

SAFETY DATA SHEET

Product: JIMO Lava Máquinas

Revision: 03

Date: 06/05/2025

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SECTION 1: IDENTIFICATION

GHS product identifier:	JIMO Lava Máquinas
Other means of identification:	97708
Recommended use of the chemical and restrictions on use:	Cleaning dishwashers.
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

SECTION 2: HAZARD IDENTIFICATION

Classification of the substance or mixture:	Acute Toxicity - Oral - Category 5; Acute Toxicity - Dermal - Category 5; Acute Toxicity - Inhalation - Category 4; Skin Corrosion/Irritation - Category 3; Serious eye damage/eye irritation - Category 2A; Respiratory Sensitization - Category 1; Reproductive Toxicity - Category 1B; 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:



Signal word: DANGER

Hazard statement(s):	H303 May be harmful if swallowed. H313 May be harmful in contact with skin. H316 Causes mild skin irritation. H319 Causes serious eye irritation. H332 Harmful if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H360 May damage fertility or the unborn child. H402 Harmful to aquatic life.
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Precautionary statement(s):	PREVENTION: P203 Obtain, read and follow all safety instructions before use. P233 Keep container tightly closed. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
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P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.
 P271 Use only outdoors or in a with adequate ventilation.
 P273 Avoid release to the environment.
 P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.
 P284 In case of inadequate ventilation wear respiratory protection.

RESPONSE TO EMERGENCY:

P301 + P317 IF SWALLOWED: Get medical help.
 P302 + P317 IF ON SKIN: Get medical help.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P317 Get medical help.
 P318 IF exposed or concerned, get medical advice.
 P332 + P317 If skin irritation occurs: Get medical help.
 P337 + P317 If eye irritation persists: Get medical help.
 P342 + P316 If experiencing respiratory symptoms: Get emergency medical help immediately.

STORAGE:

P403 Store in a well-ventilated place.
 P405 Store locked up.

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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Components contributing to the hazard:

Product identifier	CAS/EC	Concentration range (%)
Sodium carbonate	497-19-8	30 - 40
Sodium carbonate	497-19-8	10 - 20
Sodium perborate tetrahydrate	10486-00-7 234-390-0	5 - 10
Subtilisin	9014-01-1	1 - 5
Silicic Acid Sodium Salt	1344-09-8	1 - 5
Alpha-amylase	9000-90-2	1 - 5
Tetrasodium etidronate	3794-83-0 223-267-7	1 - 5
Citrus fragrance ¹	NA	0.1 - 1
Sodium metasilicate	10213-79-3	0.1 - 0.5

¹ It does not have a CAS number because it is a mixture not registered in the Chemical Abstract Service database.

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NA: Not applicable.

SECTION 4: FIRST-AID MEASURES

Description of necessary first-aid measures

Inhalation:	Remove victim to fresh air and keep in a position that does not obstruct breathing. If you feel unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this document.
Skin:	Wash exposed skin with sufficient amount of water to remove the product. Remove and isolate contaminated clothing and shoes. In case of skin irritation: Consult a doctor. Bring this document.
Eye:	Rinse carefully with water for several minutes. If wearing contact lenses, remove them if it is easy and keep rinsing. If eye irritation persists: 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 mild skin irritation with redness and dryness. Causes serious eye irritation with redness and pain. May cause allergy or asthma symptoms or breathing difficulties if inhaled with shortness of breath and tiredness. May be harmful if swallowed. May be harmful in contact with skin. Harmful if inhaled.
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.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	Suitable: carbon dioxide (CO ₂), foam, water mist and powder. Unsuitable: water jet directly.
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. Vapors can be denser than air and tend to accumulate in low-lying or confined areas such as storm drains and basements. Containers may explode if heated.
Special protective actions for fire-fighters:	Wear positive pressure self-contained breathing apparatus (SCBA) and full protective clothing. Containers and tanks involved in the fire must be cooled with water mist.

SECTION 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 away from the area. Stop the leakage if it can be done without risk. 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:	Collect the product with a clean shovel or another instrument that does not disperse the product. Place the adsorbed product in proper containers and remove it to a safe place. For final disposal, proceed according to Section 13 of this document.

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SECTION 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 dust 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:	It is not expected that the product presents a fire or explosion hazard.
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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Occupational exposure limit:	The values below apply to workplaces. - <u>Subtilisin</u> : ACGIH - TLV - Ceiling: 0.00006 mg/m ³ .
Biological limit:	No biological indicators of exposure are established.
Other limits and values:	No other limits and values are 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.
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.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid, in tablet.

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Colour:	Blue.
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:	10.5 to 11.49 ((1%)).
Kinematic viscosity:	Not available.
Solubility:	Soluble in water. Insoluble in organic solvents.
Partition coefficient n-octanol/water (log value):	Not available.
Vapour pressure:	Not available.
Density and/or relative density:	Not available.
Relative vapour density:	Not available.
Particle characteristics:	Not available.
Other information:	Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Reactivity is not to be expected under normal conditions of temperature and pressure.
Chemical stability:	Product stable under normal temperature and pressure conditions.
Possibility of hazardous reactions:	There are not known hazardous reactions with the material.
Conditions to avoid:	High temperatures. Contact with incompatible materials.
Incompatible materials:	Alkaline earth metals, alkaline metals, aluminum, ammonia, magnesium, metals, non metallic oxides, oxidizing agents, phosphorus oxides, salts of heavy metals, sodium hydroxide, Strong acids, strong base, strong basic amines, strong oxidizers, strong oxidizing agents and strong reducing agents.

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Hazardous
decomposition
products:

No dangerous decomposition products are known.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity: May be harmful if swallowed.
May be harmful in contact with skin.
Harmful if inhaled.
ATEmix Oral: 3685.117 mg/kg.
ATEmix Dermal: 3571.429 mg/kg.
ATEmix Dusts and mists (4h): 3.901 mg/L.

Information regarding to:

- Sodium carbonate:

LD₅₀ Oral (rats): 2800 mg/kg.

LD₅₀ Dermal (rabbits): 2000 mg/kg

- Sodium carbonate:

LD₅₀ Oral (rats): 4090 mg/kg.

LC₅₀ Dusts and mists (rats, 4h): 2.3 mg/L

- Sodium perborate tetrahydrate:

LD₅₀ Oral (rats): 1200 mg/kg

- Subtilisin:

ATEmix Oral: 3685.117 mg/kg.

- Silicic Acid Sodium Salt:

LD₅₀ Oral (rats): 3400 mg/kg.

LC₅₀ Dusts and mists (rats, 4h): 2.06 mg/L

- Tetrasodium etidronate:

LD₅₀ Oral (rats): 990 mg/kg.

Skin corrosion/irritation: Causes mild skin irritation with redness and dryness.

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

Respiratory or skin sensitization: It is not expected to cause skin sensitization.
May cause allergy or asthma symptoms or breathing difficulties if inhaled with shortness of breath and tiredness.

The ingredients Subtilisin and Alpha-amylase are classified as respiratory sensitizers and contribute to this product classification.

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

Carcinogenicity: It is not expected to be carcinogenic.

Reproductive toxicity: May damage fertility or the unborn child.

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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SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Harmful to aquatic life.
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.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product.
Keep the product remains in its original and properly closed containers. Disposal should be performed as established for the product.

SECTION 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.
Environmental hazards:	The product is not 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:	Not classified as dangerous for rail transport.
Environmental hazards:	The product is not considered dangerous for the environment in 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.
Environmental hazards:	The product is not considered dangerous for the environment for air transport.
Special precautions for user:	Not applicable.
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

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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.

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

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

SECTION 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
03	06/05/2025	Change in section: 2, 10, 11 and 12.

Abbreviations:

ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
CAS - Chemical Abstracts Service;
Ceiling - The concentration that should not be exceeded during any part of the working exposure;
EC - European Community;
EEC - European Economic Community;
IARC - International Agency for Research on Cancer;
LC₅₀- Lethal Concentration 50%;
LD₅₀- Lethal Dose 50%;
PBT - Persistent, bioaccumulative and toxic;
TLV - Threshold Limit Value;
UN - United Nations;
vPvB - Very Persistent and very Bioaccumulative.

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, 2025.

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 in: <http://eur-

Desde 1956



SDS

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

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