

SAFETY DATA SHEET**Product: MICRO-ÓLEO ANTICORROSIVO M1 (LÍQUIDO)**

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1- IDENTIFICATION	
Product identifier:	MICRO-ÓLEO ANTICORROSIVO M1 (LÍQUIDO)
Recommended use of the chemical and restrictions on use:	Lubricating, eliminating moisture, protect against corrosion, penetrate and clean.
Manufacturer's name:	Starrett Indústria e Comércio Ltda.
Address:	Avenida Leroy S. Starrett, 1880 – CEP 13306-900 – Pinheirinho – Itú – SP – Brazil
Telephone number:	0300 788-8800
Emergency telephone number:	(11) 2118-8080 (11) 2118-8083
Email:	falecom@starrett.com.br

2- HAZARDS IDENTIFICATION	
Classification of the chemical:	Flammable Liquids – Category 4
Signal word:	WARNING
Hazard statement(s):	H227 Combustible liquid.
Symbol(s):	Not applicable.
Precautionary statement(s):	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves, protective clothing, eye protection and face protection. P370 + P378 In case of fire: Use regular foam, mechanical foam, water mist, dry chemical, ABC chemical powder and carbon dioxide (CO ₂). P403 Store in a well-ventilated place. P501 Dispose of contents and container in accordance with local regulations.



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Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.
Other hazards which do not result in classification:	Can cause harmful effects to the environment, with long lasting effects.

3- COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE			
Components contributing to the hazard (%m):	Component	Concentration (%)	CAS Number
	C13-14 isoparaffin	80.0	64742-47-8

4- FIRST-AID MEASURES

Description of first aid measures	
Inhalation:	Remove victim to fresh air and keep warm at rest in a position comfortable for breathing. Call a POISON CENTER or a doctor if you feel unwell. Take this SDS.
Skin contact:	Take off all contaminated clothing. Wash exposed skin with sufficient water and soap for removal of material. In case of irritation: Consult a doctor. Take this SDS.
Eye contact:	Rinse thoroughly with water for, at least, 15 minutes. Remove contact lenses, if present and easy to do. If eye irritation persists: Get medical advice/attention. Take this SDS.
Ingestion:	Do not induce vomiting. If the same occurs spontaneously, lay the victim on side to prevent aspiration of residues. Never give anything by mouth to an unconscious person. Rinse the victim's mouth with plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell. Take this SDS.

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Most important symptoms and effects, acute and delayed:	May cause mild irritation to skin, eyes, respiratory system, gastrointestinal system and nausea. If ingested or inhaled in large quantities can cause chemical pneumonitis, pulmonary edema and CNS depression. Repeated or prolonged contact may cause dermatitis and irritation of the conjunctiva.
Indication of any immediate medical attention and special treatment needed:	Avoid contact with the product to help the victim. Keep victim warm and quiet. Symptomatic treatment should comprise mainly supportive measures such as correction of electrolyte disturbances, metabolic and respiratory support. In case of contact with the product do not rub the affected site. Avoid gastric lavage, except in case of ingestion of large quantities. CNS depressant.

5- FIRE-FIGHTING MEASURES

Extinguishing media:	Suitable: Compatible with regular foam, mechanical foam, water mist, dry chemical, ABC chemical powder and carbon dioxide (CO ₂). Unsuitable: Water directly on the burning liquid.
Specific hazards arising from the chemical product:	Dangerous when exposed to excessive heat or other sources of ignition such as sparks, open flames or flames of matches and cigarettes, welding operations, pilot lights and electric motors. Can accumulate static charge by flow or agitation. Vapors from heated liquid can be ignited by static discharge. Vapors are heavier than air and tend to accumulate in low or confined areas, such as sewers, basements, etc. Can travel great distances causing retrogression of the flame or new fires both in open environments in as confined ones. Containers may explode if heated. The combustion of the chemical products or containers may form toxic and irritant gases such as carbon monoxide and carbon dioxide.
Special equipment for the protection of firefighters:	Self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

6- ACCIDENTAL RELEASE MEASURES

Personal precautions:	Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled material without the use of appropriate clothing.
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	Avoid inhalation, contact with skin or eyes. Stay out of low areas, with the wind from behind.
Protective equipment:	Use protective equipment as described in section 8.
Emergency procedures:	It is recommended the installation of fire alarm system and leak detection in local storage and use of the product. Isolate the leakage from ignition sources. Evacuate the area within a radius of, at least, 50 meters. Keep unauthorized persons away from the area. Stop leak if it can be done without risk.
Methods and materials for containment and cleaning up:	Containment techniques may include bunding, covering of drains and capping procedures. Use water mist or vapor suppressing foam to reduce the dispersion of the vapors. Use natural barriers or containment of spillage. Collect spilled product and place in appropriate containers. Adsorb the remaining product with dry sand, earth, vermiculite or other inert material. Place the adsorbed material in appropriate containers and remove them to a safe place. Use non-sparking tools to collect absorbed material. For disposal, proceed according to section 13 of this SDS.

7- HANDLING AND STORAGE

Precautions for safe handling:	Handle in a well ventilated area or with general system of ventilation/local exhaust. Avoid vapors and mists formation. Avoid exposure to the chemical. Avoid contact with incompatible materials. Use personal protective equipment as described in Section 8. Keep away from heat, sparks, open flames and hot surfaces. – Do not smoke. Keep container tightly closed. Ground the container vessel and the receiver of the product during transfers. Only use anti-sparking tools. Avoid the accumulation of electrostatic charges. Use electrical equipment, ventilation and lighting explosion proof. Contaminated clothing should be changed and washed before reuse. Remove clothing and protective equipment contaminated before entering eating areas.
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	Wash hands and face thoroughly after handling and before eating, drinking, smoking or going to the bathroom.
Conditions for safe storage, including any incompatibilities:	Store in a well ventilated place away from sunlight. Keep container closed. Keep stored at room temperature not exceeding 35°C. Keep away from high temperatures, ignition sources and incompatible materials. Incompatible with oxidizing agents. Recommended material for packaging: Similar to the original packaging. Unsuitable material: It is not known unsuitable materials.

8- EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters:

Occupational exposure limit:	Not established.
Biological limit:	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:

Respiratory protection:	In case of large spills, where exposure is great, we recommend the use of semifacial respiratory or facial protection mask with filter against organic vapors.
Hand protection:	Nitrile safety gloves.
Eye protection:	Safety goggles.
Skin and body protection:	Protective cream for the skin, protective clothing, apron and closed shoes. The material used should be waterproof.

9- PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

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Appearance (physical state, color, etc.):	Amber liquid.
Odour:	Characteristic.
Odour threshold:	Not available.
pH:	Not available.
Melting point/freezing point:	Not available.
Initial boiling and boiling range:	173°C
Flash point:	72°C
Evaporation rate:	Not available.
Flammability (solid, gas):	Not applicable.
Upper/ lower flammability or explosive limits:	Not available.
Vapour pressure:	Not available.
Vapour density:	Not available.
Relative density:	0.788 at 15.5°C
Solubility(ies):	Insoluble in water.
Partition coefficient: n-octanol/water	Information regarding to: - <u>C13-14 isoparaffin</u> : Log kow: 6.235 (estimated)
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.
Other information:	Not applicable.

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10- STABILITY AND REACTIVITY

Reactivity:	It is not expected that the product shows reactivity potential.
Chemical stability:	Product is stable under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	There are not known hazardous reactions with the product.
Conditions to avoid:	High temperatures, moisture, ignition sources and contact with incompatible materials.
Incompatible materials:	Oxidizing agents.
Hazardous decomposition products:	The burning may produce toxic and irritant gases, besides carbon monoxide and carbon dioxide.

11- TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic by oral route. It is not expected that the product presents acute toxicity by dermal and inhalation route. Information regarding to: - <u>C13-14 isoparaffin</u> : LD ₅₀ (oral, rats): > 5000.0 mg/kg
Skin irritation/corrosion:	May cause mild skin irritation.
Eye damage/irritation:	May cause mild eye irritation. Repeated or prolonged contact may cause irritation of the conjunctiva.
Respiratory or skin sensitization:	Repeated or prolonged contact may cause dermatitis. It is not expected that the product causes respiratory sensitization.
Reproductive cell mutagenicity:	It is not expected that the product presents reproductive cell mutagenicity.
Carcinogenicity:	It is not expected that the product presents carcinogenicity.
Reproductive toxicity:	It is not expected that the product presents reproductive toxicity.

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Specific target organ toxicity – single exposure:	May cause mild irritation to respiratory system, gastrointestinal system and nausea. If ingested or inhaled in large quantities can cause chemical pneumonitis, pulmonary edema and CNS depression.
Specific target organ toxicity – repeated exposure:	It is not expected that the product presents specific target organ toxicity by repeated exposure.
Aspiration hazard:	It is not expected that the product presents aspiration hazard.

12- ECOLOGICAL INFORMATION

Ecotoxicity:	<p>Can cause harmful effects to aquatic life, with long lasting effects.</p> <p>Information regarding to:</p> <p>- <u>C13-14 isoparaffin</u>:</p> <p>LC₅₀ (<i>Oncorhynchus mykiss</i>, 96h): 2.4 mg/L EC₅₀ (<i>Daphnia magna</i>, 48h): 1.4 mg/L ECr₅₀ (<i>Pseudokirchneriella subcapitata</i>, 72h): 1.0 – 3.0 mg/L</p>
Persistence and degradability:	<p>The product does have persistence and it is considered readily biodegradable.</p> <p>Information regarding to:</p> <p>- <u>C13-14 isoparaffin</u>:</p> <p>Degradation rate: 58.6% in 28 days.</p>
Bioaccumulative potential:	<p>Presents high bioaccumulative potential in aquatic organisms.</p> <p>Information regarding to:</p> <p>- <u>C13-14 isoparaffin</u>:</p> <p>BCF: 207.7 (estimated) Log_{kw}: 6.235 (estimated)</p>
Mobility in soil:	It is expected very low mobility in soil.

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	Information regarding to: - <u>C13-14 isoparaffin</u> : Koc: 1.967 x 10 ⁵ (estimated)
Other adverse effects:	There are not known adverse environmental effects of the product.

13- DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:	<p>Must be disposed of as hazardous waste in compliance with local regulations. The treatment and disposal should be evaluated for each specific product. Route the product for recycling as authorized by the competent environmental authority. Federal, state and municipal laws should be consulted. It is forbidden to discard it in the soil, surface water, groundwater, territorial sea and sewage systems. It also prohibited the removal of residual water or any other means of disposal causing atmospheric pollution.</p> <p>Keep the product remains in its original and properly closed. Disposal should be performed as established for the product.</p> <p>Container/packaging under pressure. Do not drill and burn, even after use. Do not reuse empty containers. These may contain residues of the product and should be kept closed and sent to landfill for chemical or recycling waste as set out for the product.</p>
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14- TRANSPORT INFORMATION

International regulations	
Land:	UN – “United Nations” Recommendations on the TRANSPORT OF DANGEROUS GOODS. Model Regulations
UN number:	3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C13-14 isoparaffin)
Transport hazard class(es)	9

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Packing group:	III
Sea:	IMO – International Maritime Organization International Maritime Dangerous Goods Code (IMDG Code)
UN number:	3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C13-14 isoparaffin)
Transport hazard class(es)	9
Packing group:	III
Environmental hazards:	Marine pollutant: Y
EmS:	F-A, S-F
Air:	IATA – International Air Transport Association Dangerous Goods Regulation (DGR)
UN number:	3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (C13-14 isoparaffin)
Transport hazard class(es)	9
Packing group:	III
Transport in bulk according to MARPOL 73/78, Annex II, and the IBC Code:	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.
Special precautions:	There is no need of special precautions.



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15- REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

International Labor Organization C170 Chemicals Convention, from June 25th, 1990: Occupational Safety and Health – Toxic Substances and Agents;
Hazard Communication Standard (HCS) 29 CFR: 1910.1200 – Appendix A,B,C,D, E,F.

16- OTHER INFORMATION

This SDS 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 materials, 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.

SDS elaborated in: December, 2015.

Abbreviations:

BCF – Bioconcentration Factor

CAS – Chemical Abstracts Service

EC₅₀ – Effective Concentration 50%

ECr₅₀ – Effective Concentration 50% in terms of reducing of the growth rate

Koc – Organic Carbon Partition Coefficient

LC₅₀ – Lethal Concentration 50%

LD₅₀ – Lethal Dose 50%

NA – Not Applicable

SCBA – Self-contained Breathing Apparatus

UN – United Nations



SDS

In compliance with HCS/HazCom 2012

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