TECHNICAL CERTIFICATION RULES OF THE EUROVENT CERTIFIED PERFORMANCE MARK

AIR CLEANERS

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The purpose of this Technical Certification Rules is to prescribe procedures for the operation of the Eurovent Certified Performance (ECP) certification programme for Air Cleaners (ACL), in accordance with the Certification Manual.

Modifications as against last version:

No.	Modifications	Section	Page
1	New structure converted into TCR	all	all
2			

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I. GENERAL INFORMATION

I.1. Scope

I.1.1. General

The programme applies to eligible models of Air Cleaners. To be eligible, each model shall be certified according to the certification rules of the "NF-536 Air Cleaners" certification mark.
The reference document is available on https://www.eurovent-certification.com/fr/third-party-certification/certification-programs/acl-air-cleaners.

I.1.2. Certify-all principle

Not applicable

I.2. Certified performances

The certified characteristics, declared by the applicant/participant and verified by tests, are specified in the NF-Air Cleaners (NF536) reference document.

I.3. Definitions

In addition to the definitions specified in the Certification Manual, the following definitions apply:

For definitions specific to the Air Cleaners refer to NF-Air Cleaners (NF536) reference document available on-line https://www.eurovent-certification.com/fr/third-party-certification/certification-programs/acl-air-cleaners.

Clean Air Efficiency of a given pollutant category

The Clean Air Efficiency of a given pollutant category is defined as the ratio between the minimum initial purified air flow rate value of the category and the absorbed electrical power, both measured for the maximum operation speed (see the NF-536 reference document for further details about these performance items).

The Clean Air Efficiency is rounded down to nearest second digit and expressed in [$m^3/h/W$].

The Clean Air Efficiencies are expressed as follows:

$$Clean\ Air\ Efficiency_{particles} = \frac{Min(Q_{AE1}; Q_{AE2}; Q_{AE3})}{P_{Emax}}$$

$$Clean\ Air\ Efficiency_{gases} = \frac{Min(Q_{AE4}; Q_{AE5}; Q_{AE6}; Q_{AE7}; Q_{AE8})}{P_{Emax}}$$

$$Clean\ Air\ Efficiency_{micro-organisms} = \frac{Min(Q_{AE9}; Q_{AE10})}{P_{Emax}}$$

$$Clean\ Air\ Efficiency_{allergens} = \frac{Q_{AE11}}{P_{Emax}}$$

Where (see NF536 reference document):

- Q_{AEi} [m^3/h] is the initial purified air flow rate for the pollutant identified by the index i
  - $Q_{AEi} = E_i \cdot Q_{max} \cdot 100$
  - E_i [%] is the purification efficiency with respect to the pollutant identified by the index i
    - i = 1 for inert particles of 0.3 µm to 0.5 µm size
    - i = 2 for inert particles of 1.0 µm to 2.0 µm size
    - i = 3 for inert particles of 3.0 µm to 5.0 µm size
    - i = 4 for Acetone
    - i = 5 for Acetaldehyde
    - i = 6 for Heptane
    - i = 7 for Toluene

        - i = 8 for Formaldehyde
        - i = 9 for Staphylococcus epidermidis
        - i = 10 for Aspergillus niger
        - i = 11 for Fel-D1 cat allergen
    - Q_{max} is the air circulation flow rate at maximum speed
- P_{Emax} [W] is the absorbed electrical power at maximum speed

Recommended room surface area

The recommended room surface area [m^2] indicated is the maximum of the room surface areas calculated for each pollutant as described in the NF-536 reference document.

Therefore, the labelling specifies “up to X m^2” with X the recommended room surface area. It is considered that the room has a ceiling height of 2.5m.

I.4. Contributors

The lists of contributors are given for information and may be modified by EUROVENT CERTITA CERTIFICATION whenever necessary.

I.4.1. Audit body

The audit functions are performed by the following body(ies), called audit body:

EUROVENT CERTITA CERTIFICATION SAS
48/50 rue de la Victoire
F- 75009 PARIS
Tel : + 33 1 75 44 71 71
www.eurovent-certification.com - www.certita.fr

I.4.2. Independent laboratory / test body

When the checks carried out involve product tests, these are performed at the request of EUROVENT CERTITA CERTIFICATION by the following laboratories, known as Independent laboratory.

The list of laboratories are described in NF536 reference document.

II. REQUIREMENTS OF THE REFERENCE DOCUMENT

II.1. Reference documents

All reference documents (Testing and Quality standards) are specified in the NF-Air Cleaners (NF536) reference document.

II.2. Specific requirements and quality management

All reference documents (Testing and Quality standards) are specified in the NF-Air Cleaners (NF536) reference document.

II.2.1. Acceptance criteria

When tested in the laboratory the obtained performance data shall not differ from the declared values by more than the applicable tolerance values given in the (NF536) reference document.
If any of individual points of measurement shows a deviation larger than the acceptable tolerance, the failure shall be declared, and the failure procedure applied.

II.2.2. Energy Efficiency Classification and Labelling

An efficiency class is determined for each of the 4 categories of pollutant from the corresponding Clean Air Efficiency (CAE) values.

Thresholds are set as described in Table 1 below.

Table 1 : Clean Air Efficiency thresholds for each efficiency class

Clean Air Efficiency class	*Clean Air Efficiency value*
A	13 $m^3/h/W \leq CAE$
B	7 $m^3/h/W \leq CAE < 13\ m^3/h/W$
C	5 $m^3/h/W \leq CAE < 7\ m^3/h/W$
D	2 $m^3/h/W \leq CAE < 5\ m^3/h/W$
E	$CAE < 2\ m^3/h/W$

II.2.3. Traceability

The provisions of the Certification Manual apply.

II.2.4. Management of customer claims

Customer claims and their treatment related to certified products shall be done, recorded, and maintained available.

II.3. Marking

It is highly recommended that the participating company indicates participation in the EUROVENT CERTIFIED PERFORMANCE (ECP) programme for Air Cleaners by the following means.

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

The Eurovent Certification mark consists of:

- Eurovent Certification mark in conformity with the design as presented in the Certification Manual, Appendix G. The accepted color combinations consist of green pantone n°341 on white, or black on white. Any size of Eurovent Certification mark may be used.
- Identification number provided by Eurovent Certita Certification when the certification is granted.

Figure 1: Illustration of the EUROVENT CERTIFIED PERFORMANCE (ECP) mark

II.3.1. Display of Eurovent Certified Performance logo on production units

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

The Eurovent Certification Performance logo may be affixed on each product or applied as part of the product label.

Each Participant is entitled to display the Eurovent Certified Performance mark on each production unit of models which have been certified. The Participant may affix the certification mark at any location thereon satisfactory to him. The Eurovent Certified Performance mark may be applied as part of nameplate of certified models providing it meets the requirements stated in Certification Manual.

Whenever the participant applies the Eurovent Certified Performance mark on the product or its packaging, it shall be done in compliance with the design, minimum size and proportions presented in the Certification Manual. Also, the Eurovent Certified Performance mark shall include in the dedicated area (see Certification Manual) the name of the relevant programme the product is certified for, i.e. “Air Cleaners” or the corresponding short name “ACL”.

II.3.2. Display of Eurovent Certified Performance logo on technical documentation

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

When used in technical documentation as defined in the Certification Manual (electronic and printed catalogues, websites, specification sheets), carrying ratings or claiming certification of certified models, the Eurovent Certified Performance mark shall be used only for certified products. Non-certified products shall be clearly distinguished or presented in a separate document.

Whenever displayed on technical documentation, the ECP mark shall include in the dedicated area (see Certification Manual) the name of the relevant programme the product is certified for, i.e. “Air Cleaners” or the corresponding short name “ACL”.

The Eurovent Certified Performance mark alone may be used in literature without certified performance data (general leaflets, advertising etc).

When used in literature containing the certified performance data (technical catalogues and leaflets) the Eurovent Certified Performance mark shall be used only once and shall be associated with the following statement (e.g. by footnote):

NAME OF COMPANY participates in the Eurovent Certified Performance Programme for Air Cleaners; Check ongoing validity of certificate online: www.eurovent-certification.com

Following the admission procedure the basic documentation literature shall be submitted for approval to Eurovent Certita Certification. It shall be the responsibility of the participant to ensure compliance of other published literature.

II.3.3. Display of the Clean Air Efficiency label on technical documentation

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Whenever displayed on technical documentation, on the product itself or on packaging, the Clean Air Efficiency label dimensions shall be at least 110 mm wide and 160 mm high. Any higher size may be used if proportions are respected.

It is not mandatory to use Eurovent Certified Performance energy labels however it is highly recommended to do so. If an energy label is used by the participant, it is mandatory to use the layout described on our website.

High resolution files of these labels, as well as specifications for the layout are available on the website in the manufacturer's restricted area.

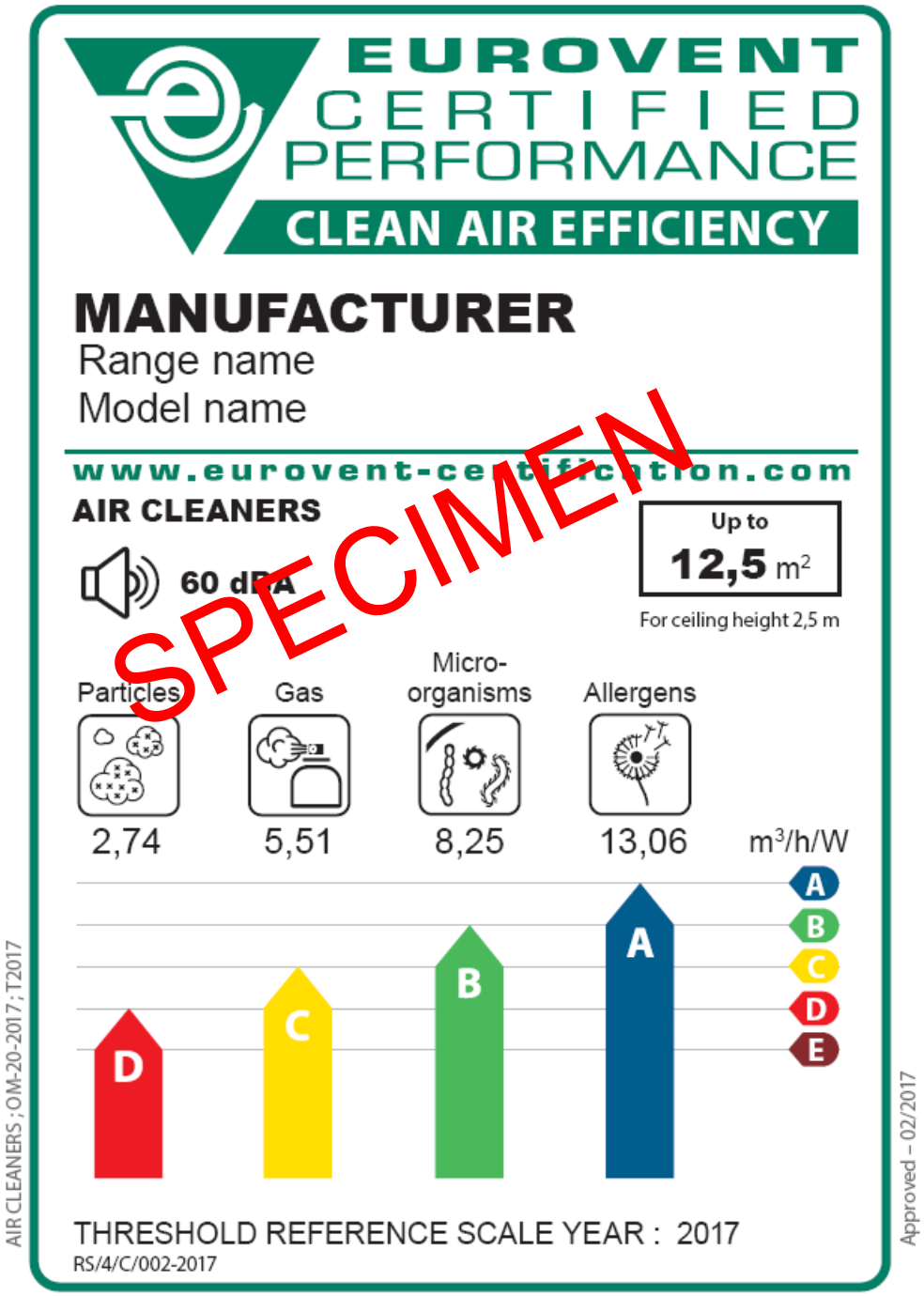


Figure 2 : Example of Clean Air Efficiency label

III. CERTIFICATION PROCESS

III.1. Admission procedure

III.1.1. Declaration of data

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

The Applicant, after signing the Certification Agreement, shall send to Eurovent Certita Certification all information required for the qualification: Test reports, Declaration file and relevant literature.

All characteristics and performances shall be expressed in SI units.

Details regarding significant figures are given in NF536 reference document.

Submittal of data shall be made by filling in the forms and provide to Eurovent Certita Certification the documents specified in NF-536 reference document.

In case the Applicant/Participant wishes to limit the ACL certification to specific models, the Declaration file shall be used to identify these models.

The applicant shall inform Eurovent Certita Certification of any modification of the product portfolio by updating the forms and documents specified in NF-536 reference document. Non-compliance of the applicant/participant is considered as non-application of procedures (see §III.1.4.2).

Submittal of data shall be made by filling in the forms provided by EUROVENT CERTITA CERTIFICATION as .xls or .xlsx files. The forms shall be sent by e-mail to EUROVENT CERTITA CERTIFICATION**.**

- for manufacturing companies (Original Equipment Manufacturer – OEM) to declare ranges, Basic Model Groups (BMG), performance ratings and technical data.
- for Brand Name (BN) companies to identify the corresponding model's number of the original equipment manufacturer

Confidentiality of certification data: All data submitted to Eurovent Certita Certification will be held confidential except for information authorised to be published in the Eurovent Certified Performance website.

III.1.2. Admissibility of the application

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

If the Applicant is already participating to the "NF536 Air Cleaners" certification scheme, application to the ACL programme consists in signing the corresponding License Agreement. Then the qualifying procedure for the ACL mark consists in verifying that the Applicant complies with the rules displayed in the Certification Manual of the Eurovent Certified Performance mark

By default, certification under the ACL programme applies automatically to all models certified within the "NF536 Air Cleaners" scheme. The Applicant may however limit the ACL certification to specific models, using the relevant Declaration file.

If the models are not certified under the "NF536 Air Cleaners" mark yet, the Applicant shall complete the Application procedure and Qualifying procedure within the "NF536 Air Cleaners" certification scheme in addition to signing the License Agreement (see also §III.1.1).

Once the test results and audit conclusions prove all the declared models are compliant with the requirements specified in NF536 reference document and that all other requirements from the Eurovent Certified Performance mark Certification Manual are fulfilled, the ACL certification is granted until maximum 15 months after the foreseen audit period. If not, the procedure for failure treatment shall be applied.

When certified, the models are published on the Eurovent Certified Performance (ECP) website as specified in §V.1. Once the certificate is received, the participant is entitled to use the ECP certification mark according to applicable requirements (see §V.2).

III.1.3. Implementation of checking operations

III.1.3.1 Initial admission audit

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details about the initial admission audits are displayed in NF536 reference document.

Audit non-conformity

After evaluation, a non-conformity is classified as critical when, based on objective evidence, the following cases are identified:

- there is a significant risk to the product conformity with respect to specified requirements.
- there is a significant risk regarding the quality management system ability to control the product conformity to specified requirements.
- there is systematic or repeated non-conformity to a specified requirement.

Otherwise, the non-conformity is classified as not critical.

In case of non-conformity, the applicant/participant shall be requested to provide Eurovent Certita Certification with a corrective action plan within the deadline specified by the auditor.

III.1.3.2 Selection of units to be tested

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details regarding the selection of units to be tested for the admission procedure are given in NF536 reference document.

III.1.3.3 Tests at the independent laboratory

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Tests shall be performed at the independent laboratory selected by Eurovent Certita Certification at the conditions detailed in NF536 reference document.

a. Time limitation of acquisition and recovery of units

The provisions of the Certification Manual apply.

Once all the tests for the campaign are finished, the applicant may recover the device. The applicant must inform ECC about its decision within one month after the reception of the last test results report.

b. Test conditions

Tests shall be performed at the conditions detailed in NF536 reference document.

c. Failure treatment

General requirements for failure treatment are stated in the dedicated paragraph of the Certification Manual.

Failure treatment conditions are detailed in relevant paragraphs of the NF536 reference document.

III.1.3.4 Software checking procedure

Not applicable

III.1.3.5 Desk study

Details regarding the desk study are given in NF536 reference document.

III.1.4. Evaluation and decision

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details are given in NF536 reference document.

Once the test results and audit conclusions prove all the declared models are compliant with the requirements specified in NF536 reference document and that all other requirements from the Eurovent Certified Performance mark Certification Manual are fulfilled, the ACL certification is granted until maximum 15 months after the foreseen audit period. If not, the procedure for failure treatment shall be applied.

III.1.4.1 Penalty tests

Not applicable

III.1.4.2 Non-application of procedures

The general consequences of non-application of procedures are described in the relevant paragraph of the Certification Manual.

III.1.4.3 Publication of certified data by Eurovent Certita Certification

The certified data of the certified products are published on the Eurovent Certified Performance website: www.eurovent-certification.com .

Eurovent Certita Certification will supply, on request, to any interested party, the current status of any participant or of any model (new, certified, deleted or obsolete).

The following data are published:

- Name of Company
- Trade or brand name
- Certificate number
- Model reference and designation
- Certified characteristics and performance items according to NF-536 reference document
- Clean Air Efficiency class as detailed in §II.3.3
- Production sites (city, country)

III.2. Surveillance procedure

The provisions of the Certification Manual apply.

III.2.1. Implementation of surveillance operations

III.2.1.1 Surveillance audit

In addition to the provisions laid down in the Certification Manual and in §III.1.3.1, the following requirements apply:

The auditor will check that the ECP mark is displayed on the production units and on the documentation in compliance with the requirements specified in paragraph §II.3;

III.2.1.2 Selection of units to be tested

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details regarding the selection of units to be tested for the surveillance procedure are given in NF536 reference document.

III.2.1.3 Surveillance tests

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details regarding the surveillance tests are given in NF536 reference document.

III.2.1.4 software checking procedure

Not applicable

III.2.1.5 Desk study

Not applicable

III.2.1.6 Technical and commercial documentation check

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details are given in NF536 reference document.

III.2.2. Evaluation and decision

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

- The previous test campaign has been successfully completed within the “NF536 Air Cleaners” certification scheme;
- The audits scheduled in the frame of the “NF536 Air Cleaners” certification scheme have been performed by the auditor and are successful or the corrective actions plan is considered satisfactory;
- The independent laboratory has received all the necessary elements (units to be tested and related documentation) to conduct the tests of the ongoing campaign;
- The Participant still complies with the rules displayed in the Certification Manual, notably regarding correct use of the ECP mark.

The company receives then renewed certificate(s) and the display of data is maintained on the Eurovent Certified Performance (ECP) website. If not, failure treatment shall be applied.

The ACL certificate is valid until maximum 18 months after the renewal date. Besides, it is understood that the ACL certificate validity is directly linked to the validity of the corresponding NF536 certificate (If applicable). Any admission, suspension or withdrawal that may occur in the frame of NF536 certification scheme automatically applies to the ACL programme.

III.2.2.1 Failure treatment

When the test or the audit results fail to comply with the requirements specified in NF-536 reference document, the corresponding failure treatment shall be applied.

III.2.2.2 Challenge procedure

Under special conditions a challenge procedure may be carried out as described in the Certification Manual.

III.3. Declaration of modifications

The provisions of the Certification Manual apply.

III.3.1. Changes concerning the participant

The provisions of the Certification Manual apply.

III.3.2. Changes concerning production entities

The provisions of the Certification Manual apply.

III.3.3. Changes concerning the quality organisation of the manufacturing and/or marketing process

The provisions of the Certification Manual apply.

III.3.4. Additional admission for a new model and/or new range

The provisions of the Certification Manual apply.

III.3.5. Changes concerning the certified product

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

Details are given in NF536 reference document.

III.3.6. Temporary or permanent cessation of production of a certified product

In addition to the provisions laid down in the Certification Manual, the following requirements apply:

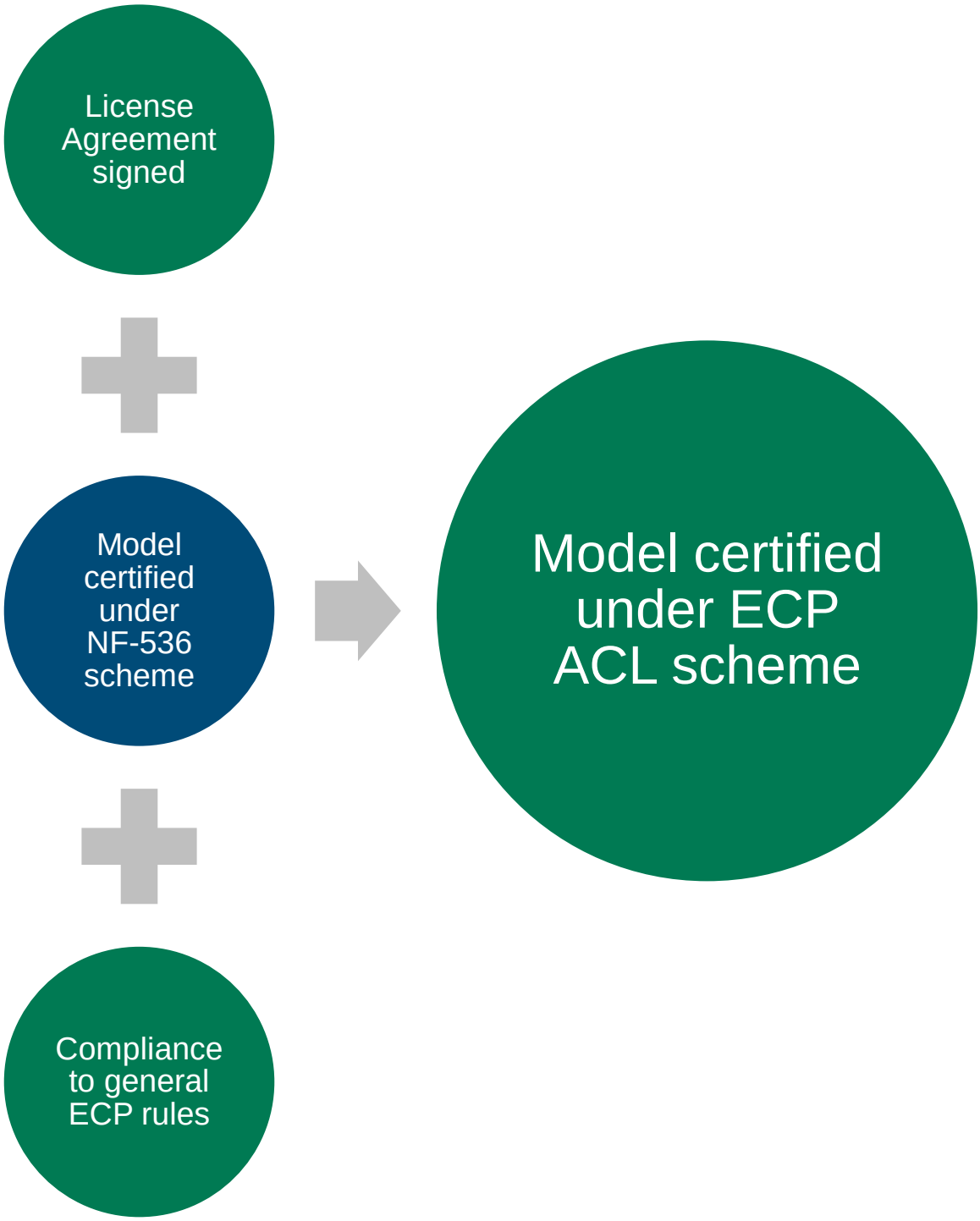
Details are given in NF536 reference document.

III.4. Suspension/cessation conditions

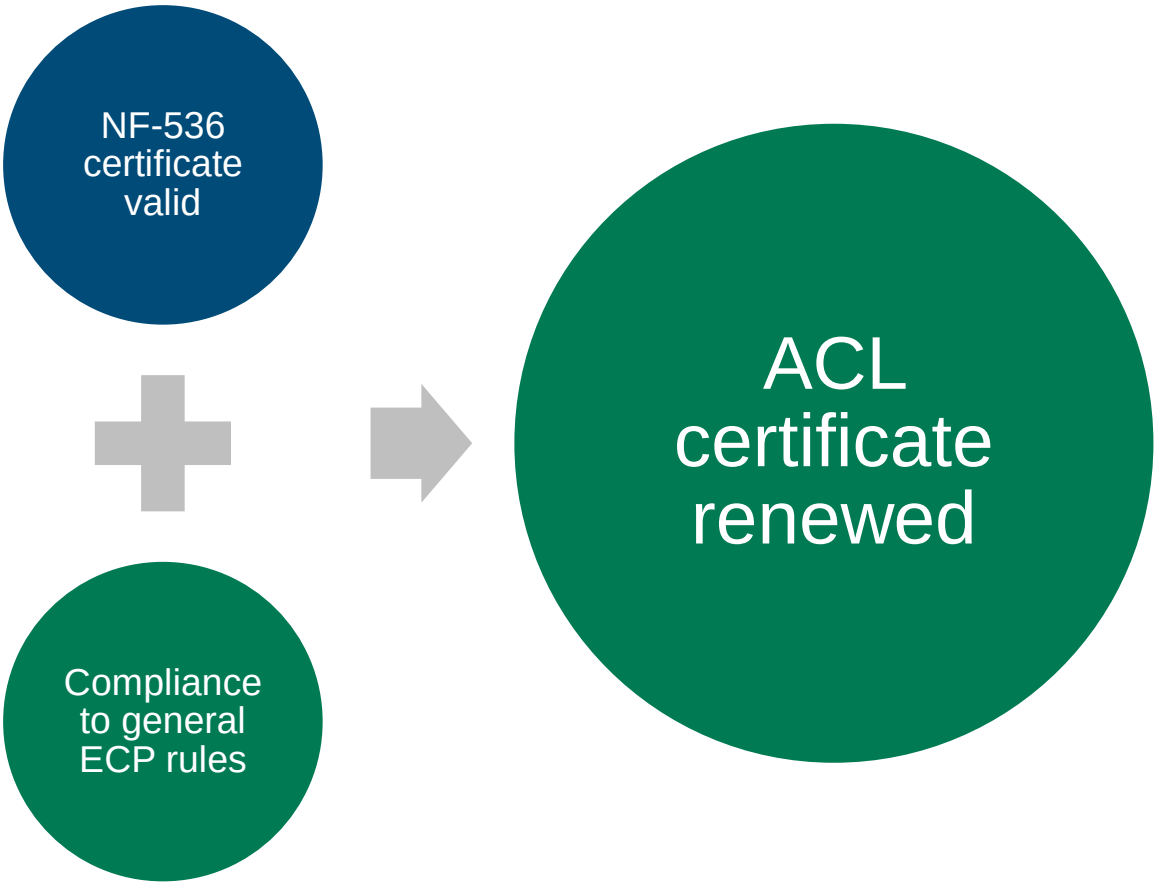
The provisions of the Certification Manual apply.

APPENDIX A. CERTIFICATION PROCESS AND SCHEDULE

A.I. Qualification procedure



A.I. Repetition procedure



Performances on line
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