SDS

SAFETY DATA SHEET

Product: FATTY ACID N° SDS: Pb0302_e

Revision: 0.0e	Date: 08/26/2025	Pages: 1/7

SECTION 1: IDENTIFICATION

GHS product identifier:	FATTY ACID
Other means of identification:	Pb0302_e
Recommended use of the chemical and restrictions on use:	Used in combustion, animal feed, food industry, mineral processing, paint industry, manufacturing of bar or powder soap and manufacturing of biodiesel.
Supplier's details:	Petrobras Biocombustível S. A. **Address:** Rua do Passeio, 38, Setor 4, 2º andar, Centro, CEP: 20021-290 - RJ – Brasil. **Phone number:** 0800-728-9001
Emergency phone number:	0800 728 9001 Opção 02

SECTION 2: HAZARD IDENTIFICATION

Classification of the substance or mixture:	Not classified as hazardous by the classification system used.
Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Caution recommendations:	Wash your hands after handling the product. During handling of the product do not drink, eat or smoke. It is recommended the use of appropriate PPE when handling the product. Get product information before handling. Store product in a suitable place. In case of emergency, proceed as indicated in this document.
Other hazards which do not result in classification:	The product has no other hazards.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

SUBSTANCE

Chemical identity of the substance:	2-hydroxyethyl stearate.
Common name(s), synonym(s) of the substance:	Octadecanoic Acid, 2-hydroxyethyl ester; Ethylene glycol Stearate.
CAS number:	111-60-4
EC number:	203-886-9
Components contributing to the hazard:	Does not contain components that contribute to the hazard.

SECTION 4: FIRST-AID MEASURES

Description of necessary first-aid measures

Inhalation:	Remove victim to fresh air.
Skin:	Wash exposed skin with sufficient amount of water to remove the product.
Eye:	Rinse carefully with water for several minutes. If wearing contact lenses, remove them if it is easy. If eye irritation occurs: consult a doctor. Bring this document.
Ingestion:	Wash the victim's mouth with plenty of water. Contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this document.
Most important symptoms/effects, acute and delayed:	May cause mild eye irritation with redness and tearing. Ingestion, in high concentrations, can cause nausea, vomiting and diarrhea.
Indication of immediate medical attention and special treatment needed, if necessary:	If necessary, provide symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing media:	Appropriate: Compatible with all means of extinguishing. 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 leak from sources of ignition. Stop the leak if this can be done without risk. Do not smoke. Avoid contact with the product. If necessary, use personal protective equipment as described in section 8.
For emergency responders:	Use full PPE, with protective glasses or face mask, protective gloves, safety footwear and appropriate protective clothing. It is recommended to use a respirator with a filter for vapors and mists.
Environmental precautions:	Prevent spilled product from reaching watercourses and sewage systems.
Methods and materials for containment and cleaning up:	Use water mist or vapor suppressant foam to reduce vapor dispersion. Use natural or spill containment barriers. Collect spilled product and place in appropriate containers. Absorb remaining product with dry sand, earth, vermiculite, or any other inert material. Place adsorbed product in appropriate containers and remove them to a safe location. For final disposal, proceed as per Section 13 of this document.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Precautions for safe handling:	Handle in a well-ventilated area or with general ventilation/local exhaust system. Avoid formation of vapors and mists. If necessary, use personal protective equipment as described in section 8.
General hygiene:	Wash 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:	The product is not expected to present a fire or explosion hazard.
Conditions for safe storage, including any incompatibilities:	Keep the product in a cool, dry and well-ventilated place, away from sources of heat and ignition. Keep containers tightly closed and properly identified. It is not necessary addition of stabilizers and antioxidants to ensure the durability.
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:	No occupational exposure limits are established.
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:	Protective glasses or face mask.
Skin protection:	Closed shoes and appropriate protective clothing. Suitable protective gloves.
Respiratory protection:	A respirator with a vapor and mist filter is recommended for average exposures above half the TLV-TWA. In cases where exposure exceeds 3 times the TLV-TWA, use a self-contained breathing apparatus (SCBA) with air supply, with a full facepiece, operated in positive pressure mode.
Thermal hazards:	It does not present thermal hazards.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid.
Colour:	Yellowish.
Odour:	Characteristic.
Melting point/freezing point:	Not available.
Boiling point or initial boiling point and boiling range:	Not available.
Flammability:	Not flammable.

Lower and upper explosion limit/ flammability limit:	Not available.
Flash point:	> 180 °C (356 °F) - Closed cup.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
pH:	≅ 5.
Kinematic viscosity:	5.573 mm²/s at 100 °C (212 °F).
Solubility:	Immiscible in water. Miscible in methanol, ethyl alcohol, isopropyl alcohol and chloroform.
Partition coeficient n-octanol/water (log value):	log K_{ow}: 7.26 (calculated).
Vapour pressure:	Not available.
Density and/or relative density:	Absolute density: 866.5 kg/m³ at 60 °C (140 °F).
Relative vapour density:	Not available.
Particle characteristics:	Not applicable.
Other information:	Total fatty acids: 90g/100g min. (Method: AOCS G3-53) Moisture: 1g/100g max. (Method: ASTM E-203) Saponification number: 200 mg KOH/g min. (Method: AOCS TI 1a-64).

SECTION 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.
Incompatible materials:	There are not known incompatible materials with the product.
Hazardous decomposition products:	No dangerous decomposition products are known.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic by oral and dermal. ATEmix Oral: > 5000 mg/kg. ATEmix Dermal: > 5000 mg/kg.
Skin corrosion/irritation:	It is not expected to cause skin irritation.
Serious eye damage/ irritation:	May cause mild eye irritation with redness and tearing.

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:	Ingestion, in high concentrations, can cause nausea, vomiting and diarrhea.
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.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	It is not expected to be ecotoxic.
Persistence and degradability:	Due to the lack of data, it is expected to be persistent and not rapidly degraded.
Bioaccumulative potential:	Presents high bioacumulative potencial in aquatic organisms. log K_{ow}: 7.26 (calculated).
Mobility in soil:	Not determined.
Other adverse effects:	The release of large amounts can cause undesirable environmental effects, such as the decrease in oxygen availability in aquatic environments due to the formation of an oily layer on the surface, coating and consequent suffocation of animals.

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.

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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 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
0.0e	06/27/2025	Changes to sections: 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;
CAS - Chemical Abstracts Service;
EC - European Community;
EEC - European Economic Community;
EPA - United States Environmental Protection Agency;
IARC - International Agency for Research on Cancer;
K_{ow}- Octanol-water partition coefficient;
NIOSH - National Institute for Occupational Safety and Health;
OSHA - Occupational Safety & Health Administration;
PBT - Persistent, bioaccumulative and toxic;

TLV - Threshold Limit Value;
TWA - Time Weighted Average;
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.

CONCAWE - HAZARD CLASSIFICATION AND LABELLING OF PETROLEUM SUBSTANCES IN THE EUROPEAN ECONOMIC AREA. Available in: <https://www.concawe.eu/>. Access at: Jun. 2025.

ECHA - EUROPEAN CHEMICAL AGENCY. Available in: <http://echa.europa.eu/web/guest>. Access at: Jun. 2025.

EPA - UNITED STATES ENVIRONMENTAL PROTECTION AGENCY. Available in: <https://www.epa.gov/>. Access at: Jun. 2025.

GESTIS - SUBSTANCE DATABASE. Available in: <https://gestis-database.dguv.de/>. Access at: Jun. 2025.

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

HSDB - HAZARDOUS SUBSTANCES DATA BANK. Available in: <http://pubchem.ncbi.nlm.nih.gov/>. Access at: Jun. 2025.

IARC - INTERNATIONAL AGENCY FOR RESEARCH ON CANCER. Available in: <http://monographs.iarc.fr/ENG/Classification/index.php>. Access at: Jun. 2025.

NIOSH - NATIONAL INSTITUTE OF OCCUPATIONAL AND SAFETY. International Chemical Safety Cards. Available in: <http://www.cdc.gov/niosh/>. Access at: Jun. 2025.

OSHA - OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION. UNITED STATES DEPARTMENT OF LABOUR. < https://www.osha.gov/chemicaldata/search >. Access at: Jun. 2025.

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-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:353:0001:1355:en:PDF>. Access at: Jun. 2025.