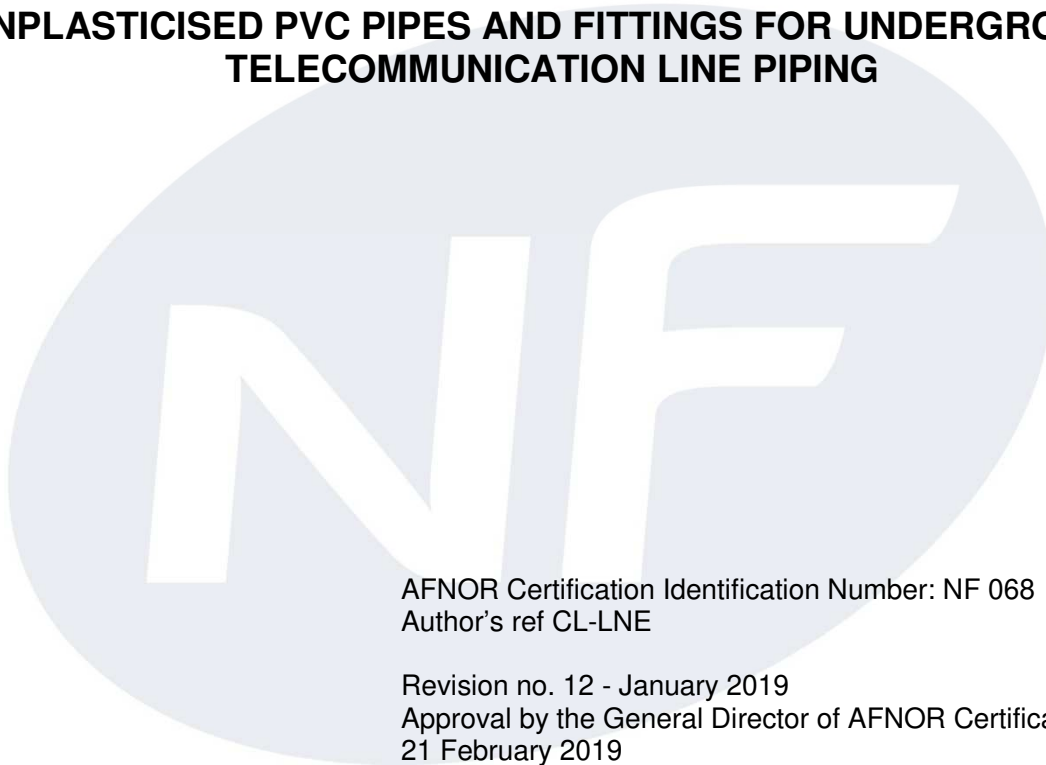


CERTIFICATION RULES

NF MARK

UNPLASTICISED PVC PIPES AND FITTINGS FOR UNDERGROUND TELECOMMUNICATION LINE PIPING



AFNOR Certification Identification Number: NF 068
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21 February 2019

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Reference document:
NF STANDARD GENERAL RULES
Approved by the president of AFNOR on the 23rd of April 2012

Only the French version of this document shall be considered as the authentic text

Founded in 1938, the NF standard is a collective certification standard, whose aim is to certify the conformance of products with the relevant national, European and international normative documents, which may be supplemented by additional specifications, under the conditions defined by certification reference standards. It is given by AFNOR Certification, and its network of partner bodies, which make up the NF network.

The NF standard is a voluntary standard for products, which meets the requirements of the French Consumer Code, notably by involving the interested parties in the validation of certification reference standards, by defining the rules under which certified products receive the standard and by providing clear and transparent information on the most important characteristics certified.

The right to use the NF standard is given based on conformance with the standard(s) and generally, with the totality of a certification reference standard, for a product coming from an applicant and a designated design and/or manufacturing and/or commercial process. Granting a right of use will under no circumstance make LNE liable for the responsibilities which legally fall on the holder of the right of use of the NF standard.

The NF standard checks the safety aspects of people and goods, the aptitude for use and durability of the products as well as any other characteristics which allow the products to stand out in the market.

The applicable documents for this certification are:

- The NF standard general rules, which deal with the general organisation and the conditions of use of the standard.
- The current certification rules, which define, particularly in section 2, the technical characteristics to follow.

In accordance with the General Rules of the NF standard, AFNOR Certification entrusts the management of NF standard 068 to LNE, known as the mandated certifying body.

LNE is accountable to AFNOR Certification for the tasks entrusted, and which are covered by a contract with AFNOR Certification.

Reminder:

All products or services must conform to regulations, regardless of whether certification is sought, for example with regards to counterfeiting, conformity and safety obligations etc.

CERTIFICATION RULES



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These certification rules have been submitted for approval by AFNOR Certification, for acceptance into the NF certification system. They have been approved by AFNOR Certification's legal representative.

They cancel and replace any previous versions.

The certification rules may be revised, wholly or partially by LNE, after consultation with the interested parties.

UPDATES

Certification rules	Reason for update (with respect to previous version)	Version	Date
Entire document		Rev. 12	January 2019
Section 1: Scope of Standard	Paragraph 1.2 added definition of processable material	Rev. 12	January 2019
Section 2: Manufacturer quality requirements	Paragraph 2.1 Clarification regarding the use of lead in formulations with or without external recycled materials Paragraph 2.1 Colour charts replaced by the RAL chart. Paragraph 2.2 Change to the quality management requirements linked to the revision of ISO9001:2015 and with respect to the duration of audits.	Rev. 12	January 2019
Section 3: Acquiring certification	Paragraph 3.1 Update of presentation and form 1b	Rev. 12	January 2019
Section 4: Monitoring of certified products – Modifications and developments	Editorial updates	Rev. 12	January 2019
Section 5: Participants		Rev. 12	January 2019
Section 6: Applicable fees – Invoicing terms	Paragraph 6.1.2 Addition of travel and living expenses to the schedule of fees	Rev. 12	January 2019

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Rev. 12 - January 2019

1.1. SCOPE

These certification rules apply to compact unplasticised PVC pipes and fittings for the installation of underground telecommunication cables.

The applicant/holder has the responsibility to ensure that the rules and regulations applicable to their product are adhered to correctly.

The applicant/holder is solely responsible for the compliance of their products. LNE tests cannot replace the applicant/holder's responsibility.

1.2. DEFINITIONS

Applicant/holder:

A legal person who manages and/or is responsible for meeting all of the requirements defined in these certification rules.

These requirements cover at least the following stages: design, manufacturing, assembly, quality control, marking, packaging as well as the marketing and specify the critical points of the various stages.

When the manufacturer is not established in the European Community, they must nominate an agent.

Agent:

A natural or legal person established in the European Economic Area (EEA) who represents the applicant/holder outside the EEA and has a written mandate from them stating that they can act on their behalf in the NF certifying process, in accordance with provisions of these rules.

The agent may be the distributor or importer. Their duties are clearly identified.

Distributor:

A legal person who distributes the applicant/holder's products, or those of their agent, and who does not work on the product, nor its packaging. When the distributor places NF certified products on the market independently of the agent, it assumes responsibility for verifying that the products conform to the applicable NF certification rules and standards.

The following may act as distributors:

- Distributors who distribute the product under the holder's commercial trademark. In this case, no action is required with regard to the NF standard.
- Distributors who distribute the product under a different trademark. The applicant/holder and the distributor must file an application to maintain the right of usage.

Fittings:

Refer to the elbows and sleeves. Elbows are usually manufactured from the PVC pipes.

PVC pipes:

Compact unplasticised PVC pipes.

Formulation:

Mixture of PVC and additives (compound, dry-blend, one pack etc) necessary for use and colour, which is easily identified.

Processable material:

Materials obtained by grinding and/or repelletising by the applicant/holder of pipes they have manufactured, made with a virgin material with the same formulation.

Family: Set of products intended for the same use and which is of the same composition:

- compact unplasticised PVC pipes for the installation of underground telecommunication cables (abbreviated as TLST)
- compact unplasticised PVC fittings for the installation of underground telecommunication cables (abbreviated as ALST)

Types of pipes:

Products whose dimensions (Dn x WT) and the material are identical
(e.g.: pipes measuring 45 x 1.8 mm = 1 type)

Types of fittings:

Products whose shape and material are identical
(e.g. a sleeve measuring 45 x 1.5 mm = 1 type, an elbow 45 x 1.8 mm, 45°, MF, r 525 = 1 type, an elbow 45 x 1.8 mm, 45°, MF, r 725 = 1 type)

Fittings shaper:

A company which manufactures the fittings, rather than the pipes.

1.3. NF STANDARD

The NF standard is represented by the NF logo, which is shown below:



The standards for marking the products, packaging and technical and commercial documents are defined in section 2.

The NF graphic charter is available upon request from LNE.

The standard's rules are designed to aid the holder with the regulatory requirements and NF certification requirements. NF's General Rules detail the terms of use, conditions and sanctions applicable in case of improper use of the NF standard.

Without prejudice to the sanctions listed in the NF standard's General Rules, any wrongful advertisement of the certified items, or any fraudulent use of the NF logo, leaves the holder liable to be pursued for fraud and/or false advertising.

1.4. CERTIFIED PRODUCTS

A list of certified products and certificates is available online at: www.lne.fr through the use of the certificate search function in the website, by going to “Certified Space - Certified Companies/Products - Certificates emitted by LNE” section of the site.

Upon request, LNE provides information on the validity of a given certificate.

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SECTION 2 APPLICANT/HOLDER REQUIREMENTS

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2.1 PRODUCT REQUIREMENTS

2.1.1 REFERENCE STANDARDS

NF T 54-018 (April 2008) - Plastics - Unplasticised PVC pipes for the installation of underground telecommunication cables.

2.1.2 SUPPLEMENTARY SPECIFICATIONS

The NF standard reference specifications are defined in the table below.

They are based on the above mentioned standard. They may contain additions or modifications, and they over-rule the regulation's specifications and methods.

In addition to the requirements given in Chapter 4 of the reference standard, when pipes and fittings are extruded using virgin or processable materials (see definition in section 1 - paragraph 1.2), this must be done using a formulation (such as mix, compound, dry-blend, one pack etc.) free of lead-based stabilisers.

When pipes and fittings are extruded using external recycled materials, this must be done using a formulation (such as mix, compound, dry-blend, one pack etc) free of lead based stabilisers. However, they may contain lead levels from the recycling (e.g. from joinery profiles.) In that case, the applicant/holder must be able to demonstrate that the lead content present due to the recycled materials is inferior to that allowed in the REACH regulations.

TABLE 1 - SPECIFICATIONS FOR PVC PIPES AND FITTINGS FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATION CABLES

Characteristics and test methods (1)	Specifications	
	Pipes	Fittings
Appearance	(2)	(2)
Dimensions NF T 54-018	See table 2	See tables 3 and 4
Density NF EN ISO 1183-1 method A	1370 - 1460 kg/m ³	
Vicat softening temperature NF T 54-018 + NF EN 727	≥ 78°C	
Tensile properties NF T 54-018 + NF EN ISO 6259-1 and 6259-2 + paragraph 2.1.3. Maximum stress Elongation at break	$\sigma \geq 45 \text{ MPa}$ $\epsilon \geq 100\%$	
Shrinkage at 150°C NF T 54-018 + NF EN ISO 2505	$T \leq 5\%$	
Impact testing NF T 54-018 + paragraph 2.1.3.4	See NF T 54-018	
Natural ageing test NF T 54-018 Appendix D	$\sigma \geq 45 \text{ MPa}$ ≥ 80% after exposure for 6 months	

(1) The versions of the standards cited are those which are current on the date of review (see update page), unless otherwise stated by LNE.

- (2) The pipes and fittings must not contain any defects which are visible to the naked eye. These include scratches, marks, specks, cracks, or holes which render them unusable. They must be of the same colour (between Agate Grey RAL 7038 and Stone Grey RAL 7030). Their walls must be opaque.

TABLE 2 - DIMENSIONS OF THE PVC PIPES FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATION CABLES

According to NF 54-018

- Rod length (L): $6 \text{ m} \leq L \leq 6.06 \text{ m}$

For specific orders, the lengths, including sockets, may differ, as long as this has been agreed contractually, and as long as the tolerances of $\pm 1\%$ are respected.

- Other dimensions:

Nominal diameter Dn (mm)	Nominal Thickness WT (mm)	Average outer diameter (mm)	Wall Size (1) (mm)	Ovality (2) (mm)	Socket		
					Inner Diameter (Di) (mm)	Depth (D) (mm)	Eccentricity
28	1.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	28 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.2$	1	$28 \leq Di \leq 28.3$	$28 \leq D \leq 33$	gauge measurements in accordance with appendix A of the NF T 54-018 regulation.
33	1.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	33 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.2$	1	$33 \leq Di \leq 33.3$	$33 \leq D \leq 38$	
45	1.8 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	45 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.2$	1	$45 \leq Di \leq 45.3$	$45 \leq D \leq 50$	
60	2.0 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	60 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.3$	1	$60 \leq Di \leq 60.3$	$60 \leq D \leq 66$	
80	2.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	80 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.3$	1	$80 \leq Di \leq 80.3$	$80 \leq D \leq 88$	
100	2.0 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	100 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	$-0.2 \leq \text{wall size} \leq +0.3$	2	$100 \leq Di \leq 100.3$	$100 \leq D \leq 110$	

(1) Wall size: Inner diameter - outer diameter

(2) Maximum measured diameter - minimum measured diameter

TABLE 3 - DIMENSIONS OF THE PVC PIPE FITTINGS FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATION CABLES

Sleeves

- Sleeve length $L = 200 \pm 5$ mm
- Other dimensions:

Nominal diameter Dn (mm)	Thickness (mm)	Inner Diameter (Di) (mm)	Ovality (1) (mm)
28	1.5 ^{+0,5} -0	$28.2 \leq Di \leq 28.5$	1.0
33	1.5 ^{+0,5} -0	$33.2 \leq Di \leq 33.5$	1.0
45	1.5 ^{+0,5} -0	$45.2 \leq Di \leq 45.5$	1.5
60	1.5 ^{+0,5} -0	$60.2 \leq Di \leq 60.5$	2.0
80	1.5 ^{+0,5} -0	$80.2 \leq Di \leq 80.5$	2.5
100	1.5 ^{+0,5} -0	$100.2 \leq Di \leq 100.5$	4.0

(1) Ovality: maximum outer diameter - minimum outer diameter

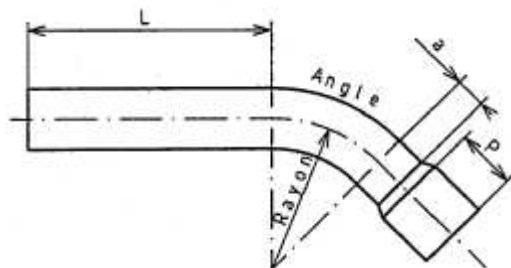
TABLE 4 - DIMENSIONS OF THE PVC PIPE FITTINGS FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATION CABLES

Elbows

- Sleeve lengths $L = 200 \pm 5$ mm (see diagram). This length is not mandatory for FF elbows.
- Other dimensions:

Nominal diameter Dn (mm)	Nominal Thickness (mm)	Diameter Outer (mm)(1)	Sockets (3)		Angle (°)	Orifice (2)	Radius (mm) ($\pm 0.05 R$)					
			Inner Diameter (Di) (mm)	Depth (D) (mm)								
28	1.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	28 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	28.2 ≤ Di ≤ 28.4	28 ≤ D ≤ 33	45	FF	210					
						MF	525					
					60	FF	210					
						MF	210					
33	1.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	33 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	33.2 ≤ Di ≤ 33.4	33 ≤ D ≤ 38	45	MF	525					
						90	MF	210				
45	1.8 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	45 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	45.2 ≤ Di ≤ 45.4	45 ≤ D ≤ 50	45	MF or FF	525					
						MF	725					
					60	MF or FF	250					
						90	MF or FF	210				
60	2.0 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	60 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	60.2 ≤ Di ≤ 60.4	60 ≤ D ≤ 66	45	MF	525					
						MF or FF	725					
					60	MF or FF	250					
						90	MF or FF	210				
80	2.5 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	80 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	80.2 ≤ Di ≤ 80.4	80 ≤ D ≤ 88	45	MF	725					
						90	MF	360				
					100	2.0 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	100 $\begin{smallmatrix} +0,3 \\ -0 \end{smallmatrix}$	100.2 ≤ Di ≤ 100.4	100 ≤ D ≤ 110	45	MF	725
											90	MF

- (1) average outer diameter measured on the right side
- (2) MF = Male/Female - FF = Female/Female
- (3) A straight length (a) is authorised between the socket and the elbow if it was manufactured mechanically, as long as it is ≤ 100 mm



2.1.3 FURTHER TESTING METHODS

2.1.3.1 Tensile testing

Carry out the test on 5 samples as per the NF EN ISO 6259-1 standard, as follows:

- Samples:

. the shape is defined in NF EN ISO 527-3: type 5 - calibrated part is 25 mm.

. sample slicing: using a cutter (or by machining it. The latter method is used in case of disputes with regards to the results.) For information: if die-cutting is used, the strips may be pre-heated at $130 \pm 5^\circ\text{C}$ for 1 minute per millimetre of thickness.

. section measurement: a screw-type micrometer is recommended, with cylindrical flat contact surfaces, with a diameter of 2 mm (NF E 10091 standard)

- Reporting of tensile test results: the average measurement taken on 5 samples.

- Measurement of elongation at break: the reference method for measuring elongation at break is that which has been established by the standard's laboratory, with extensometers. Comparison measurements after break are possible.

2.1.3.2 Reversion test

The reference method for carrying out the longitudinal reversion test is the heated water method.

However, the air oven method is also acceptable, under the following conditions:

- Oven temperature: $150 \pm 2^\circ\text{C}$
- Heating time: 60 ± 1 min
- Sample length: 200 ± 20 mm (a different length may be used for equipment-related safety reasons)
- Heat mapping must be carried out on the hot air oven, in order to ensure temperature stability and homogeneity.
- The holder must demonstrate that there is a correlation between each method, to ensure that results obtained with the use of the hot air oven are valid.

2.1.3.3 Falling weight impact testing

The reference method for preparation of the samples to be used in the falling weight impact test is the immersion of the samples in a cold water bath (with a homogenous temperature of $0 \pm 1^\circ\text{C}$) for a minimum of 15 minutes.

However, preparation is also permitted in cold air, under the following conditions:

- Air temperature in the chamber: $0 \pm 1^\circ\text{C}$,
- Length of preparation time: Minimum of 60 minutes,
- The holder must demonstrate that there is a correlation between the methods, to ensure that results obtained with the use of samples prepared in cold air are valid.

In case of dispute, the reference preparation method is the immersion of the samples in a cold water bath.

2.1.3.4 Natural ageing test

Time of exposure

The chosen time is 6 months.
Exposed at the beginning of each half-year.

Tensile test

The tensile test is carried out on 5 samples, taken from the aged sheet, as per the instructions given in NF EN ISO 527.
Sampling Speed: 5mm/min

Reporting of results:

The average and standard deviation of 5 separate readings.

2.2 REQUIREMENTS FOR THE QUALITY MANAGEMENT SYSTEM (FOR PIPE AND FITTING MANUFACTURERS AND THE NON-EXTRUSION MANUFACTURERS)

The current chapter lists the minimal quality management system requirements which the applicant/holder must meet in order to use the NF standard. This assures that products which use the NF standard are manufactured in accordance with the current certification rules.

An efficient quality management system is required to manage the production of certified products and to test the raw materials to be used in the finished product before, during and after manufacture.

2.2.1 LEADERSHIP

2.2.1.1 Quality policy

The applicant/holder's management must establish a quality policy, its objectives and reach. They must be up-to-date. They must also be communicated, understood and used within the company.

2.2.1.2 Roles, responsibilities and authority within the company

2.2.1.2.1 Responsibilities and authority

The management must ensure that people's responsibilities and authority are communicated to every person involved:

- In the production stages, who may have a direct effect on the product's quality
- In testing
- In the release of the conforming product
- In the evaluation and remedy of the non-conforming product

The management must ensure that the responsibilities and authority are defined in such a way as to assure that the requirements of the certification rules are implemented permanently.

2.2.1.2.2 Testing means and staff

The applicant/holder must:

- Identify and implement measures to monitor the quality of the finished product, during the appropriate stages (upon receipt, during manufacture and on the finished product.)
- Foresee the necessary tests

2.2.1.2.3 Training

Staff:

- who carry out work which will affect the quality of the finished product
- who work in the manufacture of the certified products

must be competent, with appropriate initial and professional training, knowledge and experience.

In order to assure this, the applicant/holder must:

- a) Determine the necessary competencies of the staff who carry out work affecting the quality of the finished product, as well as those who work in the manufacture of the certified products.
- b) Carry out actions in order to acquire the necessary competencies and to evaluate the efficacy of these actions, if needed.
- c) Assure that competence is maintained.

- d) Keep document evidence of competence (i.e. initial and professional training, further training, knowledge and experience.)

2.2.2 PERFORMANCE EVALUATION

2.2.2.1 Internal audit

Internal quality audits must be carried out at planned intervals in order to establish whether the quality management system meets the requirements placed by the applicant/holder as well as those listed in the certification rules.

The applicant/holder must keep the results of these internal audits, and carry out any appropriate corrective action(s).

2.2.3 DOCUMENT MANAGEMENT

Quality management system documentation must be read, evaluated and approved before being disseminated by authorised persons. Quality management system documentation must be managed in such a way as to ensure that only valid documents are available.

The holder/applicant must manage the documented information. To do this, they must carry out the following actions, when applicable:

- a) Approve documentation, with regards to their adequacy, before dissemination.
- b) Review and update documents if necessary.
- c) Ensure that any modifications, and the validity period of the documents are identified.
- d) Ensure the availability of the documents wherever they are required.
- e) Ensure that the documents are legible and easily identifiable.
- f) Ensure that external documents are identified, and that their dissemination is managed.
- g) Prevent any unintentional use of expired documents and identify them appropriately if they are kept for any reason whatsoever.

2.2.4 PURCHASES

2.2.4.1 Purchase specifications

The holder/applicant must ensure that the purchased product conforms to the purchase specifications.

To do this, they must identify the requirements that they will place on the supplier, the checks to be carried out on supplied products, as well as any other steps necessary to ensure that the purchased products satisfy the purchase specifications. The importance of a purchased product on the conformance of a final product will determine the type and scope of any requirements placed on suppliers and purchased products.

Purchase documents must describe the purchased product, its reference and, where appropriate, they must state the applicable version of the purchase specifications.

2.2.4.2 Subcontracting of NF manufacturing

Subcontracting operations (defined as manufacturing carried out by a different production unit to the one that is managing the commercial contract, the unit subcontracting out the work) are governed by the following principles:

- They are only permitted to take place between standard holders.

- The holder who contracting the work out is responsible for the conformance of the NF certified products, in accordance with the certification rules. In the case of non-conformance, the necessary checks must be carried out either at the manufacturer's site, or the site of the unit contracting out the work, in keeping with the quality duties adopted for the subcontracted work.
- The subcontracted duties must be agreed to in advance by LNE, and they must be clearly recorded, both by the subcontractor manufacturer and by the subcontracting unit (in particular, lot number and identification of the manufacturer outsourcing the work and any testing carried out must be recorded).
- Orders must state clearly which product is being ordered (reference, technical specifications, quantity, deadlines etc.) They must make reference to the specifications made in the design brief and, if applicable, they must indicate the Certificate of Analysis request.

This does not apply to commercial distribution operations.

2.2.5 IDENTIFICATION AND TRACEABILITY

The applicant/holder must provide instructions to allow for the identification of the product. They must be marked in according with the requirements of paragraph 2.3 below.

The NF standard requires traceability. Unique product identification must be managed at every stage of the manufacturing process, by defining the rules to follow and the appropriate means to carry this out.

Identification must allow the product and its history to be traced. It should be possible to trace the lot numbers of the raw materials used and the tests carried out upon their receipt, during the manufacturing and on the final product.

The applicant/holder must also determine the state of the products and compare them to the monitoring and measurement requirements, throughout the entire production process (from the time of receipt, until the product is finished). They must keep any documentation required for traceability.

2.2.6 PRODUCTION MANAGEMENT

Production must be managed at every stage of the process.

This is the case from the start of manufacturing, until the final product is packaged, if applicable.

To do this, the applicant/holder should:

- Define the methods of production associated with the pipes and fittings.
- Define the production parameters for each type of pipe and fitting, at each stage of production.
- Allow access during manufacture for: manufacturing instructions, pipe and fitting specifications, testing schedules and associated monitoring equipment.

The manufacturing equipment must be kept in good condition.

The applicant/holder must arrange for checks and periodic maintenance tasks to be carried out on manufacturing equipment. The applicant/holder must keep the relevant records of this.

For shapers, the fittings must be made using NF pipes.

2.2.7 TESTING

Responsibilities and authority within a company must be given to people who carry out testing and who release conforming products.

2.2.7.1 Tests to carry out upon receipt

The applicant/holder must ensure that products purchased are used only after they have been shown to conform to the purchase specifications.

For example, using defined and regular testing upon receipt, Certificates of Conformity to technical specifications given by the suppliers, or design briefs.

Tests carried out must be recorded, along with acceptance criteria, and any decisions made in the case of non-conformance.

2.2.7.2 Tests carried out on products which are being manufactured and those which are finished

The applicant/holder must implement the planned actions, at the appropriate time points, in order to check that the specified requirements are being satisfied.

They must assure themselves that every required test has been carried out at the specified frequencies. This applies during receipt of the product (see paragraph 2.2.7.1), manufacture and on the finished product (see table below). The results must show that the product conforms with the specified requirements.

The testing plan must ensure that the products which conform to the requirements listed in paragraph 2.1. It must at least contain tests described below.

Samples must be taken in a manner which is representative of the production during the determined time period.

The results of these tests must be recorded, along with the acceptance criteria and any decisions made in the case of non-conformance.

The client must not be given the products before all planned tests have been carried out satisfactorily.

Measures or tests (as per paragraph 2.1)	Frequency	Pipes	Pipes for elbows	Sleeves
Dimensions Appearance Colour Marking	Per extruder: 1 every 2 hours (every type)	X	X	X
Density	1 test per month (1 random type from the stock)	X	X	X
Vicat softening temperature	(1 test every 6 months) (1 random type from the stock)	X	X	X
Tensile properties	Per extruder: • 1 test (with 5 samples) per run (2) if the run is ≤ 2 days • At least 1 test per day, using 2 samples obtained from the same pipe (all types) for runs which last > 2 days	X	X	X

Shrinkage	Per extruder (1): <ul style="list-style-type: none"> • 1 test (with 3 samples) per run (2) if the run is ≤ 2 days • at least 3 tests per week (all types) for runs which last > 2 days 	X		
Falling weight impact testing	1 test per week, per extruder (every type)	X		

- (1) If multiple extrusions are used, tests must be carried out on each pipe extruded on the machine
 (2) run: for each extrusion period, between when it is started and when it is stopped
 (weekend - change to dimensions or change to formulation)

In the case where the company has an NF ISO 9001 certificate, the testing plan must ensure that products conform to the requirements of the standard regulations and these certification rules. The manufacturer must thus carry out or arrange for the required tests, which must be done at frequencies specified in the testing plan. Some tests may be thought of as “routine” (e.g. for the implementation of new equipment, or the use of a new formulation).

For shapers, the testing plan must at the very least include the tests which ensure the conformance of the fitting dimensions.

2.2.7.3 Recording of tests

Documents relating to testing must be drawn up and kept, in order to prove compliance with the requirements of these certification rules. They must be legible, easy to identify and accessible.

The applicant/holder must ensure that the documents relating to testing are identifiable, protected, accessible, properly stored for the required amount of time and subsequently destroyed.

2.2.7.4 Subcontracted testing

Certain tests may be subcontracted, as long as this does not affect the manufacturing process (for example due to the turnaround time.)

The subcontracting terms and conditions must be formalised and recorded (e.g. how “subcontractor” is defined, the frequency in which the tests will be carried out, the turnaround times required, the written communication of results, the procedure to follow in case of non-compliance).

In order to verify that the subcontracting laboratory conforms with the required regulations, LNE reserves the right to audit it.

2.2.8 MANAGEMENT OF TESTING AND MEASUREMENT EQUIPMENT

Principles of calibration

Calibration involves the comparison of the values given by a piece of measurement equipment or system, to known values given by a standard.

The standard’s value must be traceable to the value given by a national standard, using a documented uninterrupted calibration chain (traceability).

Calibration methods of measurement equipment or system

There are two possibilities:

- The holder's laboratory has its own standards, which are compared to national standards at defined intervals. The holder calibrates their equipment themselves.
- The holder's laboratory sends their equipment off to be calibrated by a service provider, which is accredited by COFRAC, or its equivalent, according to the applicant/holder's country of origin. In the absence of such accreditation, they must possess the secondary standards which must regularly be traced back to national standards.

The applicant/holder must have equipment to ensure that the results are valid.

Management of measurement equipment

Measurement equipment must be:

- Calibrated against standards linked to national or international standards (if these standards do not exist, the calibration reference used must be registered). They must be re-calibrated or checked at specified intervals or before their first use.
- Identifiable, to check the validity of the calibration.

The standard's uncertainty must be sufficiently small with regards to the uncertainty expected from the measuring equipment or system to be calibrated.

When a piece of equipment is found to be non-conforming, the applicant/holder must check the validity of previous results obtained. They must take appropriate action on the equipment and on any affected products. This information must be recorded. The records of the calibration and verification results must be kept.

These requirements also apply to any independent laboratory the applicant/holder uses to carry out all or certain internal control measurements.

2.2.9 MANAGEMENT OF NON-COMPLIANT PRODUCTS

The applicant/holder must ensure that each product which does not conform to the specified requirements is identified and managed so that it does not get used or delivered unintentionally.

The applicant/holder must treat a non-conforming product marked with the NF standard in the following ways:

- By carrying out actions which eliminate the non-conformity.
- By allowing its use, release or acceptance on an exceptional basis. In this case, prior authorisation must be obtained from the client and from LNE.
- By carrying out actions which prevent it from being used (e.g. scrapping the product).

Responsibilities and authority must be given to people who carry out testing and those who take actions in order to remedy the product's non-conformity.

The applicant/holder must keep documentation which describes non-conformities along with their remedy.

2.2.10 CORRECTIVE ACTIONS

The holder/applicant will define the requirement and will keep proof of actions carried out in order to:

- a) Review non-conformities (including client complaints).
- b) Determine the cause(s) of non-conformities.
- c) Evaluate the need to undertake actions so that non-conformities are not repeated.
- d) Determine which actions are necessary, and put them into place.
- e) Evaluate the effectiveness of the actions taken.
- f) Record the results of the actions put in place.

Records of any complaints made regarding certified products and their remedy must be made and kept.

2.2.11 Product preservation

2.2.11.1 Stock

The applicant/holder must provide areas or premises for the storage of stocking order to avoid causing damage or deterioration to the product before it is used or delivered.

The condition of the stock must be assessed at defined and appropriate time intervals, in order to detect any deterioration.

2.2.11.2 Packaging

The holder/applicant must manage the wrapping, packing and marking of products as needed, in order to ensure that they conform to the specified requirements.

2.3 MARKING REQUIREMENTS

Marking makes up an integral part of the certification of a product.

As well as allowing for identification and traceability of a certified product, marking a product with the NF logo ensures that users will receive better protection and protects holders from improper use and counterfeiting.

Without prejudice to the sanctions listed in the NF standard's General Rules, any wrongful advertisement of the certified items, or any fraudulent use of the NF logo, leaves the holder liable to be pursued for fraud and/or false advertising.

It is strictly forbidden to reproduce or affix the AFNOR, AFNOR Certification or LNE logos without prior authorisation from those institutions.

The holder undertakes to respect the NF standard's graphic charter.

NF certified products have a different designation and identification to non-NF certified products. The holder must only use the NF logo to identify NF certified products. They may only do this if there is no risk of confusion with other products, especially those which are not NF certified.

The holder is advised to submit all documentation making reference to the NF standard to LNE before use.

REMINDER:

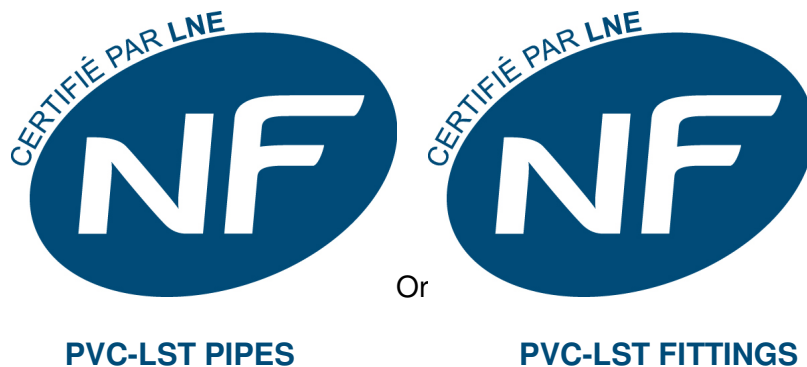
Article R 433-2 of the French Consumer Code states that:

“When reference is made to certification in advertising, labelling or in the presentation of any product or service or in any associated commercial documents, the following information must always be brought to the consumer’s or user’s attention:


- *The name or corporate name of the certifying body or the collective certification standard.*
- *The denomination of the certificate reference standard used.*
- *Methods to consult or obtain the certification reference standard.”*

2.3.1 Marking by manufacturers of pipes and fittings

The NF logo conforming to the requirements of the graphic charter, and in keeping with the existing specific norms and regulations, is as follows (depending on the product):






Given its length, the UNPLASTICISED PVC PIPES AND FITTINGS FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATIONS CABLES NF standard designation, which should be written below the logo, is shortened to PVC-LST PIPES and PVC-LST FITTINGS.

Due to the technical difficulties related to the marking of the product, the  logo may be used in reverse.

Each NF certified pipe or fitting must be marked permanently, visibly and durably (the characters must be ≥ 5 mm tall) on a generator. For example, the marks may be moulded, engraved or stuck onto the product with a label.

They must contain the information given below, in the order shown.

When the fittings are produced by the extruder, they need to be marked continuously, so that all the information is available on the fitting.



- ① - The commercial brand name or logo held by the holder.
- ② - The manufacturer's identification number and production site number given when approval was granted.
- ③ - The NF logo. The holders may use either of the following:
 - The  logo (in colour or in black and white), which conforms to the graphic charter (see below).
 - The  logo (in colour or in black and white), without including "certifié par LNE" (certified by LNE) nor the application name.
 - The old logo  (in colour or in black and white) on an exceptional basis, when use of the new logo causes technical and/or material difficulties, without including "certifié par LNE" (certified by LNE) nor the application name.
- ④ - Family type and product symbol:

For the pipes: T LST. For the fittings: A LST

- ⑤ - The material (PVC) identification symbol
- ⑥ - Size: nominal diameter x nominal thickness
- ⑦ - A sign which permits product identification: number of the week (2 characters) or day (3 characters) and year of manufacture OR lot number, indicating the date of manufacture and machine (in the latter case, the definition of that number will need to be communicated to the mandated body).


Note: Other markings are authorised, as long as they do not interfere with the sequence of information required for NF marking (for example: ORANGE marking).

Examples:




XXX	01-02	 TLST	-	PVC	-	80 x 2.5	-	19-19
XXX	01-02	 ALST	-	PVC	-	80 x 2.5	-	19-19
①	②	③ ④		⑤		⑥		⑦

2.3.2 Marking of fittings by shapers

If the fittings are shaped by a company which does not manufacture the pipes, an extra mark must be inscribed on the fittings.

Each NF certified fitting must be marked permanently, visibly and durably (the characters must be ≥ 5 mm tall) on a generator. For example, the marks may be moulded, engraved or stuck onto the product with a label. Due to the technical difficulties related to the marking of the product, the  logo may be used in reverse.

The information given below must be marked onto the product, in the order shown, without interrupting the NF marking on the pipes (it may be placed after it, or on another generator).

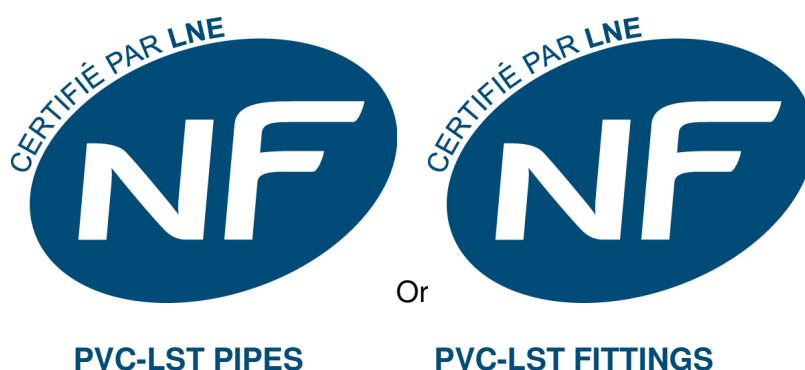
- ① - The commercial brand name or logo held by the holder.
- ② - The manufacturer's identification number and production site number given when approval was granted.
- ③ - The NF logo. The holders may use either of the following:
 - The  logo (in colour or in black and white), which conforms to the graphic charter (see below).
 - The  logo (in colour or in black and white), without including "certifié par LNE" (certified by LNE) nor the application name.
 - The old logo  (in colour or in black and white) on an exceptional basis, when use of the new logo causes technical and/or material difficulties, without including "certifié par LNE" (certified by LNE) nor the application name.
- ④ - Family type and product symbol: i.e. A – LST

⑤ - Sign which permits product identification: number of the week (2 characters) or day (3 characters) and year of manufacture OR lot number, indicating the date of manufacture and machine (in the latter case, the definition of that number will need to be communicated to the mandated body).

Example:

xxx 04/01  ALST 19/16


2.3.3 Marking on the pipe and fitting packaging or on the accompanying documentation (including labels)




The following must be included with the NF logo on the packaging (or the unit package) or on the product documentation:

- A code, ensuring that the product can be traced
- The commercial name of the product given on the certificate
- A sign, identifying the owner of the NF certificate and of the factory which produced the product
- Website www.marque-nf.com or www.lne.fr
- The certified essential characteristics of the product:
 - . Appearance - colour
 - . Material characteristics (density, Vicat etc.)
 - . Pipe characteristics (dimensions, tension, resistance to impact, ageing behaviour, shrinkage)
 - . Characteristics of the fittings (dimensions, tension)
- Name and address of the certifying body: LNE, 1 rue Gaston Boissier, 75015 Paris

The design of the layout and format of the accompanying document is left to the holder's preference.

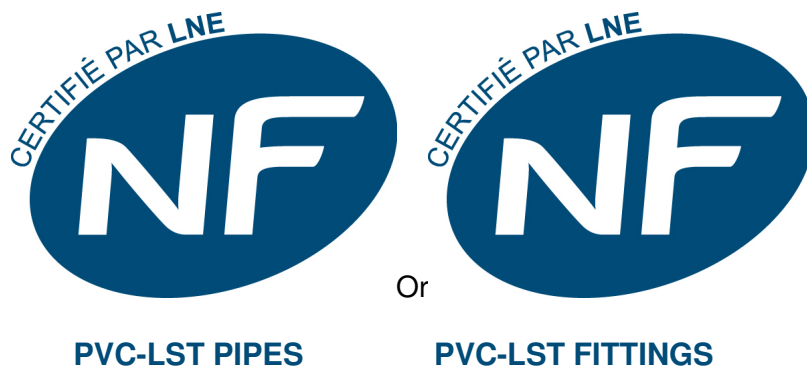
Keeping in mind that industrial printers may not be very accurate and that some primary packaging and labels may be very small, the "certifié par LNE" (certified by LNE) mark and the application name do not have to appear with the logo .

Due to the technical difficulties related to the marking of the product, the  logo may be used in reverse.

2.3.4 Marking on the documentation (technical and commercial documents, posters, advertisements, internet sites etc.)

References to the NF standard in the documentation (order confirmations, invoices, delivery notes, advertiser pamphlets, catalogues etc.) must be made in such a way as to make it impossible to confuse certified products with non-certified products.

Use of the NF standard in documentation and in advertising must be in accordance with the requirements listed below, depending on the product:



The holder is advised to submit all commercial documentation which contains the standard (including any modifications) to LNE before use.

The holder must show LNE any documentation which references the NF standard either directly or indirectly, upon request.

2.4 APPLICANT/HOLDER REQUIREMENTS

The applicant/holder agrees to provide LNE with the means to carry out any necessary tasks for the evaluation and follow-up of their case. In particular, they agree to:

- Always fulfil the requirements of the current certification rules, and to carry out the necessary changes within the time frames given by LNE, if the certification rules change.
- Provide LNE's representatives with the information and documentation necessary to carry out the evaluation successfully.
- Only provide information which the applicant/holder deems to be truthful and trustworthy.
- Appoint a primary contact person to liaise with LNE.
- Appoint people within the company to receive test and audit reports from LNE and inform LNE about any changes to the person or email address to whom LNE should send these reports.
- Introduce LNE's representatives to the staff within the company who have been assigned to the various tasks.
- Instruct their staff to collaborate with LNE's representatives, and to agree to take part in any meeting with them.
- Provide LNE's representatives with the means of access and transport to the sites and premises where the inspections are to be carried out, including those of subcontractors, if relevant.
- Inform LNE's representatives of the health and safety rules and regulations applicable to sites and staff and provide them with any equipment necessary to enable them to follow these rules and regulations.
- Pay LNE any sums due for the evaluation, in accordance with the financial conditions set out and accepted by the applicant/holder.
- Authorise an observer to be present. This observer will be bound by confidentiality. LNE may be obliged to call upon this observer by the standards or agreements to which it is a signatory. The applicant/holder will always be told about this observer by LNE before the audit.
- If non-conformities are found, to take all necessary actions, within the time frames specified by LNE.
- Return the completed non-compliance documentation to the person responsible for the audit. This must be done within 3 weeks of the last day of the audit.
- Carry out all necessary tasks, so that the certificate may be given within a maximum time period of 11 months after the initial audit. Once the 11 months have passed, a new audit will need to be undertaken before the certificate may be awarded.

- Provide the standard's laboratory with any samples taken as defined in sections 3 and 4.

The certificate holder must also undertake to:

- Only place the NF standard on products which are certified by LNE and which adhere to the applicable regulations.
- Use the product's trade name only with products which are covered by certificates given by LNE and which conform with the applicable regulations.
- Inform LNE about any modifications to the product, or any information which is likely to affect the product's conformance with the current regulations. The evaluation methods are defined in section 4. This must be done before the modification is carried out.
- Provide LNE with any information required for granting and maintaining the certificate.
- Keep any documentation relating to complaints which the holder is aware of concerning the conformance of any certified product(s), and to provide LNE with this documentation upon request. They must also:
 - Take any appropriate action with regards to complaints and imperfections identified in the products, which affect their conformance with the certification requirements.
 - Document any actions carried out.
- Cease making any reference to the product certification, and stop using any method of communication which alludes to certification if it has been suspended, reduced, withdrawn or if a renewal has been refused.
- Authorise any follow-up evaluations during the lifetime of the certificate, according to the frequencies given in section 4, as well as any other duly justified evaluation.
- Only speak of the certificate in a manner that is consistent with the certificate issued by LNE.
- Refrain from using the certification obtained in a way that could harm LNE and from issuing any statement regarding the certification of its products that could be considered as misleading or unauthorised.
- Reproduce the certificates in their entirety, with the appendices, if providing them to a third party.

CERTIFICATION RULES

NF MARK UNPLASTICISED PVC PIPES AND FITTINGS FOR UNDERGROUND TELECOMMUNICATION LINE PIPING

SECTION 3 ACQUIRING CERTIFICATION

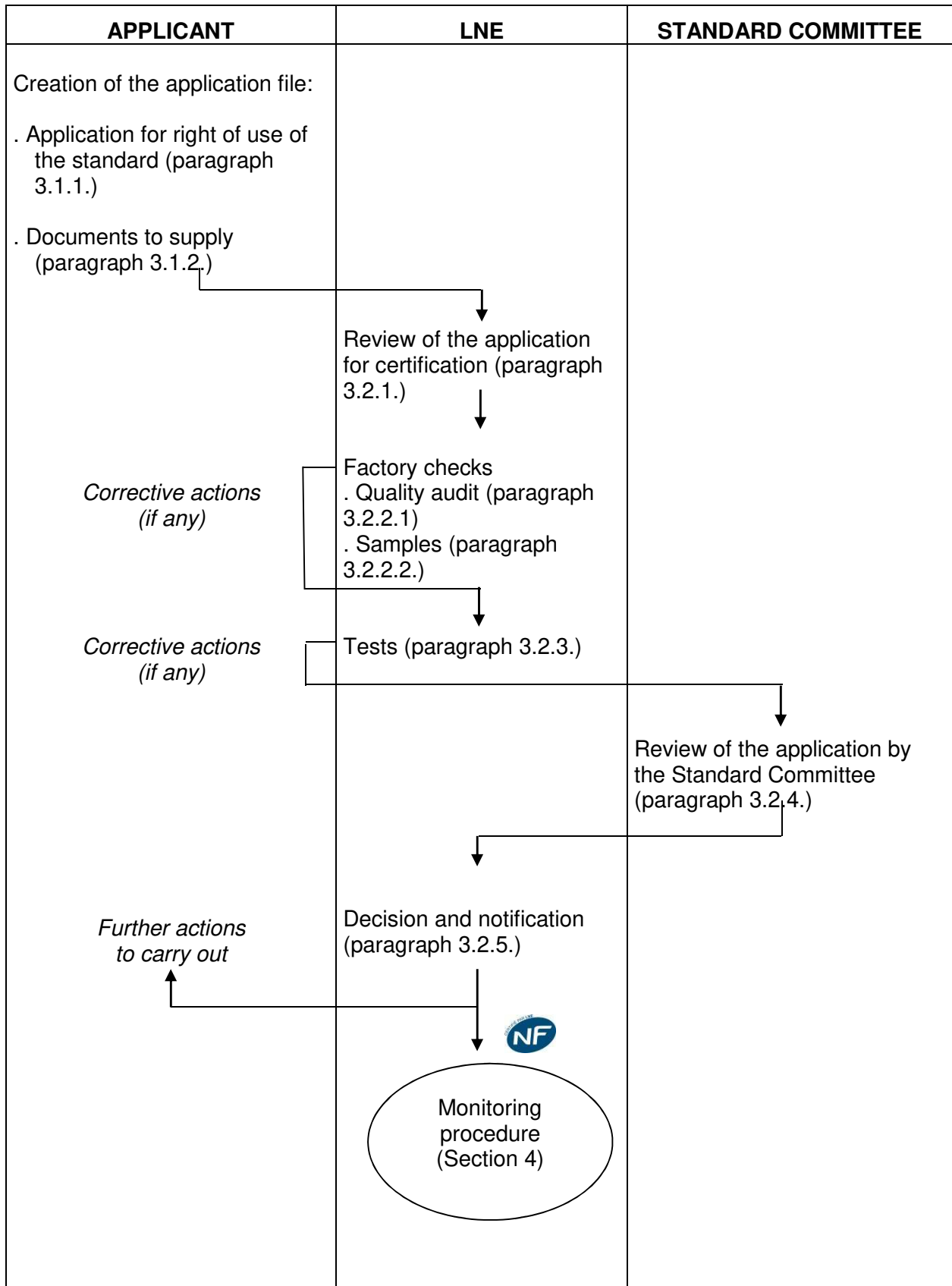


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- 3.1. Creation of the application file**
- 3.2. Initial evaluation procedure**

Rev. 12 - January 2019

PROCESS TO ACQUIRE CERTIFICATION



Before making an application, the applicant must ensure that (at the time of the application) they fulfil all the requirements stated in these certification rules, especially section 2, which concern their products and sites.

They must fulfil these requirements for the entire time that they use the NF standard.

Should they fail to do so, the review of their application may be interrupted or suspended. It is not possible, under any circumstances, to make references to the NF standard before permission to use it has been granted, or request certification for counterfeit goods.

3.1. CREATION OF THE APPLICATION FILE

All companies which manufacture one or more products covered by the NF standard may apply for the right to use the standard. Such requests are hereinafter known as “the application”. The person who makes an application is hereinafter known as “the applicant”.

3.1.1. APPLICATION FOR RIGHT OF USE OF THE STANDARD

Any manufacturer who wishes to apply for NF certification for a product they have manufactured must acquaint themselves with the standard’s certification rules beforehand. They must then state that they abide by those rules.

The application should be made in writing, on the manufacturer’s headed paper, as per the template (form 1a) and addressed to LNE.

It must state the types of pipes and fittings (see definitions - section 1 paragraph 1.2.) for which certification is requested.

For every factory that will produce the products for which certification is requested, the applicant must provide a file containing the documents or information listed in paragraph 3.1.2. (below).

The application may only be entertained if the tests detailed in Section 2 of the current rules are in place and have been used beforehand by the manufacturer.
This measure is verified during the initial audit.

All documents must be written in French or in English.

The application must be accompanied by the applicable fees for reviewing the application and the initial audit.

When the applicant is from a country outside the European Economic Area, they must submit their application jointly with a representative who is established in the European Economic Area. The representative shall be duly accredited and responsible for the production of goods for which the NF standard is requested and which are to be sold in France.

The representative is hereinafter known as the “agent”.

Before using the NF standard, LNE must be informed about all modifications made to the range of products submitted for certification purposes. LNE will decide if extra testing needs to be carried out on those products.

3.1.2. DOCUMENTS TO SUPPLY

- A certification application template letter (form 1a), written on the manufacturer's headed paper, as per the attached template (with the appendix and associated mandate co-signed (as per form 1e) if the application is made from outside the European Economic Area).
- General information form (form 1b).
- List of products for which the NF standard is requested (form 1c).
- Description of quality management arrangements in place:
 - Quality manual and/or plan(s) (if these documents may not be taken off-site, they must be given to the auditors during the audit).
 - Organizational chart of the site(s) concerned by the application (staff positions and numbers).
 - Description of the manufacturing process and associated quality control plans (detailing the measures and tests carried out as well as their frequency).
 - Certificate of conformance of the quality management system (where appropriate).
- Technical file:
 - Quality control plan (description of measures and tests carried out, as well as their frequency). Methods used and subsequent correlation if the methods used differ from the reference methods (see paragraph 2.1.3.).
 - Formalised arrangements for subcontracting tests, where appropriate.
 - Product and packaging marking project.

All documents must be written in French or in English.

FORM 1a
APPLICATION FOR CERTIFICATION
(To be written on the manufacturer's headed notepaper)

The General Director of
LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS
Division Certification Plurisectorielle
1, rue Gaston Boissier
75724 PARIS CEDEX 15

RE: Application for the right to use the NF standard - UNPLASTICISED PVC PIPES AND FITTINGS FOR THE INSTALLATION OF UNDERGROUND TELECOMMUNICATION CABLES

Dear General Director,

I, the undersigned (name and job-title)
representing the company (company name - headquarters)
request that LNE carry out the checks necessary for the right to use the NF standard on the products listed in the attached table, in accordance with the NF T 54-018 regulations.

These products are manufactured at (company name and full address of the factory where the products are manufactured)
.....

Optional, in case of application to modify a certified product:

The products manufactured by us, differ from the NF certified products due to the following modifications: *(describe the modifications carried out)*.

This product replaces the certified product:

This new product manufactured by us is identified by the following reference numbers:

I declare that the other characteristics of the products for which this application is made strictly conform to those which already bear the NF certificate, and that they are manufactured under the same conditions as those products.

Optional, in case of application for continuance:

This application is also for the products sold by using reference number..... (see attached continuance form.).....

I declare that I have read the reference regulations, the NF standard general rules and the certification rules. I undertake to follow them for the entire time that the NF standard is used.

I certify that these products satisfy the applicable regulatory requirements and I undertake to refrain from submitting counterfeit goods for certification.

Date
Stamp and signature
of the applicant

APPENDIX TO THE APPLICATION FOR CERTIFICATION (1)

I also authorise the company (2)
represented by Mr./Ms. (name and position)

who accepts the conditions listed in the attached mandate, to act on my behalf in France for any questions regarding use of the NF standard.

I therefore request that any expenses for which I am liable be invoiced directly to him/her. (S)he hereby undertakes to pay the invoices upon receipt.

I undertake to notify LNE immediately if the above agent is replaced.

Yours sincerely,

Date
Stamp and signature
of the agent's representative (3)

Stamp and signature
of the applicant's representative (3)

-
- (1) This appendix should only be filled out for applicants located outside the European Economic Area. It must be accompanied by a co-signed mandate (see example of form 1e)
 - (2) Details of the agent's company which must be given: corporate name, type of business, headquarters and Commercial Register number.
 - (3) The signatures of the applicant and their representative must be preceded by "proxy agreement granted" and "acceptance of proxy agreement" respectively.

FORM 1b
GENERAL INFORMATION FORM

Applicant's corporate name:

Applicant's address:
 Contact person:
 Phone number:
 Fax number:
 E-mail:
 Website:

Staff dealing with certification:

Site has ISO 9001 certification: Yes No
 Subsidiary of a group: Yes No
 If yes, please state which:

Address of the person/people to e-mail LNE test and audit reports to:

Contact person name	Job title	E-mail	Audit report	Test report

NB: LNE keeps an authenticated copy of the document which was sent, for a period of 30 years. LNE has security procedures for its internal computer network. However, you hereby recognise that LNE cannot be held liable for any problems which occur due to sending an electronic copy of the document, especially with regards to confidentiality and the integrity of the document.

Billing address (if different to the address given along with the applicant's corporate name), and involvement if it is different to the applicant's.

Location of the different stages in the manufacturing process

	Address of the site responsible for each stage*
Design	
Manufacturing (1)	
Assembly	
Final checks	
Marking	
Packaging	
Storage	

* Give the corporate name, address, contact name, telephone number and e-mail address, if different to the applicant's.

Any act not carried out by the applicant is subject to a contract which defines the responsibilities undertaken, along with their provider.

(1) Details (if necessary) of the manufacturing stages or of outsourced manufacturing.

Commercial brand name:

Owner of the commercial brand name*:

List of distributors responsible for marketing the product, whose name appears on the packaging*:

Signed in:

On:

Signature

FORM 1c

PIPES SUBMITTED FOR CERTIFICATION

Manufacturer's name:

Commercial brand(s) or logo (used for the markings on pipes, in accordance with section 2, paragraph 2.3):

Outer diameter (Nominal) Dn (mm)	Nominal thickness (mm)	Composition reference - type of stabiliser

Applicant's name

Date

Stamp and signature

FORM 1d

FITTINGS SUBMITTED FOR CERTIFICATION

Manufacturer's name:

Commercial brand(s) or logo (used for the markings on fittings, in accordance with section 2, paragraph 2.3):

Name	Angle	Orifice: M = Male F = Female	Dimensions	Composition reference - type of stabiliser

Applicant's name

Date

Stamp and signature

FORM 1e
EXAMPLE OF A MANDATE

(To be written on the applicant/holder's headed notepaper)

Information which needs to be provided:

- Corporate name: _____
- Address: _____
- Country: _____
- Phone number: _____ Fax number: _____
- SIRET number: _____ NAF code number: _____
- Name and position of legal representative: _____
- Name and position of contact person (if different): _____
- VAT number: _____
- Contact person's email address: _____
- Company's email address: _____
- Website: _____

Tasks to be carried out by the agent to be stated in the mandate between the applicant/holder and the agent

Applicant/Holder:

.....

Agent:

Minimum requirements which need to appear in the mandate:

- tasks and associated responsibilities
- financial considerations (NF standard invoices)
- complaints
- certifying body contact person

Mandate:

The mandate must be recorded in the applicant/holder's quality system.

A copy of the mandate (in French or in English) must be included with the co-signed application.

Adherence to the requirements of the mandate is verified during the audits.

Date of initial mandate

Co-signature of the agent's and applicant's representatives

3.2. INITIAL EVALUATION PROCEDURE

3.2.1. REVIEW OF THE APPLICATION FOR CERTIFICATION

The application and attached file addressed to LNE are reviewed before the factory checks and testing.

Upon receipt of the application, LNE will verify that:

- All requested documents (listed in paragraph 3.1.2) are included
- The items included in the file adhere to the certification rules
- Payment of fees has been made.

LNE will also ensure that it has all it requires to respond to the application. It may request more information for the file if it is incomplete.

Once the application is accepted, LNE will organise inspections and will inform the applicant of the process (auditor, length of the audit, sites to be audited, laboratories, samples etc.). If appropriate, it will inform the applicant of the deadline for submitting extra information.

The inspections carried out for NF certification are as follows:

- Audits, which aim to cover all those involved in design, manufacturing, assembly, quality control, marking and packaging of products (see paragraph 3.2.2)
- Product testing (see paragraph 3.2.3)

Test samples are taken during the initial audit and sent by the applicant to the designated laboratory.

3.2.2. AUDIT

Evaluation of the application involves an initial audit of the factory where the products are manufactured. If appropriate, it also involves an audit, based on the same benchmarks, of any other sites which are involved and described in the Application for Certification.

It is carried out by auditors, qualified at LNE, who are bound to confidentiality.

The audit will be carried out in either French or English. If required, the company being audited has the responsibility for providing the auditor with an interpreter. In that case, the length of the audit may be increased (prior agreement with the company).

Every mean (documents, sites, installations, equipment) which will help the NF auditor to carry out their job, must be placed at their disposal, as must competent staff to carry out the work.

3.2.2.1. Quality audit

This audit is carried out as per the general principles defined in the ISO 19011 standard, for quality audits. In particular, the scope of the audit, and how it will be carried out, will be detailed in an audit plan which will be sent to the company beforehand.

The auditor(s):

- Carry out a quality audit aimed at checking whether there is a quality management system, as well as its implementation. It will also check the system's adherence to section 2 of these rules.
- Check that the products are covered by the scope of the application (see Section 1, paragraph 1.1).
- Check that the controls listed in Section 2 have been put in place and carried out beforehand by the manufacturer, in order to be able to check their frequency, their operating procedures and that the criteria set forth in the NF certification rules are being followed. They will request that conformity tests be carried out, in their presence, on the products for which certification is requested. The tests are preferably carried out on the type of sample taken for the standard's laboratory tests.

NB: The results of tests obtained during the audit will not influence the results obtained in the standard's laboratory.

- Carry out dimensional tests on every type of pipe and all fittings submitted for certification.
- Obtain the required samples for testing.
- If appropriate, examine the scope of the contract with the agent and/or with the different sites involved and described in the application for certification.

The on-site audit lasts 2.5 auditor days.

It may change, depending on the sites which need to be audited (with the applicant's prior permission).

The auditors may, with the company's permission, take a copy of all documents which they think are necessary.

Once the audit has been completed, the audit leader will write up a report, which shall be provided to the applicant during the closing meeting. It will discuss the efficacy of the quality system in place, its strengths and weaknesses and give an explicit statement of non-conformities. It will also contain a report detailing the tests carried out during the audit, and the sample sheet.

If non-conformities are found, the applicant will need to fill out the different sections of the non-conformity forms, and send them within the agreed time frame to the audit leader for evaluation.

The completed report is sent by e-mail, by LNE to the contact person(s) designated by the applicant. If applicable, a copy shall be sent to the agent.

3.2.2.2. Samples

The manufacturer must make all diameters, for each composition submitted for certification, available to the audit leader for sampling.

The auditors will take the samples necessary, which have been validated as per the manufacturer's quality control system, for testing.

The samples taken will be given a distinctive mark by the auditors, allowing them to identify the sample at a later time, accompanied by instructions to identify the samples.

The samples are sent within two weeks by, and under the responsibility of, the applicant to the standard's laboratory tasked with carrying out the tests (see section 5 of these certification rules), accompanied by the sample sheet. Alternatively, the auditors can decide to take responsibility for them.

a) Samples taken on the sites of pipe and fitting manufacturers

The sample consists of a type of pipe and fitting submitted for certification, as per the instructions provided in tables 1 and 2, paragraph 3.2.3., i.e.:

- 7 pipes, of the same diameter, 6 m in length cut into:
 - . 3 subsamples, each 1 metre long, from 4 pipes
 - . 1 subsample, 1 metre in length, from 3 pipes

These subsamples will be sent to the standard's laboratory for testing. The remaining samples will be used for factory testing.

- 4 pipes, of the same diameter, 6 m long, kept by the manufacturer for repeat testing in case of non-conformity after impact testing (3 subsamples of 1 metre in length, from each pipe to be sent to the relevant body upon request).

- 0.5 m of pipe, with a diameter of 60 x 2 mm (or 45 x 1.8 mm if possible), for natural ageing testing, or for the production of a sheet using the pipe.

- 0.5 m of pipe, with the same diameter, to be kept by the manufacturer away from light, as a control.

- 20 fittings of the same type.

b) Samples taken from the shapers

The samples taken consist of 20 fittings of all types submitted for application (as per Table 2, paragraph 3.2.3).

The samples taken must have been made in the manufacturer's workshop, under industrial manufacturing conditions.

3.2.3. TESTS

Tables 1 and 2 below define the tests to be carried out by the standard's laboratory on the samples taken during the audit.

A report on the tests carried out on the samples is sent by e-mail, by LNE to the contact person or people designated by the applicant. If applicable, a copy shall be sent to the agent.

In case of non-conformance, LNE will notify the applicant of actions to take.

Table 1 - Pipe certification testing

Measurements or tests (1)	Number of types tested	Number of pipes tested per type	Number of samples per pipe	Testing location	Acceptance	Repeats	Sample non-conformance	
Marking Appearance Colour	All	All		Factory	All pass		1 non-conforming pipe	
Dimensions: - Length - Average outer diameter - Ovality - Socket - Socket tightening	All	20	1	Factory	1 measurement outside tolerance		2 or more measurements outside tolerance	
- thickness					2 or fewer measurements outside tolerance		3 or more measurements outside tolerance	
Density	1 type	1	3	Factory + standard's laboratory	Average result of 3 measurements conforms to the specifications		Average outside tolerance	
Vicat softening temperature		1	2	Factory + standard's laboratory	Average result of 2 measurements conforms to the specifications		If the difference between the results obtained is >2°C, repeat measurements on 2 new samples	Average outside tolerance
Falling weight impact testing		4	3	Factory + standard's laboratory	Number of breaks ≤ 3 (out of 12 samples tested)		Number of breaks ≥ 4: Repeat on 12 new samples	Number of breaks > 7 (cumulative result for the 2 series of samples)
Shrinkage after re-heating to 150°C		3	1	Factory + standard's laboratory	Average result obtained from 3 samples conforms to the specifications.			Average outside tolerance
Tensile tests		3	5 samples taken from 3 pipes	Factory + standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming.	Average, or more than 1 individual sample value outside tolerance.		
Natural ageing test		1	5	Standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming.	Average, or more than 1 individual sample value outside tolerance.		

(1) Testing methods described in section 2

Table 2 - Fitting certification testing

Measurements or tests (1)	Number of types tested	Number of fittings tested per type	Number of samples per fitting	Testing location	Acceptance	Repeats	Sample non-conformance
Marking Appearance Colour	All	All		Factory	All pass		1 non-conforming part
Dimensions: - Angle - Length - Radius	All	20	1	Factory	All pass		1 non-conforming part
- Average outer diameter - Ovality - Socket	All	20	1	Factory	1 measurement outside tolerance		2 or more measurements outside tolerance
- thickness (2)					2 or fewer measurements outside tolerance		3 or more measurements outside tolerance
Density	1 type (3)	1	3	Factory + standard's laboratory	Average result of 3 measurements conforms to the specifications		Average outside tolerance
Vicat softening temperature		1	2	Factory + standard's laboratory	Average result of 2 measurements conforms to the specifications	If the difference between the results obtained is >2°C, repeat on 2 new samples	Average outside tolerance
Tensile tests		3	5 samples taken from 3 items of the same type	Factory + standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming.		Average, or more than 1 individual sample value outside tolerance.

(1) Testing methods described in section 2

(2) Measured on the right hand side for elbows

(3) Tests carried out only on sleeves (possibly on the elbows if the fittings for which the application is made are not part of pipes which already bear the NF standard. In that case, the tests will be carried out on 1 type - diameter x thickness)

3.2.4. REVIEW OF THE APPLICATION BY THE STANDARD COMMITTEE

LNE will carry out a review of the file and, if appropriate, it will perform extra verifications prior to presenting it to the Standard Committee.

A summary of the audit and test findings will be presented anonymously to the Standard Committee.

If applicable, the summary needs to state clearly the areas in which the manufacturer's products or control tests do not conform rigorously to the requirements set forth in section 2 of these certification rules.

After examining the different sections of the file, the Standard Committee will suggest to either grant or refuse certification.

3.2.5. DECISION AND NOTIFICATION

Based on the results obtained while processing the application, and on the standard committee's recommendations, LNE will give the applicant one of the following answers:

- a) Certification accepted
This decision may be subject to pre-conditions, which the applicant must satisfy before they may be granted certification.
- b) Certification rejected

Pursuant to the LNE's decision to authorise certification, AFNOR Certification will grant the applicant the right to use the NF standard.

Once the right to use the NF standard has been given, its beneficiary will be known as the "holder". The continuance of this right is subject to the results of verifications described in section 4.

The right to use the NF standard is strictly limited to those products for which certification has been granted. These are the products defined as having come from defined factories and which have been manufactured under the conditions described by the current certification rules.

3.2.6. APPEALING A DECISION

The applicant may appeal a decision made under Article 11 of the NF standard's general rules.

LNE will initially re-examine the file in light of the facts giving rise to the appeal. It notifies the applicant as to whether this decision is upheld or if there has been a new decision, within 15 working days of receipt of the appeal.

If the applicant wishes to maintain their challenge, they (or the beneficiary of the certification) may appeal against LNE's decision.

Reasons must be given justifying this appeal, which does not have a suspensory effect on the LNE's decision. It is notified by registered letter, with confirmation of receipt.

It will be examined by LNE within 30 working days of receipt and, where it relates to a certification decision or certification rules, will be examined by the standard committee. LNE will inform the appellant whether or not its decision has been upheld, within this time frame.

In the event that the appeal is upheld following examination and submission to the standard committee for their opinion, the appeal will be presented to LNE's Certification and Impartiality Committee, which presents its conclusions following examination of the case.

This last appeal is subject to a lump-sum payment by the applicant.

The company will be informed of the final decision by LNE.

CERTIFICATION RULES

NF MARK UNPLASTICISED PVC PIPES AND FITTINGS FOR UNDERGROUND TELECOMMUNICATION LINE PIPING

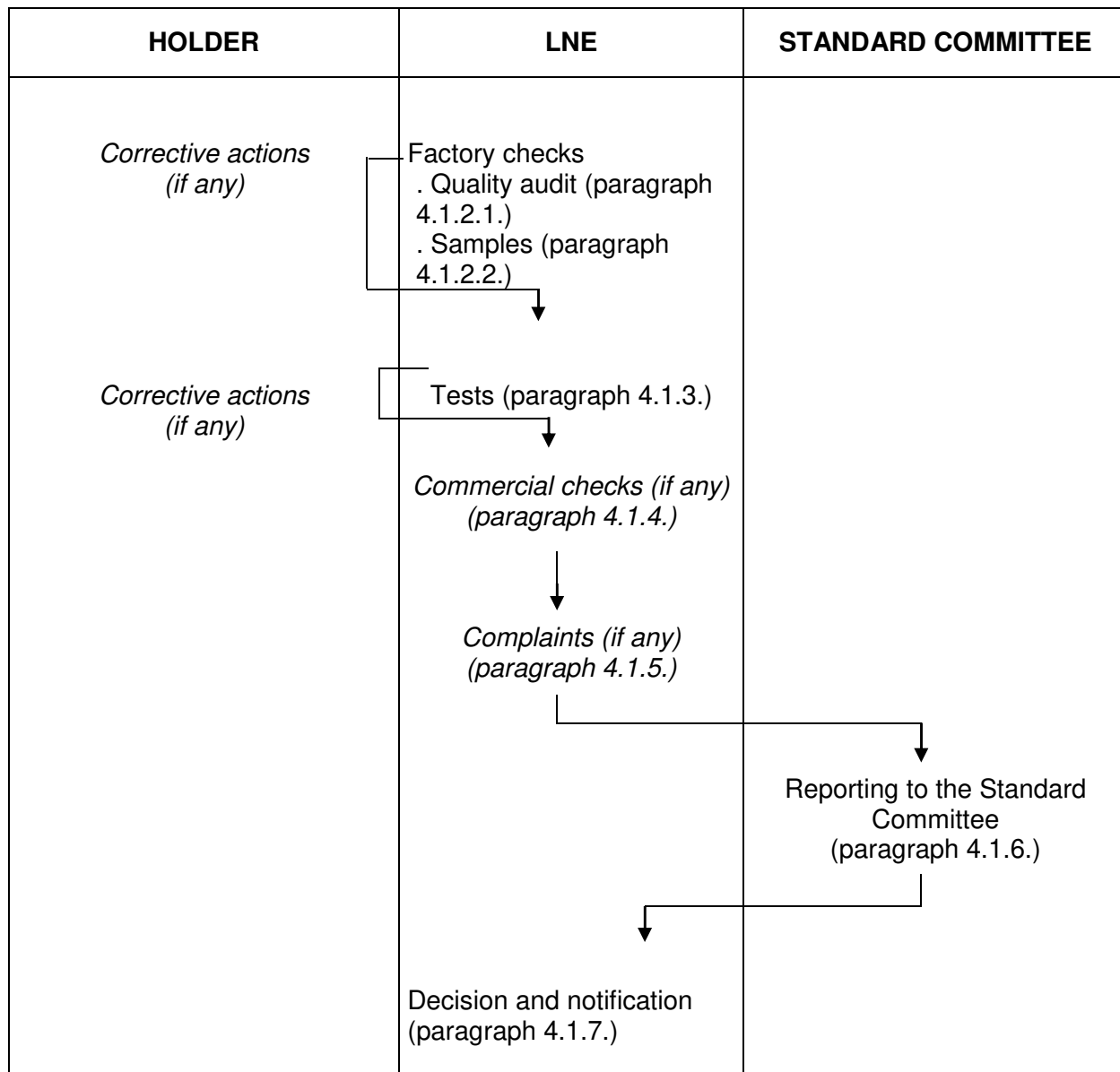
SECTION 4 MONITORING OF CERTIFIED PRODUCTS MODIFICATIONS AND DEVELOPMENTS

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- 4.1. Monitoring of certified products**
- 4.2. Modifications and developments concerning the company structure or the certified product**

Rev. 12 - January 2019

MONITORING PROCEDURE



For the entire certification period, the holder must:

- Comply with the regulations and marking methods described in section 2.
- Systematically inform LNE of any changes to the characteristics of the certified products and/or of the company's structure which may affect certification:
- Changes concerning the holder (paragraph 4.2.1.)
- Change in the location of production (paragraph 4.2.2.).
- Change to the certified product, new products (paragraph 4.2.3.)
- Temporary cessation of production (paragraph 4.2.4.)
- Permanent cessation of production or surrender of the right of use (paragraph 4.2.5.)

Furthermore, LNE reserves the right to carry out any inspections which it deems necessary following:

- Modifications which concern the certified product or the quality organisation of sites involved and which are described in the initial certification application file.
- Complaints, disputes and litigation which it knows about and relating to the use of the NF Standard.

4.1. MONITORING OF CERTIFIED PRODUCTS

LNE organises the monitoring of certified products.

The first follow-up audit will take place within 6 months of the decision regarding certification.

This aims to monitor whether or not the manufacturer is adhering to the requirements described in the certification rules.

The monitoring methods used also depend on the decisions made after the prior checks.

4.1.1. AUDIT

At least two audits are carried out per year at the main manufacturing site and at the site responsible for the final checks on the certified products.

LNE decides which other site(s) to visit and the frequency of these visits on a case by case basis. It chooses which sites to visit from those involved and which are described in the original application for certification.

The length of the audit may change, depending on the sites which need to be audited according to the requirements listed in paragraph 3.2.1 (with the holder's prior permission).

The frequency of the audits carried out on the main manufacturing site and the site in charge of the final checks on certified products may be altered under the following conditions:

- Two years after having received NF certification, the main manufacturing site and the site in charge of the final checks on certified products may be audited just once a year, during the first half-year, as long as:
 - The company being audited has a quality management system certificate, awarded to them by an accredited certifying body, according to the ISO/CEI 17021 regulation by COFRAC, or by a member of the EA or by a body which is a member of an association that has entered into international multilateral mutual recognition agreements. These bodies may be found on COFRAC's website (www.cofrac.fr).

- That no non-conformities have been found in the tests carried out in the standard's laboratory over the course of the last 3 audits.

If any of the above conditions are not met, an audit will also be carried out during the second half-year.

If a non-conformity is found in tests carried out in the standard's laboratory during the first half-year for a company which has a quality management system certificate, awarded to them by an accredited certifying body, according to the ISO/CEI 17021 regulation by COFRAC, or by a member of the EA or by a body which is a member of an association that has entered into international multilateral mutual recognition agreements found on COFRAC's website (www.cofrac.fr), an audit will be carried out during the second half-year and the samples will be adapted accordingly (see 4.1.2.2).

If a dimensional non-conformity is found during the audit undertaken in the first half-year for a company which has a quality management system certificate, awarded to them by an accredited certifying body, according to the ISO/CEI 17021 regulation by COFRAC, or by a member of the EA or by a body which is a member of an association which has entered into international multilateral mutual recognition agreements found on COFRAC's website (www.cofrac.fr), a second, exclusively dimensional, audit will be carried out during the second half-year without taking samples.

Additional audits may be carried out at the suggestion of the standard committee or at LNE's initiative.

These are carried out by auditors, qualified at LNE, who are bound to confidentiality.

The checks carried out are mainly aimed at verifying the modifications carried out, if appropriate, from the time of the last audit. These apply to: manufacturing, verification methods and any modifications to the organisation of the quality management system.

This quality audit is carried out as per the general principles defined in the ISO 19011 standard, for quality audits. In particular, the scope of the audit, and how it will be carried out, will be detailed in an audit plan which will be sent to the company beforehand.

The following steps are carried out during each audit:

A sample of the products will be taken for testing at the standard's laboratory (see 4.1.2.2.).

During the audit, the auditor will ask for conformity checks to be carried out on the certified products in his or her presence. This is to check the conditions under which the manufacturer carries out inspections. These tests will be carried out preferably on the type sampled for testing in the standard's laboratory.

NB: The results of tests obtained during the audit will not influence the results obtained in the standard's laboratory.

The auditor may, with the manufacturer's permission, take a copy of any documents which they deem necessary.

4.1.1.1. Quality audit

Checking the quality management system involves checking the requirements which are specific to the NF standard (see paragraph 2.2.2 in section 2).

The audit reports obtained from the quality management system accreditation body must be passed on to the auditor, or consulted in situ.

The audit lasts 1.5 days on site.

The audit leader will write up a report, which will be provided to the holder during the closing meeting. It will discuss the efficacy of the quality system in place, its strengths, areas which could be improved and give an explicit statement of non-conformities. It will also contain a report detailing the tests carried out during the audit, and the sample sheet.

If non-conformities are found, the applicant will need to fill out the different sections of the non-conformity forms, and send them within the agreed time frame to the audit leader for evaluation.

The completed report is sent by e-mail, by LNE to the contact person or people designated by the holder. If applicable, a copy shall be sent to the agent.

4.1.1.2. Samples

The auditors will take the samples necessary, which have been validated as per the manufacturer's quality control system, for testing.

Sampling will be carried out in reference to tables 1 and 2, below:

TABLE 1

Company that does not have a quality management system certificate, awarded by an accredited certifying body, according to the ISO/CEI 17021 regulation by COFRAC, or by a member of the EA or by a body which is a member of an association that has entered into international multilateral mutual recognition agreements found on COFRAC's website (www.cofrac.fr).	
Breakdown	Number of samples
1st half-year	1 type of pipe and fitting
2nd half-year	1 type of pipe and fitting

TABLE 2

Company which has a quality management system certificate, awarded by an accredited certifying body, according to the ISO/CEI 17021 regulation by COFRAC, or by a member of the EA or by a body which is a member of an association that has entered into international multilateral mutual recognition agreements found on COFRAC's website (www.cofrac.fr), and which also satisfies the conditions listed in paragraph 4.1.1 2 years after certification.	
Breakdown	Number of samples

Results of 1st half-year tests: Acceptable	1 type of pipe and fitting in the 1st half-year only.
Results of 1st half-year tests: non-conforming due to at least one pipe and/or fitting characteristic.	1 type of pipe and fitting in the 1st half-year and 1 type of pipe and/or fitting in the 2nd half-year.

4.1.1.3. Sample preparations

- 7 pipes, of the same diameter, 6 m in length cut into:
- 3 subsamples, each 1 metre long, from 4 pipes
- 1 subsample, 1 metre long, from 3 pipes

These subsamples will be sent to the standard’s laboratory for testing. The remaining samples will be used for factory testing.

- 4 pipes, of the same diameter, 6 m long, kept by the manufacturer for repeat testing in case of non-conformity after impact testing (3 subsamples of 1 metre in length, from each pipe to be sent to the relevant body upon request).

- 0.5 m of pipe, with a diameter of 60 x 2 mm (or 45 x 1.8 mm if possible), for natural ageing testing, or for the production of a sheet using the pipe.

- 0.5 m of pipe, with the same diameter, to be kept by the manufacturer away from light, as a control.

- 10 fittings of the same type

The samples obtained must be accompanied by instructions which will allow their manufacturing lot number to be identified.

The samples taken will be given a distinctive mark by the auditors, allowing them to identify them at a later time. They will be sent to an independent laboratory, tasked with carrying out the tests, within two weeks by/under the responsibility of the manufacturer, unless the auditor decides to take responsibility for them.

4.1.2. TESTS

The tests carried out by the standard’s laboratory on the samples taken during the follow-up audits and/or in the distribution chain are explained in the following tables.

A report on the tests carried out on the samples is sent by e-mail, by LNE to the contact person or people designated by the applicant. If applicable, a copy shall be sent to the agent.

IMPORTANT NOTE:

If LNE detects any non-conforming results, the manufacturer must implement the provisions described in section 2, paragraph 2.2.2. (Management of non-compliant products).

The holder will inform LNE about any corrective actions taken after the discovery of a non-conformity.

Table 1 - Periodic follow-up tests on the pipes

Measurements or tests (1)	Number of types tested	Number of pipes tested per type	Number of samples per pipe	Testing location	Acceptance	Repeats	Sample non-conformance
Marking Appearance Colour	All	All		Factory	All pass		1 non-conforming pipe
Dimensions: - Length - Average outer diameter - Ovality - Socket - Socket tightening	3	10	1	Factory	All pass	If the value is outside tolerance: repeat on 10 new samples	2 or more measurements outside tolerance, using 20 samples
- thickness					1 measurement outside tolerance	If 2 or more measurements are outside tolerance: repeat on 10 new samples	3 or more measurements outside tolerance, using 20 samples
Density	1 or 2 according to paragraph 4.1.2.2	1	3	Factory (2) + standard's laboratory	Average result of 3 measurements conforming to the specifications		Average outside tolerance
Vicat softening temperature	1 or 2 according to paragraph 4.1.2.2	1	2	Factory (2) + standard's laboratory	Average result of 2 measurements conforms to the specifications	If the difference between the results obtained is >2°C, repeat measurements on 2 new samples	Average outside tolerance
Falling weight impact testing	1 or 2 according to paragraph 4.1.2.2	4	3	Factory + standard's laboratory	Number of breaks ≤ 3 (out of 12 samples tested)	Number of breaks ≥ 4: repeat testing on 12 new samples	Number of breaks > 7 (cumulative result for the 2 series of samples)
Shrinkage after re-heating to 150°C	1 or 2 according to paragraph 4.1.2.2	3	1	Factory + standard's laboratory	Average result obtained from 3 samples conforms to the specifications		Average outside tolerance
Tensile tests	1 or 2 according to paragraph 4.1.2.2	3	5 new samples from 3 pipes	Factory + standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming		Average, or more than 1 individual sample value outside tolerance.
Natural ageing test	1 or 2 according to paragraph 4.1.2.2	1	5	Standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming.		Average, or more than 1 individual sample value outside tolerance.

(1) Testing methods described in section 2

(2) At least once per year

Table 2 - Periodic follow-up tests on the fittings

Measurements or tests (1)	Number of types tested	Number of fittings tested per type	Number of samples per fitting	Testing location	Acceptance	Repeats	Sample non-conformance
Marking Appearance Colour	All	All		Factory	All pass		1 non-conforming part
Dimensions: - Angle - Length - Radius	4	10	1	Factory	All pass		1 non-conforming part
- Average outer diameter - Ovality - Socket (3)	4 (2)	10	1	Factory	All pass	1 value outside tolerance: Repeat on 10 samples	2 or more measurements outside tolerance, using 20 samples
- Thickness (4)					1 measurement outside tolerance	2 values outside tolerance: repeat on 10 samples	3 or more measurements outside tolerance, using 20 samples
Density	1 or 2 as per paragraph 4.1.2.2(5)	1	3	Factory (7) + standard's laboratory	Average result of 3 measurements conforms		Average outside tolerance
Vicat softening temperature	1 or 2 according to paragraph 4.1.2.2(5)	1	2	Factory (7) + standard's laboratory	Average result of 2 measurements conforms	If the difference between the results obtained is >2°C, repeat measurements on 2 new samples	Average outside tolerance
Tensile tests	1 or 2 according to paragraph 4.1.2.2(5)	3	5 samples taken from 3 items of the same type	Factory + Standard's laboratory	Average result obtained from 5 conforming samples, with at least 4 individual values conforming.		Average, or more than 1 individual sample value outside tolerance.

- (1) Testing methods described in section 2
- (2) Divided between the elbows and sleeves
- (3) Only on the elbows
- (4) Measured on the right hand side for elbows
- (5) Only for the sleeves
- (6) Same type as tested in factory
- (7) At least once per year

4.1.3. COMMERCIAL CHECKS

In addition to the above provisions, checks may be carried out on the chain of distribution, at the request of LNE or of the standard committee. The results will be sent to the holder.

Samples may be sent directly to LNE by a distributor, or by another user.

The tests carried out are for every characteristic of the sample, including dimensional tests. The results are compared to the appropriate specifications and to the results obtained by the manufacturer on the pipe sampled to manufacture the pipe.

These documents will be requested by LNE after the sample has been taken.

In case of non-conformity, additional tests may be carried out, if appropriate, in order to try to determine the cause.

The cost of the pipes and the expenses incurred as a result of the time spent sampling (journeys) and the testing expenses shall be borne by the manufacturer of the sampled pipes.

An invoice, with a copy of the pipe marking, should be sent to LNE by the distributor.

4.1.4. COMPLAINTS

In the case of complaints by users, the tests may involve sampling or tests on the site where the product is sold or used (in this case, the holder is asked to be represented when the samples are obtained and during testing).

The complaint must concern characteristics which have been certified (dimensions, breakage during installation etc.) and all the facts must be reported to LNE.

If the results show that the product conforms, the costs of the tests will be paid by the person who made the complaint. Otherwise, they will be paid by the sampled pipe manufacturer.

If there is a suspicion that the NF standard is being used improperly, the evidence shall be sent to LNE. They will write a summary for AFNOR's legal department, which may take any legal action it deems fit, in accordance with article 13 of the general rules of the NF standard.

4.1.5. REPORTING TO THE STANDARD COMMITTEE

A summary of the tests carried out will be sent to LNE's standard committee at least once a year.

The documents examined during each sitting of the standard committee must be presented anonymously.

If applicable, sanctions may be proposed by the standard committee.

4.1.6. DECISION AND NOTIFICATION

Based on the results of the tests carried out and any relevant proposals made by the standard committee, LNE will notify the holder of their decision, which will be one of the following:

- a) Renewal of the certificate, possibly with a request to carry out corrective actions.
- b) Renewal of the certificate with formal notification to cease the infractions identified within a given time period. This may or may not be accompanied by an increase in the number of checks, tests and audits carried out (which may be unannounced).
- c) Suspension of certification (a suspension can last for a maximum of 6 months, and may be renewed once. After this time, certification will be withdrawn).
- d) Withdrawal of certification.

In the case of b), c) and d) the costs of the extra verifications are payable by the holder, regardless of the results. The decisions are enforceable from the time of their notification.

If a serious infraction has been carried out, LNE may, after ensuring that the infraction has taken place, make any of the decisions listed above as a precautionary measure. It will be informed of the decisions made by the standard committee.

Certificates are renewed every 3 years.

4.1.7. APPEALING A DECISION

The applicant may appeal a decision made under Article 11 of the NF standard's general rules.

In that case, the challenge will be heard by LNE as a claim. LNE will initially re-examine the file in light of the facts giving rise to the appeal. It notifies the applicant as to whether this decision is upheld or if there has been a new decision, within 15 working days of receipt of the appeal.

If the applicant wishes to maintain their challenge, they (or the beneficiary of the certification) may appeal against LNE's decision.

The appeal, which is non-suspensive, must have grounds. They are notified by registered letter, with confirmation of receipt within 15 working days.

It will be examined by LNE within 30 working days of receipt and, where it relates to a certification decision or certification rules, will be examined by the standard committee. LNE will inform the appellant whether or not its decision has been upheld, within this time frame.

In the event that the appeal is upheld following examination and submission to the standard committee for their opinion, the appeal will be presented to LNE's Certification and Impartiality Committee, which presents its conclusions following examination of the case.

This last appeal is subject to a lump-sum payment by the applicant. The company will be informed of the final decision by LNE.

4.2. MODIFICATIONS AND DEVELOPMENTS CONCERNING THE COMPANY STRUCTURE OR THE CERTIFIED PRODUCT

4.2.1. CHANGES CONCERNING THE HOLDER

In case of merger, liquidation or acquisition involving the holder, all rights of usage of the standard come to an automatic end (see article 4 of the general rules of the NF standard). The holder must inform LNE immediately of any decisions likely to lead to either a legal modification to the company or a change in its corporate name.

Failure to comply with this rule may lead to a suspension or withdrawal of the right to use the NF standard.

LNE maintains the right to examine, in consultation with the standard committee if appropriate, the terms and conditions for renewed admission, if requested.

If the merger or acquisition results in nothing more than a change in the company's corporate name, without any modifications being made to the product, manufacturing process, material and human resources used, quality organisation and verification methods, the NF certificate can be updated upon receipt of a notification letter on the new company's headed notepaper.

4.2.2. MODIFICATIONS OF THE SITES COVERED BY CERTIFICATION

Before any partial or complete change of location of the activities described in the application form, the holder must inform LNE in writing. Counting from the date of the change of location, they must stop using the standard until they have been notified of LNE's decision.

LNE's decision will be made after they have audited the new site and, if applicable, made a presentation to the standard committee (renewal of the certification or review of a new application with full or partial testing).

4.2.3. CHANGE TO THE CERTIFIED PRODUCT – NEW PRODUCTS

NF certified products must conform with the technical file included in the application, along with any observations which may have been made when certification was granted.

Therefore, LNE must be notified in writing of any modifications which the holder wishes to make to the certified products.

These modifications may be:

- To the formulation (mix, compound, dry-blend, one-pack etc.) of the certified products. They may have an effect on the natural ageing of the product. An example would be the use of a new type of stabiliser or pigment (a change in supplier for the same type of stabiliser or pigment does not count as a change in formulation).
- To the manufacturing methods.
- To the testing methods.
- To the quality management system, if they could influence the conformance of the products.

Requests for new type(s) of pipe(s) or fitting(s) require a request for an extension to the right of use of the NF Standard (forms 1a, 1c and 1d described in section 3 and update of the file).

The modification will be heard as shown in the table below. It cannot be carried out until LNE has agreed. LNE must inform the holder of the method of investigation (acceptance, prior testing or referral to the standard committee) within 15 days.

The samples necessary to carry out testing will be sent by/under the responsibility of the applicant to the independent laboratory tasked with carrying out the tests. They must be marked so that they can be identified at a later time and they must be accompanied by instructions to identify the lot numbers of the materials used in their manufacture.

Type of extension	Evaluation of the request (1)	Extension notification conditions
New family of products (pipes or fittings) or New formulation which may affect the natural ageing of a family already certified	Evaluation identical to evaluation as per section 3: audit (paragraph 3.2.2) and tests (table 1 or 2, paragraph 3.2.3)	Certification granted by LNE after consultation with standard committee (possibly in writing)
New type(s) of pipe(s) (increase in dimensional range)	<ul style="list-style-type: none"> - Dimensional measurements carried out by LNE on all types (table 1, paragraph 3.2.3) during audit - Tests on the first type by the standard's laboratory (table 1, paragraph 3.2.3) - LNE informed of the results of tests carried out by the manufacturer (tests as per table 1, paragraph 3.2.3) 	Certification given by LNE, given the test results (without consulting the committee if no particular problems are found)
New commercial reference for a model which has already received the NF standard	- Request for continuance as per appendix 1 and 2 of the current section	Certification given by LNE (without consulting the committee if no particular problems are found)
New type(s) of fitting(s)	<ul style="list-style-type: none"> - Dimensional measurements carried out by LNE on all types (table 2, paragraph 3.2.3) during audit - Tests on the first type (only applicable to the sleeves) by the standard's laboratory (table 2, paragraph 3.2.3) - LNE informed of the results of tests carried out by the manufacturer on the other types (only applicable to the sleeves) (tests as per table 2, paragraph 3.2.3) 	Certification given by LNE, given the test results (without consulting the committee if no particular problems are found)

(1) The samples required for testing and dimensional measurements may be taken during the annual audit, or during a specific audit.

4.2.4. TEMPORARY CESSATION OF PRODUCTION

The holder must inform LNE of any temporary cessation of production of the certified range or ranges (pipes – fittings) if the cessation lasts less than 6 months.

The holder must request a provisional suspension to the right of use of the standard (maximum length: 1 year) if they do not have any more products bearing the NF standard in stock. After this time, the right of use will be removed.

If the holder recommences manufacturing before the suspension has expired, they must inform LNE. A verification audit will be carried out before the NF marked products can be sold again.

4.2.5. PERMANENT CESSATION OF PRODUCTION OR SURRENDER OF THE RIGHT OF USE

If the holder ceases manufacturing the certified product definitively, or if they surrender the right of use of the standard, they must inform LNE, stating how long they think it will take for the stock which bears the standard to be exhausted. LNE will propose conditions under which the stock may be exhausted, after consulting with the standard committee, if necessary.

The certificate emitted by LNE will remain valid for as long as the holder has a stock of NF certified products, as long as the tests keep being carried out on them.

APPENDIX 1 of section 4

FORM
REQUEST TO MAINTAIN THE RIGHT OF USE
(WHEN A MODIFICATION HAS BEEN MADE TO A COMMERCIAL REFERENCE)

(to be written on the manufacturer's headed paper, or completed with the company's stamp and the signature of its legal representative).

The General Director of
LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS
Pôle Certification Plurisectorielle
1, rue Gaston Boissier
75724 PARIS Cedex 15

RE: Request to maintain the right of use of the NF standard for

Dear General Director,

In my capacity as..... (1), representing the company(2), I kindly request to maintain the right of use of the NF standard for the products listed below, in accordance with the certification rules for NF

which differ from the products approved for the NF standard solely by the brand name and commercial reference.

This request is for the products marketed by (3):

Reference of the basic model	NF certified	New brand name(s) and/or requested commercial reference(s)
Brand name and commercial reference already approved	Number of previously approved NF standard right of use	

I attach the above mentioned distributor's undertaking (cf Appendix 2).

Stamp and signature of the holder
or of the agent (*):

Date

(1) Job title

(2) Company identification (headquarters)

(3) Distributor name and address

(*) For manufacturers from outside the EEA (European Economic Area).

APPENDIX 2 of section 4

**ATTACHMENT TO REQUEST TO MAINTAIN THE RIGHT
OF USE OF THE NF STANDARD**

(Undertaking by the distributor to be written on their headed paper)

I the undersigned, _____

in my capacity as: _____

of the company: _____

state that the substitution of the commercial brand: _____ for _____ the manufacturer's one, on the of the above-mentioned models, leads me to take on the required responsibilities.

In particular, I state that I have exclusive rights over these brands and commercial references, through a trademark registration in accordance with the applicable industrial property legislation.

I also undertake to market the above mentioned model(s) for which this request is made, without carrying out any changes whatsoever to them.

Signed in:

On:

Signature

Distributor's stamp:

Stamp and signature of the manufacturer
or of the agent:

CERTIFICATION RULES

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SECTION 5 PARTICIPANTS

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- 5.4. Testing bodies**
- 5.5. Standard Committee**

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5.1. AFNOR CERTIFICATION

AFNOR is the owner of the NF standard and has given AFNOR CERTIFICATION an exclusive licence. AFNOR CERTIFICATION manages and organises the NF certification system, which notably defines the NF standard's rules of governance and operating procedures.

5.2. MANDATED BODY

AFNOR Certification entrusts the management of the application of the standard to LNE.

LNE is thus accountable to AFNOR Certification's for all management operations entrusted, in accordance with Article 3 of the NF standard's general rules.

All participants in the NF standard process are bound to confidentiality by Article 8 of the NF standard's general rules. If needed, an agreement may be signed between LNE and the manufacturer, upon the manufacturer's request.

5.3. AUDIT BODIES

LNE entrusts the audits to the following bodies:

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS (LNE)

1, rue Gaston Boissier
75724 PARIS CEDEX 15
Phone number: +33 (0)1 40 43 37 00

It may also call on duly qualified external auditors, as per LNE's protocols. The subcontracted audits are subject to a contract (requirements for independence and confidentiality).

Specific conditions and restrictions may be defined by the standard committee, who may express an opinion on the acceptance of external auditors.

The holder or applicant must facilitate the work carried out by the auditor.

LNE must be informed of any requests for recusal of members of an audit team within 10 days of receipt of notification by the audit team, so that it may be taken into account.

5.4. TESTING BODIES

LNE entrusts the tests to the following independent laboratory:

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS (LNE)

Direction des Essais (DE) - Pôle Chimie et physico-chimie des matériaux
29 avenue Roger Hennequin
78197 TRAPPES Cedex
Phone number: +33 (0)1 30 69 10 00

5.5. STANDARD COMMITTEE

5.5.1. COMMITTEE MEMBERS

A standard committee has been set up. Its participants are approved by LNE - each member will have been informed by LNE.

The committee's powers are to:

- provide an opinion on the certification rules and changes to the process.
- provide an opinion on potential communication or promotion activities relating to the standard. Promotional activities have a particular budget which must be agreed upon every year in concert with the committee.
- Providing an opinion on applications for certification and appeals.

The committee must provide its opinions impartially.

It may be consulted by LNE regarding any files for monitoring purposes.

LNE will ask the committee members to meet, or it will write to them, at least once a year, in order to provide them with a summary of the inspections carried out.

Every member of the committee undertakes to:

- Contribute to the good functioning of the NF standard, using their expertise.
- Maintain confidentiality on all information presented to them, until it is published by either AFNOR Certification or LNE.
- Attend meetings regularly, and if required, to regularly inform their substitute and to provide them with the necessary documents.
- To contribute to the development of the NF standard, by promoting the products or services which have been awarded an NF certificate.

The members' mandate is 2 years and is renewable by tacit consent.

In order to preserve the credibility and efficacy of the committee's work, LNE reserve the right to end a member's mandate under the following circumstances:

- If they do not maintain confidentiality
- If they are repeatedly absent from the committee's meetings without justification
- If they generally do not comply with the above mentioned rules

The chair of the standard committee is nominated under the same conditions, in consultation with the standard committee. He/She calls the committee together and looks for consensus of opinions. The rule is to rotate between the colleges. However, a chair's mandate may be extended by prorogation by one or several years if no other candidate representing another college comes forward.

Performance of the standard committee members' duties is strictly personal. However, in case of absence, a substitute is appointed and named, under the same condition as the incumbents.

LNE drafts the minutes of the comments and proposals made during the committee meeting. These minutes are sent to all members of the committee.

LNE requests that AFNOR Certification participate in the committee meetings as needed. During revision of the current certification rules, LNE will organise consultations on and validation of the certification reference standard (in accordance with the requirements of regulation NF X 50-067, which includes consulting with AFNOR Certification in its role as stakeholder.)

5.5.2. MAKE-UP OF THE COMMITTEE

1 Chair (to be designated by the members of the committee)

1 Deputy Chair:

1 Representative of the mandated body LNE - Multisectoral certification department

Suppliers, manufacturers, distributors

3 pipe and/or fitting manufacturers who are already certificate holders

1 representative of the "Syndicat National des Fabricants Tubes et Raccords en PVC rigide" [*National Syndicate for Rigid PVC Pipes and Fittings*]

Users, consumers, specifiers

1 telecommunications operator representative

2 supply chain representatives

Experts and technical bodies

1 representative from the "Bureau de Normalisation des Plastiques et de la Plasturgie" (BNPP) [*Plastics and Plastic Processing Standardisation Bureau*]

1 representative from testing and auditor bodies

5.5.3. BUREAU

For the sake of efficacy, the standard committee may delegate some of its tasks to a bureau, whose members are appointed individually and are obligatorily chosen from the standard committee.

The bureau is composed of the standard committee's chair, a representative of the manufacturers, a representative of the users, the representative of LNE, the representative of the laboratories and the representative of the qualified auditors.

The bureau will meet as needed.

During the standard committee meetings, a report will be given of the work carried out by the bureau.

5.5.4. SUBCOMMITTEE OR WORKING GROUP

For certain ad-hoc technical work that does not require all members of the standard committee to be convened, a working group or subcommittee may be formed whose members are appointed and chosen from the standard committee.

In the case of a working group, professionals or prominent figures from outside the committee may be called in.

The roles of this subcommittee or working group are specified by the standard committee; they will generally be limited to the creation of drafts, proposals or the provision of additional information on a particular subject on behalf of the standard committee.

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SECTION 6

APPLICABLE FEES – INVOICING TERMS

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- 6.1. Applicable fees**
- 6.2. Invoicing terms**

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6.1. APPLICABLE FEES

The costs of the services provided to obtain certification and monitor certified products are subject to a fee which is revised annually. The fee applicable for the year is payable by all certification holders.

Promotional activities have a specific budget which must be agreed upon every year in concert with the committee.

The fees are in euros and do not include taxes. For testing fees, the samples must be sent to the standard's laboratory, with carriage and clearance fees paid for, if applicable.

6.1.2. TRAVEL AND LIVING EXPENSES

Travel and living expenses are to be paid by the applicant or the holder as per the schedule of fees.

6.1.3. AUDIT CANCELLATION

Any audit which is cancelled, but which had been scheduled by agreement between LNE and the audited company, is subject to billing as follows:

- Cancellation 15 to 8 days before the agreed date: 50% of the audit fees.
- Cancellation 7 to 3 days before the agreed date: 75% of the audit fees.
- Cancellation between 2 days before the agreed date and the scheduled date: 100% of the audit fees.

Transport fees may be charged at up to 100% of the total if they are non-refundable or subject to penalties.

6.2. INVOICING TERMS

6.2.1. COLLECTION OF INVOICED SUMS

The LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS is a mandated body, empowered to collect the invoiced sums.

Invoices issued by LNE are payable within 45 days.

The applicant or holder must pay the invoices under the given conditions: any failure to pay by the holder prevents LNE from carrying out its monitoring and intervention activities, as required by the current certification rules.

If a first formal demand, sent by registered letter, with acknowledgment of receipt, does not result in payment of the total sums due within one month, LNE may adopt precautionary measures with regards to the certificates issued under the NF standard, for the totality of the holder's products.

6.2.2. ACQUIRING CERTIFICATION

For each application, the services provided include: evaluation of the application, audits and testing.

The fees relating to the evaluation of the application are paid once, at the time the application is submitted, and they are for: the evaluation of the application, the presentation of the case to the standard committee and the general functioning of the standard.

The total fees due for the evaluation of the application are payable regardless of the outcome of the evaluation.

6.2.3. MONITORING OF CERTIFIED PRODUCTS

The fees payable are for the right of use of the NF standard paid to AFNOR Certification, the follow-up of the case, audits and testing.

If approval is given during the year, the invoiced fees will correspond to the services carried out. Case follow-ups (technical review of the case) are invoiced based on time.

After a product has been certified, the annual right of use of the NF standard is invoiced by LNE to the holder and paid to AFNOR Certification.

The right of use covers:

- The general functioning of the NF standard (follow-up of the bodies in the NF network, management of the NF standard committee).
- Defence of the NF standard: registration and protection of the standard, legal advice, management of improper use of the NF standard, legal costs.
- Contribution to the general promotion of the NF standard.

The fees due for case follow-ups (technical review of the case) are collected even if the certificate is withdrawn or suspended, as decided by LNE, or at the holder's request.

As long as the holder maintains stocks of products which bear the NF standard, inspections are carried out and invoices are sent for the applicable fees. Case follow-ups (technical review of the case) are invoiced based on time.

6.2.4. ADDITIONAL CHECKS

The costs incurred due to additional checks which follow on from a decision made by LNE are payable by the applicant/holder, regardless of their results.