sheet and product label.
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SECCIÓN 5. FIRE SAFETY MEASURES

5.1 Extinguishing agents.

Suitable	Use any convenient means to extinguish the fire such as CO ₂ , water, chemical powder, foam and others.
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5.2 Specific hazards arising from the substance or mixture

Fire protection measures: Not considered a flammable product.
Fire hazard, flammability of the product: Not flammable.
Flash point: N/A.
Flammable limits: Not considered flammable.
Products of combustion: N/A.
Fire hazard present with other substances: No ignition hazard when in contact with any known substance but should not be mixed with any flammable substance.
Explosion hazard: Not considered a flammable product.
Explosion hazard 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. On ignition it produces fumes that are slightly toxic to the environment.

5.3 Recommendations for firefighting personnel

Special protective equipment for firefighting personnel	Use firefighting equipment.
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Additional information

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

N/A: No aplica
N/D: No disponible

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

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

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, keep out of reach of children and away from animals and food.

Information for joint storage

It is compatible with most agrochemicals; however, it is suggested to make tests before making the final mixture.

SECTION 8. EXPOSURE CONTROLS/INDIVIDUAL PROTECTION

8.1 Control parameters

N/D

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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.

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

N/A: No applica
N/D: No disponible

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Essential physical and chemical properties

Shape	Liquid
Color	Brownish-yellow
Odor	Herbal
pH	6.50-7.76
Flammability	N/A
Vapour pressure	N/D
Relative density	0.967-0.998 g/ml
Solubility in water	Yes
Flash point	N/D
Viscosity	81.2-100.2 cp-s ²

9.2 Other information

N/D

N/A: No applica
N/D: No disponible

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SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under normal environmental conditions and not considered reactive.
10.2 Chemical stability	Becomes unstable at temperature conditions over 45°C.
10.3 Possibility of harmful reactions	Compatible with most agrochemicals; however, testing is suggested before final mixing. Polymerization hazard: Does not polymerize.
10.4 Conditions to avoid	Do not store at temperatures higher than 45°C.
10.5 Incompatible materials	Compatible with most agrochemicals; however, testing is suggested before final mixing.
10.6 Hazardous decomposition products	The product tends to decompose if not properly stored or exposed to temperatures higher than 45°C (113°F).

SECTION 11. TOXICOLOGY INFORMATION

11.1 Information on toxicological effects

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

Chronic Toxicity/Effects

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

N/A: No aplica
N/D: No disponible

SECTION 12. ECOTOXICOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish	N/D
Toxicity to invertebrates	N/D
Toxicity to aquatic plants	N/D

12.2 Persistence and degradability

Biodegradability	N/A
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12.3 Bio-accumulation potential

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Bioaccumulation	N/D
12.4 Mobility in Soil	
Mobility in soil	N/D
12.5 Other adverse effects	
Additional ecological information	No effect on the environment
<small>N/A: No aplica N/D: No disponible</small>	

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	N/D
14.5 Environmental hazard label	Not considered a hazardous product.
14.6 Hazard identification number.	N/A
<small>N/A: No aplica N/D: No disponible</small>	

ION 15. REGULATORY INFORMATION (MEXICO)

NOM-232-SSA1-2009. Pesticides: Establishing the requirements for packaging, packing and labeling of technical grade products for agricultural, forestry, livestock, gardening, urban, industrial and domestic use.

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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SECTION 16. OTHER INFORMATION

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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