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

SAFETY DATA SHEET

Product: JIMO TBF Export 64

Revision: 05	Date: 04/30/2024	Pages: 1/10

1 - IDENTIFICATION

GHS Product identifier:	JIMO TBF Export 64
Other means of identification:	90685
Recommended use of the chemical:	Wood preservative.
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:	Flammable Liquids - Category 3; Acute Toxicity - Oral - Category 4; Acute Toxicity - Dermal - Category 4; Skin Corrosion/Irritation - Category 1A; Serious eye damage/eye irritation - Category 1; Skin Sensitization - Category 1; Reproductive Toxicity - Category 2; Hazardous to the Aquatic Environment - Acute Hazard - Category 1.
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):	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H361 Suspected of damaging fertility or the unborn child. H400 Very toxic to aquatic life.
Precautionary statement(s):	**PREVENTION:** P203 Obtain, read and follow all safety instructions before use. P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical, ventilating and lighting equipment.

P242 Use non-sparking tools.
P243 Take action to prevent static discharges.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 Wash hands thoroughly after handling.
P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection.

RESPONSE TO EMERGENCY:
P301 + P317 IF SWALLOWED: Get medical help.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P302 + P361 + P354 IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P354 + P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316 Get emergency medical help immediately.
P317 Get medical help.
P318 IF exposed or concerned, get medical advice.
P321 Specific treatment.
P330 Rinse mouth.
P333 + P317 If skin irritation or rash occurs: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use carbon dioxide (CO_2), foam, water mist and powder to extinguish.
P391 Collect spillage.

STORAGE:
P403 + P235 Store in a well-ventilated place. Keep cool.
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.

3 - COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Components contributing to the hazard:	2.4.6-tribromophenol (CAS 118-79-6): 55 - 65 %; Sodium hydroxide 50% (CAS 1310-73-2): 10 - 20 %; Ethyl alcohol (CAS 64-17-5): 5 - 10 %; Sodium tetraborate decahydrate (CAS 1303-96-4): 0.1 - 5 %; Sulfonic acid (CAS 27176-87-0): 0.1 - 5 %;

Phenol (CAS 108-95-2): 0.1 - 1 %.

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:	Immediately remove contaminated clothing or accessories. Wash exposed skin with a sufficient amount of water to remove product. In case of minor skin contact, avoid spreading the product on unaffected areas. Immediately contact the TOXICOLOGICAL INFORMATION CENTER or doctor. Bring this document.
Eye:	Immediately flush eyes with sufficient amount of water, keeping eyelids open, for several minutes. If wearing contact lenses, remove them if it is easy and rinse again. Immediately contact the TOXICOLOGICAL INFORMATION CENTER or doctor. Bring this document.
Ingestion:	Wash the victim's mouth with plenty of water. Never give anything by mouth to an unconscious person. Immediately contact the TOXICOLOGICAL INFORMATION CENTER or doctor. Bring this document.
Most important symptoms/effects, acute and delayed:	May cause an allergic skin reaction with pruritus and dermatitis. Causes severe skin burns with pain, blistering and peeling. Causes serious eye damage with burning, tearing and pain. Harmful if swallowed. Harmful in contact with skin.
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), foam, water mist and 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. 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 lights and electric motors. May build up static charge by flow or agitation. Vapors from heated product can ignite by static discharge. Vapors are denser than air and tend to accumulate in low-lying or confined areas such as storm drains and basements. It can travel great distances causing the flame to retreat or new fires in both open and confined environments. Containers may explode if heated.
Special protective actions for fire-fighters:	If the load is involved in fire, isolate and evacuate the area to a minimum radius of 800 meters. 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.

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:	Use water mist to reduce the dispersion of vapors. Use natural or spill containment barriers. Collect spilled products and place them in appropriate containers. Adsorb the remaining product with dry sand, earth, vermiculite, or any inert product. Place the adsorbed product in proper containers and remove it to a safe place. Use non-sparking tools to pick up the product. All equipment used must not be electrically grounded. For final disposal, proceed according to Section 13 of this document. Large spill: confine the liquid into a dike away from the spills for later and proper disposition. Water mist can be used to reduce of vapors, but it wont prevent ignition in closed environments.

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. Avoidvapors and mists formation. Handling the product can result in electrostatic charge buildup. All ignition sources must be extinguished from areas during use. Use proper grounding procedures. 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.
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. - <u>Ethyl alcohol:</u> 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. - <u>Sodium tetraborate decahydrate:</u> NIOSH - REL - TWA: 5 mg/m³; ACGIH - TLV - TWA: 2 mg/m³ (I); ACGIH - TLV - STEL: 6 mg/m³ (I). - <u>Phenol:</u> OSHA - PEL - TWA: 5 ppm (19 mg/m³) (*) (29 CFR 1910.1000 Table Z-1) (CFR); NIOSH - REL - TWA: 5 ppm (19 mg/m³) (*);

	NIOSH - REL - Ceiling: 15.6 ppm (60 mg/m³) [15-min]; ACGIH - TLV - TWA: 5 ppm (*). CFR: See mentioned item in OSHA CFR; I: Inhalable particulate matter; *: Also absorbed through the skin.
Biological limit:	- Phenol: ACGIH - BEI: Determinant: Phenol in urine. Sampling Time: End of shift. Index: 250 mg/g creatinine. Notation: B, Ns. OBS: H. 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. H: The analytical method requires hydrolysis.
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.
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.
Color:	Light brown.
Odour:	Characteristic.
Melting point/freezing point:	Not available.
Boiling point or initial boiling point and boiling range:	80.6 °C (177.08 °F).
Flammability:	Flammable.
Lower and upper explosion limit/flammability limit:	Not available.
Flash point:	54 °C (129.2 °F) - Closed cup.
Auto-ignition temperature:	Not available.
Decomposition	Not available.

temperature:	
pH:	10.5 to 12 ((4%)).
Kinematic viscosity:	Not available.
Solubility(ies):	Miscible in water.
Partition coeficient n-octanol/water (log value):	Not available.
Vapour pressure:	Not available.
Relative vapour density:	Not available.
Density and/or relative density:	Relative density: 1.35 to 1.45 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.
Conditions to avoid:	High temperatures. Ignition sources. Contact with incompatible materials.
Incompatible material:	Acetyl chloride, acids, alkaline compounds, alkaline metals, base, bromine pentafluoride, calcium hypochlorite, chlorates, chromic acid, cyanide, flammable substances, hydrogen peroxide, mercuric nitrate, mineral acids, nitric acid, oxidizing agents, perchloric acid, peroxides, silver nitrate, strong oxidizers, strong oxidizing agents, strong reducing agents and water.
Hazardous decomposition products:	No dangerous decomposition products are known.

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic by inhalation. Harmful if swallowed. Harmful in contact with skin. ATEmix Vapours (4h): > 20 mg/L. ATEmix Dusts and mists (4h): > 5 mg/L. LD_{50} Oral (rats): 1245 mg/kg. LD_{50} Dermal (rats): 1307 mg/kg.
Skin corrosion/irritation:	Causes severe skin burns with pain, blistering and peeling.
Serious eye damage/irritation:	Causes serious eye damage with burning, tearing and pain.
Respiratory or skin sensitization:	May cause an allergic skin reaction with pruritus and dermatitis. It is not expected to cause respiratory sensitization. The ingredient 2,4,6-tribromophenol is classified as a skin sensitizer and contributes 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:	Suspected of damaging 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.

12 - ECOLOGICAL INFORMATION

Toxicity:	Very toxic to aquatic life. EC_{50} (*Daphnia sp*, 48 h): 0.26 mg/L; ErC_{50} (Green algae, 72 h): 0.4 mg/L; LC_{50} (Fish, 96 h): 6.6 mg/L.
Persistence and degradability:	It is expected that the product presents persistence and it is not considered readily biodegradable. Information regarding to: - Ethyl alcohol: Low degradation and high persistence are expected.
Bioaccumulative potential:	Presents low bioacumulative potencial in aquatic organisms. Information regarding to: - Ethyl alcohol: log K_{ow}: 0.31.
Mobility in soil:	Not determined.
Other adverse effects:	Due to the basic nature of the product, it can cause changes in environmental compartments, causing damage to organisms. Due to the basic nature of the product, it can cause changes in environmental compartments, causing damage to organisms. Due to the basic character of the product, damage to organisms may be caused by changes in the environmental compartments.

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.

14 - TRANSPORT INFORMATION

Road:	UN - United Nations: Model Regulations: • Recommendations on the Transport of Dangerous Goods.
UN number:	1306
Proper shipping name:	WOOD PRESERVATIVES, LIQUID
Primary risk class or	3

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division:	
Subsidiary risk class or division:	NA
Packing group:	III
Railway regulations:	COTIF - Convention concerning International Carriage by Rail: • Appendix C: RID - Regulations concerning the International Carriage of Dangerous Goods by Rail.
UN number:	1306
Proper shipping name:	WOOD PRESERVATIVES, LIQUID
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	III
Sea:	IMO - International Maritime Organization: • IMDG Code - International Maritime Dangerous Goods Code.
UN number:	1306
Proper shipping name:	WOOD PRESERVATIVES, LIQUID
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	III
EmS:	F-E,S-D
Environmental hazards:	The product is considered a marine pollutant.
Air:	IATA - International Air Transport Association: • DGR - Dangerous Goods Regulation.
UN number:	1306
Proper shipping name:	WOOD PRESERVATIVES, LIQUID
Primary risk class or division:	3
Subsidiary risk class or division:	NA
Packing group:	III
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
05	04/30/2024	Change in section: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16.

Abbreviations:
ACGIH - American Conference of Governmental Industrial Hygienists;
ATEmix - Acute Toxicity Estimate of the mixture;
BEI - Biological Exposure Index;
CAS - Chemical Abstracts Service;
Ceiling - The concentration that should not be exceeded during any part of the working exposure.
EC - European Community;
EC_{50} - Effective concentration of substance that causes 50 % of the maximum response;
EEC - European Economic Community;
ErC_{50} - Effective concentration that results in a 50% reduction in the growth rate;
K_{ow} - Octanol-water partition coefficient;
LC_{50} - Lethal Concentration 50%;
LD_{50} - 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

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

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(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: Apr. 2024.