

In accordance with Globally Harmonized System of
Classification and Labelling of Chemicals (GHS)- Chapter 1.5
and Annex 4

SAFETY DATA SHEET

Product: JIMO Ácaros e Pulgas Aerossol

Revision: 04

Date: 05/16/2024

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1 - IDENTIFICATION

GHS Product identifier:	JIMO Ácaros e Pulgas Aerossol
Other means of identification:	41271
Recommended use of the chemical:	Insecticide.
Specific restrictions on use:	There are not known restrictions on use.
Supplier's details:	Jimo Química Industrial Ltda. Address: Rua Ítalo Raffo 693 - Distrito Industrial, CEP: 94930-240 - RS - Brasil. Phone number: +55 51 3470 67 55 E-mail: jimo@jimo.com.br
Emergency phone number:	+55 51 3470 67 55 / 0800 051 41 46

2 - HAZARD IDENTIFICATION

Classification of the substance or mixture:	Aerosols - Category 2; Serious eye damage/eye irritation - Category 2A; Hazardous to the Aquatic Environment - Acute Hazard - Category 1; Hazardous to the Aquatic Environment - Chronic Hazard - Category 3.
Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Pictograms:



Signal word:	WARNING
Hazard statement(s):	H223 Flammable aerosol. H229 Pressurized container: may burst if heated. H319 Causes serious eye irritation. H400 Very toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.
Precautionary statement(s):	PREVENTION: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 Do not spray on an open flame or other ignition source. P251 Do not pierce or burn, even after use. P264 + P265 Wash hands thoroughly after handling. Do not touch eyes. P273 Avoid release to the environment. P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection. RESPONSE TO EMERGENCY: P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P337 + P317 If eye irritation persists: Get medical help.
P391 Collect spillage.**STORAGE:**

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

DISPOSITION:

P501 Dispose of contents and container in accordance with local regulations.

Other hazards which do not result in classification: The product has no other hazards.

3 - COMPOSITION/INFORMATION ON INGREDIENTS**MIXTURE**

Components contributing to the hazard:	Isopropyl Alcohol (CAS 67-63-0): 30 - 40 %; Liquefied Petroleum Gas (LPG) (CAS 68476-85-7): 30 - 40 %; Ethyl alcohol (CAS 64-17-5): 5 - 10 %; D-phenothrin (CAS 26002-80-2): 0.1 - 1 %; Sodium nitrite (CAS 7632-00-0): 0.1 - 1 %; Pyriproxyfen (CAS 95737-68-1): 0.01 - 1 %.
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4 - FIRST-AID MEASURES**Description of necessary first-aid measures**

Inhalation:	Gases and vapors can cause dizziness or suffocation. Remove victim to fresh air and keep in a position that does not obstruct breathing. Monitor respiratory function. If the victim is breathing hard, give oxygen. If necessary, apply artificial respiration. Consult a doctor. Bring this document.
Skin:	In case of contact of the product in pressurized form with the skin, injury or frostbite may occur. Wash exposed skin with a sufficient amount of water. Clothing that adheres to the skin should be thawed with warm water before being removed. Consult a doctor. Bring this document.
Eye:	In case of contact with the eyes of the product in pressurized form, injury or frostbite may occur. Flush eyes with a sufficient amount of water, keeping eyelids open. If wearing contact lenses, remove them if it is easy. Keep rinsing. Consult a doctor. Bring this document.
Ingestion:	Wash the victim's mouth with plenty of water. Never give anything by mouth to an unconscious person. If you feel unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this document.
Most important symptoms/effects, acute and delayed:	Causes serious eye irritation with redness and pain.
Indication of immediate medical attention and special treatment needed, if necessary:	Avoid contact with the product when helping the victim. If necessary, symptomatic treatment should include, above all, supportive measures such as correction of hydro electrolytic and metabolic disorders and respiratory assistance. In case of skin contact, do not rub the affected area.

5 - FIRE-FIGHTING MEASURES

Extinguishing media:	Appropriate: carbon dioxide (CO ₂), water mist and dry chemical powder. Inappropriate: water directly onto the burning material.
Specific hazards arising from the chemical:	Combustion of the material or its packaging can form irritating and toxic gases such as carbon monoxide and dioxide.

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The combustion of the chemical product or its packaging can form irritating and toxic gases such as carbon monoxide and dioxide. Very dangerous when exposed to excessive heat or other sources of ignition such as: sparks, open flames or flames from matches and cigarettes, welding operations, pilot lamps and electric motors. Gases can be denser than air and can accumulate in low-lying or confined areas, such as storm drains and basements. They can travel long distances, causing flame regression or new fires in both open and confined environments. Containers may explode if heated.

Special protective actions for fire-fighters: Do not extinguish a gas leak fire unless the leak can be contained. If cargo is involved in fire, isolate and evacuate the area within a minimum radius of 1600 meters. Use self-contained respiratory protection equipment (SCBA) with positive pressure and complete protective clothing. Containers and tanks involved in the fire must be cooled with water mist.

6 - ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

For non-emergency personnel: Isolate the leakage from sources of ignition. Keep unauthorized persons out of the area and away from windows. Stop the leakage if it can be done without risk. Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled product without proper clothing. Avoid exposure to the product. Stay in a safe place, with the wind at your back. Use personal protective equipment as described in section 8.

For emergency responders: Wear complete PPE with safety glasses, safety gloves, suitable protective clothing and closed shoes. In case of leakage, where exposure is high, it is recommended to use a suitable respiratory protection mask.

Environmental precautions: Avoid that the spilled product reaches waterways or sewage system.

Methods and materials for containment and cleaning up: For the gas phase: Release contents slowly into the atmosphere. Stay downwind. Do not pour water into the spill or source of the leak. Due to the dispersion of the material in the environment, it is recommended that the area be ventilated until the area is cleared. All equipment used to contain the material must be grounded. Do not dispose of used or damaged containers directly into the environment or into the sewage system.
For the liquid phase: Use water mist to reduce material dispersion. Use natural or spill containment barriers. Collect spilled material and place in appropriate containers. Adsorb the remaining material with dry sand, earth, vermiculite, or any other inert product. Place the adsorbed material in appropriate containers and remove them to a safe location. Use non-sparking tools to collect absorbed material. For final disposal, proceed as per Section 13 of this document.

7 - HANDLING AND STORAGE**Precautions for safe handling**

Precautions for safe handling: Handle in a well ventilated area or with general system of ventilation/local exhaust. Avoid gases and aerosols formation. Avoid exposure to the product, since the effects may not be felt immediately. Use personal protective equipment as described in section 8. Avoid contact with incompatible materials.

General hygiene: Wash hands and face thoroughly after handling and before eating, drinking, smoking, or using the toilet. Contaminated clothing should be changed and washed before reuse. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities

Technical measures for prevention of fire and explosion: Keep away from heat, sparks, open flame, and hot surfaces. Do not smoke. Keep the container tightly closed. Ground the container vessel and product receiver during transfers. Only use non-sparking tools. Avoid the accumulation of electrostatic charges. Use explosion-proof electrical, ventilation, and lighting equipment.

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Conditions for safe storage, including any incompatibilities: Store in a dry, well-ventilated place away from sunlight. Keep the container closed. It is not necessary addition of stabilizers and antioxidants to ensure the durability. Keep away from incompatible materials.

Packaging compatibilities: Similar to the original packaging.

Inadequate packaging materials: There are not known unsuitable material.

8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit: The values below apply to workplaces.

- Isopropyl Alcohol:

OSHA - PEL - TWA: 400 ppm (980 mg/m³) (29 CFR 1910.1000 Table Z-1) (CFR);

NIOSH - REL - TWA: 400 ppm (980 mg/m³);

NIOSH - REL - STEL: 500 ppm (1225 mg/m³);

ACGIH - TLV - TWA: 200 ppm;

ACGIH - TLV - STEL: 400 ppm.

- Liquefied Petroleum Gas (LPG):

OSHA - PEL - TWA: 1000 ppm (1800 mg/m³) (29 CFR 1910.1000 Table Z-1) (CFR);

NIOSH - REL - TWA: 1000 ppm (1800 mg/m³);

ACGIH - TLV - TWA: (AF; D; EX).

- Ethyl alcohol:

OSHA - PEL - TWA: 1000 ppm (1900 mg/m³) (29 CFR 1910.1000 Table Z-1) (CFR);

NIOSH - REL - TWA: 1000 ppm (1900 mg/m³);

ACGIH - TLV - STEL: 1000 ppm.

CFR: See mentioned item in OSHA CFR;

D: Simple asphyxiant;

EX: Explosion hazard: the substance is a flammable asphyxiant or excursions above the TLV® could approach 10% of the lower explosive limit;

AF: See Appendix F: Minimal Oxygen Content.

Biological limit:

- Isopropyl Alcohol:

ACGIH - BEI: Determinant: Acetone in urine. Sampling Time: End of shift at end of workweek. Index: 40 mg/L. Notation: Ns, B.

B: The determinant may be present in biological specimens collected from subjects who have not been occupationally exposed, at a concentration which could affect the interpretation of the results. Such background concentrations are incorporated in the BEI value;

Ns: The determinant is nonspecific, since it is also observed after exposure to other chemicals.

Other limits and values: Not established.

Appropriate engineering controls: A risk assessment is recommended to define the engineering control measures necessary to eliminate or minimize the risk. These measures help to reduce exposure to the product. Maintain atmospheric concentrations of the constituents of the material below occupational exposure limits indicated.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection: Safety glasses.

Skin protection: Closed shoes and suitable protective clothing. Appropriate protective gloves.

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Respiratory protection: A risk assessment should be performed for proper definition of respiratory protection, in view of the material use conditions.

Thermal hazards: It does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Aspect: Liquid, compressed.

Color: Colorless.

Odour: Characteristic.

Melting point/freezing point: Not applicable.

Boiling point or initial boiling point and boiling range: Not applicable.

Flammability: Not available.

Lower and upper explosion limit/flammability limit: Not applicable.

Flash point: 22 °C (71.6 °F) - Closed cup.

Auto-ignition temperature: Not available.

Decomposition temperature: Not applicable.

pH: 8 to 9.

Kinematic viscosity: Not applicable.

Solubility(ies): Miscible in water.

Partition coefficient n-octanol/water (log value): Not available.

Vapour pressure: Not applicable.

Relative vapour density: Not applicable.

Density and/or relative density: Relative density: 0.85 to 0.9 at 20 °C (68 °F).

Particle characteristics: Not applicable.

Other information: Not applicable.

10 - STABILITY AND REACTIVITY

Reactivity: Reactivity is not to be expected under normal conditions of temperature and pressure.

Chemical stability: Stable under normal temperature and pressure conditions.

Possibility of hazardous reactions: There are not known hazardous reactions with the material.

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Conditions to avoid: High temperatures. Contact with incompatible materials.

Incompatible material: Acetyl chloride, alkaline compounds, alkaline metals, bromine pentafluoride, calcium hypochlorite, chlorates, chlorine, chromic acid, hydrogen peroxide, mercuric nitrate, nickel, nitric acid, oxidizing agents, oxygen, perchloric acid, peroxides, silver nitrate, strong oxidizing agents and sulphuric acid.

Hazardous decomposition products: No dangerous decomposition products are known.

11 - TOXICOLOGICAL INFORMATIONAcute toxicity: Product not classified as acute toxic.
ATEmix Vapours (4h): > 20 mg/L.
ATEmix Dusts and mists (4h): > 5 mg/L.
LD₅₀ Oral (rats): >2000 mg/kg.
ATEmix Dermal: > 5000 mg/kg.

Skin corrosion/irritation: It is not expected to cause skin irritation.

Serious eye damage/irritation: Causes serious eye irritation with redness and pain.

Respiratory or skin sensitization: It is not expected to present respiratory or skin sensitization.

Germ cell mutagenicity: It is not expected to show mutagenicity in germ cells.

Carcinogenicity: It is not expected to be carcinogenic.

Reproductive toxicity: It is not expected to be reproductively toxic.

STOT - Single exposure: It is not expected to exhibit specific target organ toxicity by single exposure.

STOT - Repeated exposure: It is not expected to exhibit specific target organ toxicity on repeated exposure.

Aspiration hazard: It is not expected to present an aspiration hazard.

12 - ECOLOGICAL INFORMATIONToxicity: Very toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

Information regarding to:

- D-phenothrin:LC₅₀ (*Oncorhynchus mykiss*, 96 h): 0.0027 mg/L;EC₅₀ (*Daphnia magna*, 48 h): 0.0043 mg/L.- Sodium nitrite:LC₅₀ (*Oncorhynchus mykiss*, 96 h): 0.56 - 1.78 mg/L;EC₅₀ (*Daphnia magna*, 48 h): 12.5 - 100 mg/L.- Pyriproxyfen:EC₅₀ (*Daphnia magna*, 48 h): 0.075 mg/L;ErC₅₀ (Green algae, 72 h): 0.11 mg/L;LC₅₀ (*Cyprinus carpio*, 96 h): 0.45 mg/L.

Persistence and degradability: It has persistence and is not considered rapidly degradable.

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- Ethyl alcohol:
Low degradation and high persistence are expected.
- Pyriproxyfen:
The product is not readily biodegraded.

Bioaccumulative potential: Presents low bioaccumulative potencial in aquatic organisms.
Information regarding to:
- Ethyl alcohol:
log K_{ow} : 0.31.

Mobility in soil: Not determined.

Other adverse effects: No other environmental effects known.

13 - DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product.
Keep product residues in their original packaging and properly closed. Disposal must be carried out as established for the product.

14 - TRANSPORT INFORMATION

Road: UN - United Nations: Model Regulations:
• Recommendations on the Transport of Dangerous Goods.

UN number: 1950

Proper shipping name: AEROSOLS

Primary risk class or division: 2.1

Subsidiary risk class or division: NA

Packing group: NA

Environmental hazards: The product is considered dangerous for the environment for land transport.

Railway regulations: COTIF - Convention concerning International Carriage by Rail:
• Appendix C: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail.

UN number: 1950

Proper shipping name: AEROSOLS

Primary risk class or division: 2.1

Subsidiary risk class or division: NA

Packing group: NA

Environmental hazards: The product is considered dangerous for the environment in rail transport.

Sea: IMO - International Maritime Organization:
• IMDG Code - International Maritime Dangerous Goods Code.

UN number: 1950

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Proper shipping name:	AEROSOLS
Primary risk class or division:	2.1
Subsidiary risk class or division:	NA
Packing group:	NA
Environmental hazards:	The product is considered a marine pollutant.
EmS:	F-D,S-U
Air:	IATA - International Air Transport Association: • DGR - Dangerous Goods Regulation.
UN number:	1950
Proper shipping name:	AEROSOLS
Primary risk class or division:	2.1
Subsidiary risk class or division:	NA
Packing group:	NA
Environmental hazards:	The product is considered dangerous for the environment for air transport.
Special precautions for user:	Not applicable.
Maritime transport in bulk according to IMO instruments:	Consult regulations: • International Maritime Organization: MARPOL: Articles, protocols, annexes, unified interpretations of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, consolidated edition. IMO, London, 2006; • International Maritime Organization: IBC code: International code for the construction and equipment of shipping carrying dangerous chemicals in bulk: With Standards and guidelines relevant to the code. IMO, London, 2007.

15 - REGULATORY INFORMATION

Convention concerning Safety in the use of Chemicals at Work (Convention 170) - International Labour Organization, 1990.

16 - OTHER INFORMATION

This document was prepared based on current knowledge about the proper product handling and under normal conditions of use, in accordance with the application specified on the packaging. Any other use of the product involving their combination with other products, and use various forms of those indicated, are the responsibility of the user. Warns that the handling of any chemical substance requires the prior knowledge of its hazards for the user. In the workplace it is for the user company's product promotes training of its collaborators about the possible risks arising from exposure to the chemical.

Change control:

Version	Manufacture date	Changes
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04	05/16/2024	Change in section: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16.
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Abbreviations:

ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
BEI - Biological Exposure Index;
CAS - Chemical Abstracts Service;
EC - European Community;
EC₅₀ - Effective concentration of substance that causes 50 % of the maximum response;
EEC - European Economic Community;
ErC₅₀ - Effective concentration that results in a 50% reduction in the growth rate;
K_{ow} - Octanol-water partition coefficient;
LC₅₀ - Lethal Concentration 50%;
LD₅₀ - Lethal Dose 50%;
NIOSH - National Institute for Occupational Safety and Health;
OSHA - Occupational Safety & Health Administration;
PEL - Permissible Exposure Limit;
REL - Recommended Exposure Limit;
STEL - Short Term Exposure Limit;
TLV - Threshold Limit Value;
TWA - Time Weighted Average;
UN - United Nations.

Bibliographic references:

ACGIH - AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIALS HYGIENISTS. TLVs® and BEIs®: Based on the Documentation of the Threshold Limit Values (TLVs®) for Chemical Substances and Physical Agents & Biological Exposure Indices (BEIs®). Cincinnati-USA, 2023.

GHS - GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS. 10th rev. ed. New York and Geneva: United Nations, 2023.

REACH - REGISTRATION, EVALUATION, AUTHORIZATION AND RESTRICTION OF CHEMICALS. Commission Regulation (EC) No 1272/2008 of December 2008 amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals. Available at: < <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:353:0001:1355:en:PDF> >. Access in: May. 2024.