

SAFETY DATA SHEET

Product: JIMO Espiral

Revision: 04

Date: 12/07/2023

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1 - IDENTIFICATION

GHS Product identifier:	JIMO Espiral
Recommended use of the chemical:	Mosquito repellent.
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 Email: 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:	Hazardous to the Aquatic Environment - Acute 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:	Not applicable.
Signal word:	Not applicable
Hazard statement(s):	H402 Harmful to aquatic life.
Precautionary statement(s):	PREVENTION: P273 Avoid release to the environment. DISPOSITION: P501 Dispose of contents and container in accordance with local regulations.
Other hazards which do not result in classification:	The product does not have other hazards.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Components contributing to the hazard:	Metofluthrin (CAS 240494-70-6): 0.0010 - 0.0100 %.
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4 - FIRST-AID MEASURES

Description of necessary first-aid measures

Inhalation:	Remove the victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, contact a TOXICOLOGICAL INFORMATION CENTER or doctor. Take this MSDS.
Skin:	Wash with soap and water in abundance. If skin irritation: Consult a doctor. Take this MSDS.
Eye:	Rinse thoroughly with water for several minutes. In case of contact lenses, remove them, if it is easy.

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	If eye irritation persists: consult a doctor. Take this MSDS.
Ingestion:	Wash the victim's mouth with water. If you feel unwell, contact a TOXICOLOGICAL INFORMATION CENTER or doctor. Take this MSDS.
Most important symptoms/effects, acute and delayed:	No symptoms and effects are expected after exposure to the material.
Indication of immediate medical attention and special treatment needed, if necessary:	Avoid contact with the product while helping the victim. If necessary, symptomatic treatment must include, specially, support measures to correct electrolyte, metabolic disorders, and respiratory care. In case of contact with the skin does not rub the affected area.

5 - FIRE-FIGHTING MEASURES

Extinguishing media:	Appropriate: Compatible with all means of extinguishing. Inappropriate: water jet directly.
Specific hazards arising from the chemical:	The combustion of the chemical or its packaging may form toxic and irritant gases such as carbon monoxide and carbon dioxide.
Special protective actions for fire-fighters:	respiratory protection equipment standalone type (SCBA) with positive pressure and full protective clothing. Containers and tanks involved in the fire may be cooled with water fog.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Preventively remove all sources of ignition. Do not smoke. Avoid contact with the product. If necessary, 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:	Prevent spilled material reaches waterways or sewage system.
Methods and materials for containment and cleaning up:	Collect the product with a clean shovel or other instrument that does not disperse the product. Place the material in appropriate containers and remove them to a safe place. For disposal proceed pursuant to Section 13 of this MSDS. There is no distinction between the actions of large and small leaks for this product.

7 - HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling:	Handle in a ventilated area or general ventilation system / local exhaust ventilation. Avoid contact with incompatible materials. Avoid contact with skin, eyes and clothing. Avoid breathing product dust. Use personal protective equipment as indicated in Section 8.
General hygiene:	Wash your hands and face thoroughly after handling and before eating, drinking, smoking or using the toilet.

Conditions for safe storage, including any incompatibilities

Technical measures for prevention of fire and explosion:	It is expected that the product presents a danger of fire or explosion.
Conditions for safe storage, including any incompatibilities:	Store in ventilated and protected from heat location. Keep away from incompatible materials. Keep stored at room temperature not exceeding 35 ° C. It is not necessary addition of stabilizers and antioxidants to ensure the durability.

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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:	Not established.
Biological limit:	Not established.
Other limits and values:	Not established.
Appropriate engineering controls:	Promote direct mechanical ventilation and exhaust system to the outside environment. These measures help reduce exposure to product.

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

Eye/face protection:	Safety glass side shields.
Skin protection:	Define the use of skin and body protection based on workplace risk assessment. Appropriate protective gloves.
Respiratory protection:	A risk assessment should be performed for proper definition of respiratory protection, in view of the material use conditions.
Thermal hazards:	Does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Aspect:	Solid, spiral.
Color:	Green.
Odour:	Characteristic.
Melting point/freezing point:	Not available.
Boiling point or initial boiling point and boiling range:	Not available.
Flammability:	Not available.
Lower and upper explosion limit/flammability limit:	Not available.
Flash point:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
pH:	Not applicable.
Kinematic viscosity:	Not available.

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Solubility(ies):	Insoluble in water.
Partition coefficient n-octanol/water (log value):	Not available.
Vapour pressure:	Not available.
Relative vapour density:	Not available.
Density and/or relative density:	Not available.
Particle characteristics:	Not available.
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.
Conditions to avoid:	Elevated temperatures.
Incompatible material:	There are not known incompatible materials with the product.
Hazardous decomposition products:	There are no known hazardous decomposition products.

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic. ATEmix Dusts and mists (4h): > 5 mg/L. LD ₅₀ Oral (rats): > 5000 mg/kg. ATEmix Dermal: > 5000 mg/kg.
Skin corrosion/irritation:	It is not expected to cause skin irritation.
Serious eye damage/irritation:	It is not expected to cause eye irritation.
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.

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12 - ECOLOGICAL INFORMATION

Toxicity: Harmful to aquatic life.

Information regarding to:

- Metofluthrin:

LC₅₀ (*Oncorhynchus mykiss*, 96 h): 0.0012 mg/L;

LC₅₀ (*Lepomis macrochirus*, 96 h): 0.0027 mg/L;

LC₅₀ (*Cyprinus carpio*, 96 h): 0.00306 mg/L;

EC₅₀ (*Daphnia magna*, 48 h): 0.0047 mg/L;

ErC₅₀ (Green algae, 72 h): 37 mg/L.

Persistence and degradability: It is expected that the product presents persistence and it is not considered readily biodegradable.

Bioaccumulative potential: Presents low bioaccumulative potencial in aquatic organisms.

Mobility in soil: Not determined.

Other adverse effects: No other environmental effects known.

13 - DISPOSAL CONSIDERATIONS

Disposal methods

Treatment and disposal should be evaluated specifically for each product. federal, state and local laws should be consulted, among them: Law No. 12.305 of 02 August 2010 (National Policy on Solid Waste).

Keep the product remains in its original packaging and properly closed. Disposal should 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: Not classified as hazardous for the road transportation.

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

UN number: Not classified as dangerous for rail transport.

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

UN number: Not classified as hazardous for water transportation.

Environmental hazards: It's not considered a marine pollutant for transportation.

Air: IATA - International Air Transport Association:
• DGR - Dangerous Goods Regulation.

UN number: Not classified as dangerous for air transport.

Special precautions for user: Not applicable.

15 - REGULATORY INFORMATION

Federal Decree No. 2657 of 3 July 1998.

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

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Ordinance No. 229, of May 24, 2011 - Changes to Regulatory Standard 26
ABNT-NBR 14725: 2012.

16 - OTHER INFORMATION

This MSDS was prepared based on current knowledge about the proper handling of the product under normal conditions of use, according to the application specified on the packaging. Any other use of the product involving its combination with other materials, as well as ways to use several of those mentioned, are the user's responsibility. Warns is that the handling of any chemical substance requires prior knowledge of its hazards for the user. In the workplace it is for the user company's product promotes training of its employees as the possible risks arising from exposure to chemical.

Change control:

Version	Manufacture date	Changes
04	12/07/2023	Change in composition. Change in section: 2, 9, 10, 11, 12 and 14.

Classification of the
substance or mixture: Health: 0
Flammability: 2
Instability: 0

Classification system
adopted: Hommel Diagram - National Fire Protection Association: NFPA 704

Classification of the
substance or mixture: Health: 0
Flammability: 0
Physical Hazard: 0

Classification system
adopted: National Paint & Coatings Association: NPCA
NFPA 704:



HMIS:

HEALTH	/	0
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		

Abbreviations:

ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
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;

Desde 1956



SDS

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LC₅₀ - Lethal Concentration 50%;

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: Dec. 2023.