

SAFETY DATA SHEET

Product: JET A QUEROSENE DE AVIAÇÃO

Revision: 01

Date: 06/13/2024

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1 - IDENTIFICATION

GHS Product identifier:	JET A QUEROSENE DE AVIAÇÃO
Other means of identification:	QAV6QB
Recommended use of the chemical:	Manufacture of substances, use in chemical processes or as an extraction agent. Formulation and packaging of substances and mixtures. Use in coatings (paints and adhesives). Use in cleaning products. Use in road and construction applications. Metal processing. Use as binding or release agent. Use in agrochemicals. Fuel. Lubricant. Use as a functional fluid (transfer fluids, coolants, insulators, hydraulics, etc.). Explosives manufacturing.
Specific restrictions on use:	There are not known restrictions on use.
Supplier's details:	Acelen Address: ROD BA 523, KM 4, MATARIPE, CEP: 43900-000 - BA - Brasil. Phone number: (71) 3511-8000 / (11) 5225-8900
Emergency phone number:	EMERGENCIall: 0800 729 2756 / (11) 94759-7282 (Whatsapp) (24h)

2 - HAZARD IDENTIFICATION

Classification of the substance or mixture:	Flammable Liquids - Category 3; Hazardous to the Aquatic Environment - Acute Hazard - Category 2; Hazardous to the Aquatic Environment - Chronic Hazard - Category 2.
Classification system adopted:	Globally Harmonized System of Classification and Labeling of Chemicals (GHS), United Nations.

GHS label elements, including precautionary statements

Pictograms:



Signal word:	WARNING
Hazard statement(s):	H226 Flammable liquid and vapour. H411 Toxic to aquatic life with long lasting effects.
Precautionary statement(s):	PREVENTION: 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. P273 Avoid release to the environment. P280 Wear protective gloves, protective clothing, eye protection, face protection and hearing protection. RESPONSE TO EMERGENCY: P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

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P370 + P378 In case of fire: Use carbon dioxide (CO₂), foam, water mist and powder to extinguish.
P391 Collect spillage.

STORAGE:

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

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

SUBSTANCE A complex combination of hydrocarbons obtained by subjecting petroleum distillate to a sweetening process to convert mercaptans or remove acidic impurities. It consists predominantly of hydrocarbons having carbon numbers predominantly in the range of C9 to C16 and boiling in the range of 130°C to 290°C (266°F to 554°F).

Common chemical name: Kerosine (petroleum), sweetened.

Common name(s), synonym(s) of the substance: Jet A; Jet A-1; Aviation kerosene.

CAS: 91770-15-9

Impurities and stabilizing additives which are themselves classified and which contribute to the classification of the substance: Does not contain components that contribute to the hazard.

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 material.

Eye: Wash carefully with water for several minutes. In case of use of contact lenses, remove them, if possible. Keep washing. If eyes irritation continues: Contact a doctor. Bring this SDS.

Ingestion: Do not induce vomiting. Wash the exposed persons mouth with water. If the victim feels unwell, contact a TOXICOLOGICAL INFORMATION CENTER or a doctor. Bring this SDS.

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: If necessary, provide symptomatic treatment.

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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:	The combustion of the chemical containers may form toxic and irritant gases such as carbon monoxide and carbon dioxide. Very 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 and basements. 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.
Special protective actions for fire-fighters:	Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing. Containers and tanks involved in the fire should be cooled with water mist.

6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:	Prevent sparks or flames. Do not smoke. Do not touch damaged containers or spilled material without the use of appropriate clothing. Avoid exposure to the product. Stay in a safe place, with wind from behind. 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 material reaches waterways or sewage system.
Methods and materials for containment and cleaning up:	Use water mist or vapor suppressing foam to reduce the dispersion of vapors. Use natural barriers or spill containment. Collect spilled material and put it into containers. Adsorb the remaining product with dried sand, vermiculite or any other inert material. Put the adsorbed material in appropriate containers and remove them to a safe place. Use tools that do not cause sparks to collect absorbed material. For final destination, proceed pursuant to Section 13 of this SDS. 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 ventilated area or with a general local exhaust/ventilation system. Avoid formation of vapors and mists. 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 going to the bathroom. Contaminated clothing should be changed and washed before reuse. Remove clothing and protective equipment contaminated 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 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. Use personal protective equipment as described in Section 8.
Conditions for safe storage, including any	Store in a well ventilated place, away from sunlight. Keep container closed. Keep away from high temperatures and ignition sources.

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incompatibilities: It is not necessary addition of stabilizers and antioxidants to ensure the durability. This material may react dangerously with some incompatible materials as outlined in Section 10. 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: Not established.

Biological limit: Not established.

Other limits and values: Not established.

Appropriate engineering controls: Promote mechanical ventilation and exhaust system to outside. These acts help reducing the exposition to the product. It is recommended to make emergency showers and eye wash facilities available in the work area. Maintain airborne concentrations of the substance or mixture below stated occupational exposure limits.

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

Eye/face protection: Wide-view glasses with splash protection.

Skin protection: Safety boots or shoes. Full chemical protective clothing. Protective gloves against chemicals such as PVC.

Respiratory protection: It is recommended to use a respirator with a vapor or mist filter for average exposures above half the TLV-TWA. In cases where exposure exceeds 3 times the TLV-TWA value, use respirators. Follow guidance from the Respiratory Protection Program (PPR), 4th ed. São Paulo: Fundacentro, 2016.

Thermal hazards: It does not present thermal hazards.

9 - PHYSICAL AND CHEMICAL PROPERTIES

Aspect: Liquid, limpid.

Color: Not available.

Odour: Characteristic (odor threshold: 1 ppm).

Melting point/freezing point: -40 °C (-40 °F).

Boiling point or initial boiling point and boiling range: 130 to 290 °C (266 to 554 °F).

Flammability: Flammable.

Lower and upper explosion limit/flammability limit: Upper: 5 % and Lower: 0.7 %.

Flash point: ≥ 38 °C (100.4 °F) - Closed cup.

Auto-ignition temperature: Not available.

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Decomposition temperature:	Not available.	
pH:	Not applicable.	
Kinematic viscosity:	4 mm ² /s at -20 °C (-4 °F).	
Solubility(ies):	Immiscible in water. Miscible with other petroleum solvents.	
Partition coefficient n-octanol/water (log value):	log <i>K</i> _{ow} : 3.3 to 6.	
Vapour pressure:	0.48 mmHg (63.99456 Pa) at 20 °C (68 °F).	
Relative vapour density:	4.5 (air = 1).	
Density and/or relative density:	Relative density: 0.804 (water at 4 °C(39,2 °F) = 1).	
Particle characteristics:	Not applicable.	
Other information:	Distillation range: 150 - 300°C at 760 mmHg.	

10 - STABILITY AND REACTIVITY

Reactivity:	Reactivity is not to be expected under normal conditions of temperature and pressure.
Chemical stability:	Stable product under normal conditions of temperature and pressure.
Possibility of hazardous reactions:	Reacts violently with strong oxidizing agents.
Conditions to avoid:	Elevated temperatures. Ignition sources. Contact with incompatible materials.
Incompatible material:	Strong oxidizing agents.
Hazardous decomposition products:	On combustion, it releases toxic and irritating vapours.

11 - TOXICOLOGICAL INFORMATION

Acute toxicity:	Product not classified as acute toxic. LC ₅₀ Vapours (rats, 4h): > 20 mg/L. LD ₅₀ Oral (rats): 53000 mg/kg. LD ₅₀ Dermal (rabbits): > 3000 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	It is not expected to exhibit specific target organ toxicity by single exposure.

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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: Toxic to aquatic life with long lasting effects.
EC₅₀ (*Daphnia sp.*, 48 h): 1.4 mg/L;
ErC₅₀ (Green algae, 72 h): 8.3 mg/L.

Persistence and degradability: It has persistence and is not considered rapidly degradable.

Bioaccumulative potential: Presents high bioaccumulative potential in aquatic organisms.
log *K_{ow}*: 3.3 to 6.

Mobility in soil: Not determined.

Other adverse effects: In cases of large leaks, the product can be dangerous for aquatic organisms due to the possibility of forming a film of the product on the surface of the water, which can reduce the level of dissolved oxygen.

13 - DISPOSAL CONSIDERATIONS

Disposal methods

Must be disposed of as hazardous 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: 1863

Proper shipping name: FUEL, AVIATION, TURBINE ENGINE

Primary risk class or division: 3

Subsidiary risk class or division: NA

Packing group: III

Environmental hazards: The product is 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: 1863

Proper shipping name: FUEL, AVIATION, TURBINE ENGINE

Primary risk class or division: 3

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Subsidiary risk class or division:	NA	
Packing group:	III	
Environmental hazards:	The product is considered dangerous for the environment in rail transport.	
Sea:	IMO - International Maritime Organization: • IMDG Code - International Maritime Dangerous Goods Code.	
UN number:	1863	
Proper shipping name:	FUEL, AVIATION, TURBINE ENGINE	
Primary risk class or division:	3	
Subsidiary risk class or division:	NA	
Packing group:	III	
Environmental hazards:	The product is considered a marine pollutant.	
EmS:	F-E,S-E	
Air:	IATA - International Air Transport Association: • DGR - Dangerous Goods Regulation.	
UN number:	1863	
Proper shipping name:	FUEL, AVIATION, TURBINE ENGINE	
Primary risk class or division:	3	
Subsidiary risk class or division:	NA	
Packing group:	III	
Environmental hazards:	The product is considered dangerous for the environment for air transport.	
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

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

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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.

Change control:

Version	Manufacture date	Changes
01	03/20/2023	Elaboration

Abbreviations:

ACGIH - American Conference of Governmental Industrial Hygienists;
 CAS - Chemical Abstracts Service;
 EC₅₀ - Effective concentration of substance that causes 50 % of the maximum response;
 ErC₅₀ - Effective concentration that results in a 50% reduction in the growth rate;
 K_{ow} - Octanol-water partition coefficient;
 LC₅₀ - Lethal Concentration 50%;
 LD₅₀ - Lethal Dose 50%;
 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.