



CERTIFICATION OF AERONAUTICAL PRODUCTS



ANAC

National Civil Aviation Agency - Brazil



The **National Civil Aviation Agency** is responsible for the regulation and the safety oversight of civil aviation in Brazil.

Established in March 2006, the **ANAC** is constituted as a special autarchy with status of regulatory agency, subordinated to the President of Brazil.

ANAC's headquarters is in Brasília, and there are also regional offices in the country: Belém, Recife, Rio de Janeiro, São Paulo, Porto Alegre, Brasília, Manaus.

What does Certification mean?

In the case of aeronautical products, it means the approval of the competent authority confirming that the product is in accordance with the applicable requirements; or, in the case of companies, it means the approval of the competent authority confirming that the company is able to execute the proposed services and operations, in accordance with the applicable requirements.



What is a Certifying Organization?

It is the competent authority to:

- ✈️ certify companies, confirming their ability to execute the proposed services and operations, in accordance with the established requirements; or
- ✈️ certify aeronautical products, confirming that they are in accordance with the established requirements (RBHA 01, section 01.43).

The Aeronautical Products Certification Branch (GGCP) which reports directly to the National Civil Aviation Authority (ANAC) is responsible for the Certification Process in Brazil, approving the projects and the production of aeronautical products.

What is an Aeronautical Product?

An aeronautical product may be an aircraft, an engine or a propeller, as well as its components and parts. Instruments, mechanisms, pieces, devices, accessories and communication equipment, as long as they are used or intended to be used in the operation and control of an aircraft in flight, and installed or fixed to the aircraft. Materials and processes used in the production of all items above are also considered aeronautical products (RBHA 01, section 01.43).

Who is responsible for the civil certification of aeronautical products in Brazil?

The GGCP, which reports directly to the National Civil Aviation Agency (ANAC), certifies the project and the manufacturing of aeronautical products, as well as their continued airworthiness.

Why do aircraft need to be certified?

The Brazilian Aeronautical Code (Law 7.565, December 19th, 1986) establishes that Brazil must comply with international agreements, among them the ones established in the Chicago Convention of 1944. During the mentioned Convention, the International Civil Aviation Organization (ICAO) was created. The Convention which was supported by 180 countries established rules and recommendations in its Annexes, aiming to develop Civil Aviation worldwide, in accordance with economic principles, equality of opportunities and flight safety requirements. To comply with the mentioned requirements, Brazil has adopted a flight safety system, being the certification of aeronautical products one of its basic activities.

What are the goals of the Brazilian Requirements for Aeronautical Certification (RBHA) or Brazilian Regulation for Civil Aviation (RBAC)?

1. to establish safety requirements for Civil Aviation, based on rules and recommendations of Annexes 1, 6, 7, 8 and 16 to the Chicago Convention; and
2. to establish requirements for the administration and certification of companies, regarding:
 - ✈ projects, materials, workforce, building and performance of aircraft, engines, propellers and other aeronautical components; and
 - ✈ inspections, maintenance and repairs and operations of aircraft, engines, propellers and other aeronautical components (RBHA 01, section 01.05).

What is an Approved Aeronautical Product Certificate (APAA)?

The Approved Aeronautical Product Certificate, together with the company certificate, approves the production of aeronautical products, except aircraft, engines or propellers (RBHA 21, section 21.303).

When can a Type Certificate be granted?

A Type Certificate can be granted to an aircraft if it is in accordance with the applicable requirements and regulations, if does not show unsafe aspects or characteristics when in operation and if it:

- ✈ fulfills its airworthiness requirements with the exception of the requirements considered inappropriate by ANAC.

How are the changes to the Type Design approved?

Minor alterations can be approved without corroborating data. In the case of major alterations to the type design, data which describe and corroborate the modifications proposed must be presented. The distinction between minor and major alterations can be consulted in RBHA 21, sections 21.95 and 21.97.

What does “Difficulties in Service” mean?

“Difficulties in Service” is a system that gathers and processes all the information related to accidents and incidents with aircraft. It guarantees that any flaws, malfunctions or defects in any aeronautical product will be reported and appropriately analyzed.

What is an Airworthiness Directive (AD)?

An AD is an amendment to RBHA 39. It is the legal way through which the Civil Aviation Authority imposes corrective actions to previously approved aeronautical products presenting problems that may affect flight safety and other products of the same type when in operation.

An AD is also used to notify operators about appropriate conditions, limitations and inspections.

What is the approval for manufacturing in accordance with the Standard Technical Order?

When a person or company produces an aeronautical product in accordance with the standard technical order defining minimum standards, these standards must be submitted to ANAC for approval.

What is a Major Repair in an Aeronautical Product?

A Major Repair is an alteration in an aeronautical product that:

- ✈ if made inappropriately, may greatly affect the weight, balance, structural resistance, flight characteristics and maneuverability or any other features related to airworthiness; or
- ✈ cannot be executed via usual practices or elementary operations.

Do the products used during aircraft manufacturing or maintenance (paint, grease, lubricant, cleaning material, additive for fuel, etc) need to be certified by ANAC?

No. All the products produced in accordance with international standards (MIL, SAE, ABNT, DIN, etc) do not need to be certified by ANAC. They are normally approved by their users through specific tests. There aren't specific requirements applicable to the certification of these products.

What is an Accredited Representative?

Although GGCP directly executes all the activities of Type Certification, it is possible to delegate engineering and/or quality control activities to representatives accredited by GGCP, according to what's established by RBHA 183.

Do the products used in the aircraft (leather, fabric, foam, carpet, plastic, etc) need to be certified by ANAC?

Yes. The certification of these products must be made through specific tests of inflammability, described in Annex F of RBHA 23 and 25, as applicable. The materials are tested together and individually. For example, the materials of a seat (leather, foam, fabric and glue) are individually tested, and the seat itself is tested again when ready to use.

The Advisory Circular 21-019 "Substitution of Aircraft Fabric, Foam and Carpet" issued by the GGCP, details about this subject and establishes a method for testing materials individually and in group, in case of replacement of materials inside the aircraft.



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**Regulation | Inspection and Supervision
Operational Safety | Certification
Training | Prevention of Accidents
International Relations | Development
Standardization | Customer Support
Free Competition**



Photos: Embraer

www.anac.gov.br/english

For more information:
www.anac.gov.br/certificacao/IndexE.asp

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