LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

Organisme certificateur mandaté par
AFNOR Certification

CERTIFICATION RULES
NF MARK FOR UNPLASTICISED VINYL-BASED EXTRUDED PRODUCTS FOR OUTDOOR USE

AFNOR Certification identification No.:
NF 132
Ref. written by LG - LNE

Revision no. 19 - February 2022
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The 25th of February 2022

First applied: October 1991

Reference document:
GENERAL RULES OF THE NF MARK
Approved by the President of AFNOR on 23 April 2012

Founded in 1938, the NF mark is a collective certification mark, with the object of certifying the compliance of products with national, European and international standard documents covering them, and which may be complemented by additional specifications, in conditions defined by the certification reference standards. It is granted by AFNOR Certification and its network of partner bodies, making up the NF network.

The NF mark is a voluntary product certification mark; it satisfies the requirements of the Code de la Consommation, notably by associating the interested parties with the validation of the certification reference standards, by defining marking rules for certified products and by clear and transparent communication on the main characteristics certified.

The right to use the NF mark is granted on the basis of compliance with one (or more) standard(s) and more generally to the whole certification reference standard*,* for a product coming from an applicant and a designated design and/or manufacturing and/or marketing process. Attribution of the right to use cannot in any circumstances substitute LNE's responsibility for that which is legally incumbent upon the company holding the right to use the NF mark.

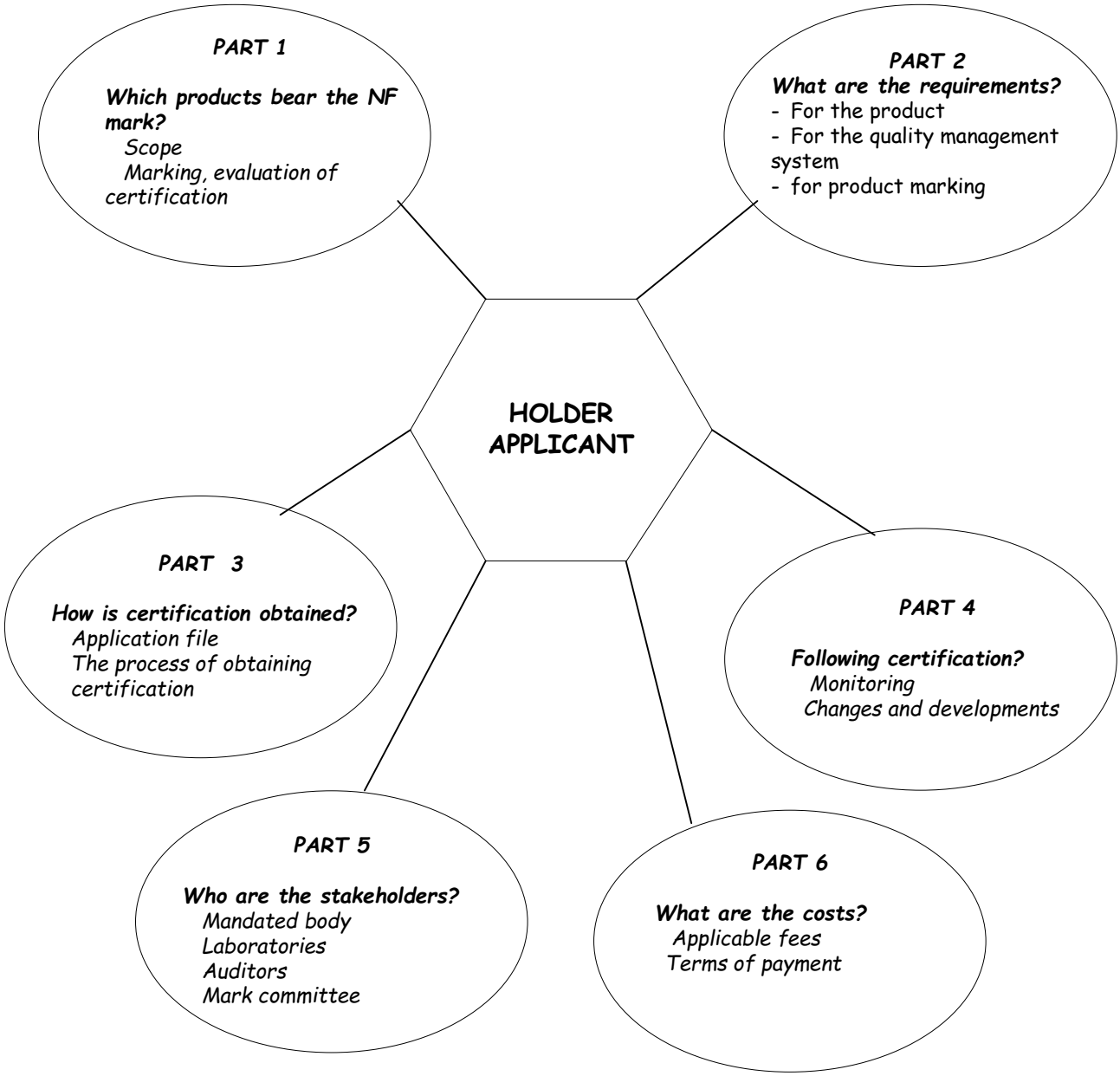
The NF mark checks the characteristics covering the safety of persons and goods, the suitability for use and the durability of products, as well as any additional characteristics enabling products to be distinguished in the market.

In accordance with the General Rules of the NF mark, AFNOR Certification entrusts the management of the NF mark for unplasticised vinyl-based extruded products for outdoor use to LNE, the mandated Certification Body.

LNE is responsible to AFNOR Certification for operations which are entrusted to it and are covered by a contract with AFNOR Certification.

Reminder:
It is specified that all products or services must satisfy the regulations, independently of any certification application, concerning for example forgery, compliance and safety requirements, etc.

CERTIFICATION RULES



Who should you contact?
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The documents applicable in this certification are:

- the general rules of the NF mark laying down the general organisation and conditions of use of the mark,
- these certification rules which define, in part 2, the technical characteristics to be respected.

These certification rules were submitted for the approval of AFNOR Certification for acceptance in the NF certification system. They have been approved by the Legal Representative of AFNOR Certification.

They cancel and replace all previous versions.

Hence the certification rules can be revised, in part or in whole, by LNE after consultation with the interested parties.

UPDATING

Certification rules	Reason for update	Revision	Date
Part 1: Scope – NF marking		Rev. 19	February 2022
Part 2: Requirements to be met by the applicant/holder	Specification of the DHC testing method, hot shrinkage, flexural modulus of elasticity Add specifics on the internal audit	Rev. 19	February 2022
Part 3: Obtaining certification	Modification of sample collection Redefining of non-compliant and compliant points to be monitored.	Rev. 19	February 2022
Section 4: Monitoring of certified products – Modifications and developments	Modification of sample collection Redefining of non-compliant and compliant points to be monitored.	Rev. 19	February 2022
Part 5: Participating organisations	Change in the committee make-up	Rev. 19	February 2022
Part 6: Applicable fees – Invoicing terms		Rev. 19	February 2022

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PART 1

SCOPE – NF MARKING

CONTENTS

Rev. 19 – February 2022

1.1. SCOPE

The Profiles covered by these NF certification rules are:

- Unplasticised vinyl-based extruded products for outdoor use;
  louver, garage door, sliding louver, roller shutter, leaf shutter, swimming pool protection (cover, shelter, barrier), French shutter, thermal bridge breaks (distance pieces), Venetian blind, wall coverings, cladding, intermediate areas (fences, garden furniture, planters) and other profiles intended for outdoor use, excluding window profiles (for example chicane, lower panel for French window…)

- These profiles are composed of virgin or reprocessed PVC-U material, or of virgin PVC-UE. These materials are opaque for all colours or translucent.
These profiles can be co-extruded, in this case, for the internal part, this concerns:
  - virgin or reprocess PVC-U or PVC-UE material (with or without resistance to UV) or
  - reprocessed or recycled PVC-U material

- Translucent vinyl compounds for application as a swimming pool covering can be used only for roller shutters protected from the sun. They are used alone or in combination with an opaque compound for two-colour strips.

The properties certified under the NF label for extruded products based on non-plasticised vinyl compositions for outdoor use are:
- Vicat softening temperature
- Appearance - colour
- Flexural modulus of elasticity
- Shrinkage
- Impact strength
- Durability

It is the responsibility of the applicant/holder to ensure that the regulations applicable to its product are adhered to (e.g. CE marking)

The applicant/holder is solely responsible for the compliance of its products; LNE inspections cannot replace the responsibilities of the applicant/holder.

1.2. DEFINITIONS

Applicant/Holder:
Artificial Person who manages and/or is responsible for compliance with all of the requirements defined in these certification rules of the NF mark.
These requirements cover at least the following stages: design, manufacture, assembly, quality control, marking, packaging and putting on the market, and specify the critical points at each stage.
If the applicant/holder is not established in the European Community they should appoint an authorised agent.

Manufacturer:
The term "manufacturer" denotes both the vinyl compound producers, profile extruders and formulator-extruders. Wherever necessary, a distinction is made between the three categories.

Extruder:
Producer of profiles extruded from vinyl compounds.

Producer of vinyl compounds (or producer):

Companies that supply vinyl compounds to extruders

Formulator-extruder:
Extruder which prepares its own vinyl compounds.

Authorised agent:
Artificial or Natural Person established in the European Economic Area (E.E.A.) who acts as representative of the applicant/holder outside the E.E.A. and has a written mandate from the latter meaning that he can act in its name in the NF mark certification process according to the provisions of the certification rules.

The authorised agent may also be the distributor, or the importer of the certified products, in which case their different functions are clearly identified.

Distributor:
Artificial Person distributing the applicant's/holder's or its authorised agent's products who does not act upon the product or its packaging. If the distributor puts NF products on the market independently of the authorised agent, it takes responsibility for verifying conformity with the NF certification rules and the applicable standards.

The types of distributor may be as follows:
- distributors who distribute the product under the trademark of the holder. In this case, no action is to be taken with regard to the NF Mark.
- distributors who distribute the product with a change in trademark. The applicant/holder and the distributor must formulate a maintenance application to maintain the right to use.

If the distributor does not want to make an explicit reference to the manufacturing site, a certification application must be made by the distributor. In this case, the production plant is not mentioned on the certificate. Depending on the operations performed by the applicant/holder or distributor, the audited sites and the audit period within the framework of the initial certification or surveillance are defined case by case.

Batch:
Clearly-identified quantity of products manufactured consecutively or continuously in the same conditions using the same material in accordance with the same specification.
The product batch is defined and identified by the product manufacturer.

Campaign:
Period of continuous manufacture in the same conditions (profile, extruder, tooling, formulation) resulting in the production of one or more batches. Re-starts with changes in parameters within the limits of the tolerances defined for the manufacturing process do not constitute a new campaign.

Vinyl compound:
Material having a defined formulation, identification characteristics including the colour, a commercial/internal reference and a presentation (powder and/or granules).

Reprocessed material of internal origin (the extruder):
Identified material, of defined formulation, free of degradation and contamination, made from PVC-U profiles coming from pre-consumption, in accordance with this document, including

poorly measured/unused products and offcuts, coming from an assembler, that will be retransformed by the same extruder as the one that extruded it previously.

Note: profiles produced with a reprocessed material of internal origin of the same formulation have the same performance as those constituted of the virgin material.

In the case of collection from an assembler (its customers, for ex.) or recourse to sub-contracting for converting its profiles or offcuts into reprocessed material, the extruder will describe in a procedure the means for controlling traceability and the associated records.

Reprocessed material of external origin (the extruder):
Material prepared using PVC-U profiles coming from pre-consumption, intended for a new extrusion by an extruder other than the one that extruded it previously.

Recycled material:
Material prepared using PVC-U profiles coming from post-consumption.

Range of profiles:
By vinyl compound, all profiles whose linear weight is between –20% and +50% of the weight of the reference profile.

Reference profiles:
Profiles defined by mutual agreement between the extruder and LNE (where possible, this should be the profile of which the extruder has the most experience)

Colour:
Light composition and profile colours are defined by the following colorimetric characteristics:

$$L^* \geq 82;\ -2{,}5 \leq a^* \leq +5;\ -5 \leq b^* \leq +15.$$

The colours, that have at least one of the colorimetric characteristics outside these tolerance ranges, are defined as a colour that is not bright.

Film-coated profiles:
A film-coated profile is constituted of the following three parts:
- Film-coating film,
- Glue and attaching primer pairing
- Material (support) of the profile to be film coated.

Range of colours of the films for film coating:
Ranges of colours of the films for film coating are defined into 4 categories:
Category 1: White or light shade
Category 2: Wood or veined tone
Category 3: Anthracite grey or dark shade
Category 4: specific or metallised shade

Solar blade:
Shutter profile for swimming pool having an upper face (in contact with the air when the shutter is deployed) allowing all or a portion of the solar radiation (generally transparent or translucent), and a lower face (in contact with the water when the shutter is deployed) which fully absorbs the solar radiation that has passed through the upper face (opaque, of a dark colour or even black, with an absorption coefficient close to 1).

1.3. NF MARK

The NF Mark is materialised by the NF monogram below:

The marking conditions for products, packaging and technical and commercial documents are defined in Part 2.

The graphics charter for the NF mark are available on request from LNE.

The purpose of the marking rules is to guide the holder in how to meet the regulations and the requirements of the NF certification. The general rules of the NF mark specify the conditions of use, of validity and the penalties in the event of abusive use of the NF mark.

Without prejudice of the sanctions laid down in the General Rules of the NF mark, any incorrect announcement of the certified features and any fraudulent use of the NF logo expose the holder to lawsuits for fraud and/or misleading advertising.

1.4. CERTIFIED PRODUCTS

The list of certified products can be obtained from the certificate search engine at www.lne.fr, by navigating to "Certification", "Certificats produits émis par le LNE" [Product certificates issued by LNE], “Moteur de recherche de certificats” [Certificate search engine].

Upon request, LNE can provide information regarding the validity of a given certificate.

CERTIFICATION RULES
NF MARK FOR UNPLASTICISED VINYL-BASED EXTRUDED PRODUCTS FOR OUTDOOR USE

PART 2

REQUIREMENTS TO BE MET BY THE APPLICANT/HOLDER

CONTENTS

Rev. 19 February 2022

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2.1. – REQUIREMENTS CONCERNING PRODUCTS

2.1.1. REFERENCE STANDARDS

NF T 54-405-1:June 2017: Extruded or coextruded profiles in unplasticised (PVC-U) poly(vinyl chloride) for outdoor use - Test specifications and methods

NF EN 13245-1:July 2010: Plastics - Profiles in unplasticised (PVC-U) poly(vinyl chloride) for building applications - Part 1: designation of light coloured profiles
NF EN 13245-3:July 2010: Plastics - Profiles in unplasticised (PVC-U) poly(vinyl chloride) for building applications - Part 3: designation of PVC-UE profiles

Note: Types of PVC-U and PVC-UE profiles are defined in Para. 3 of NF EN 13245-1 and EN 13245-3 standards (Type 1 [profile obtained by mono-extrusion (coloured in mass)], Type 2 [profile obtained by co-extrusion], Type 3 [profile film-coated Type 1 or Type 2] and Type 4 [profile Type 1 or Type 2 with a coat of paint]).

2.1.2. ADDITIONAL SPECIFICATIONS

The specifications for the vinyl compounds and profiles and the reference test methods for the NF Mark are defined in the tables below. They are based on the above standards including any additions or amendments.

2.1.2.1. Compound identification characteristics

2.1.2.3

a) Reprocessed or recycled materials

There are no identification requirements for coextruded materials used for internal or non-visible external layers, but the characteristics of the profile produced with this material must comply with the requirements of Para. 2.1.2.2 below.

b) Expanded PVC compounds

The formulation of the basic composition is filed with LNE at the time of the certification application.

c) Films, primer and adhesive for film coating

The film coating film must comply with the requirements hereinafter.

Characteristics and test methods	Specifications
Reaction of the film to radiation (Visible, UV and IR) before ageing	Producer's declared value
Reaction of the film on supports of different colours with regards to radiation in new condition Visible, UV and IR radiation	Producer's declared value
Characterisation of the IRTF micro film (optional test) before ageing	Producer's declared value
Ageing tests per colour of coated film before ageing	Delta E ≤ 5 Delta b ≤ 3 Grey scale ≥ 3

The references of the adhesive and of the primer are filed with LNE at the time of the certification application.

d) Paints for painting

The commercial reference of the paint and its manufacturer is filed with LNE at the time of the certification application. In addition, a technical data sheet that contains the identification characteristics of the paint must be forwarded to LNE (in particular the reference of the base, its hardener (if any) and its colour must be clearly identified.).

e) PVC-U compounds for non-decorated, film-coated, painted, thermal bridge break and swimming pool cover application.

Characteristics and test methods	Non-decorated PVC-U	Film-coated / painted	RPT	Swimming pool cover	Specifications
Density at 23°C (kg/m3) NF EN ISO 1183-1 standard	X	X	X	X	Producer's declared value ± 20
Ash content (%) (1) (3) NF EN ISO 3451-5 standard Method A § 2.1.3.	X		X	X	Producer's declared value ± 10%
Thermal stability time (DHC) (min) (3)+ Para. 2.1.3.	X		X	X	- Value declared by the producer± 15 % with a minimum range of ± 7 min.
Vicat Softening Temperature (°C) NF EN ISO 306 standard Method B 50 and NF T 54-405-1	X		X	X	- Reference value declared by the producer ± 2. The minimum value must be: - for opaque compounds: ≥ 75 - for translucent compounds: ≥ 69
		X			- Level declared by the producer on the basis of the nominal reference value: level 75: 75 ≤ T < 82 level 82: 82 T - Nominal reference value declared by the producer ± 2
Modulus of elasticity in flexure (MPa) NF EN ISO 178 standard	X	X	X	X	- Nominal reference value declared by the producer ± 10% that needs to be ≥ 2300 N/mm²
Colour(3) standard ISO 18314-1 + Para.2.1.3.	X	x(2)	X	X	- for opaque compounds Producer's declared specifications (L* a* b*) - for bright colours: where L*1 - a* ± 0,5 b* ± 0,8 ±E* Δ 1 - for non-bright colours: ΔE* ≤ 3,5 - for translucent compounds: specifications being prepared
Translucidity (%) standard NF P 38-511 + Para.2.1.3.	X			X	- for opaque compounds: Not applicable - for translucent compounds:
Reaction to contact with hydrogen sulphide(3)				X	No reaction observed

(1) Illustrative figure for compositions of which L* 35

(2) if the final profile is film-coated or painted on its visible faces, the requirements do not apply.

(3) Not applicable to non-UV resistant virgin vinyl compositions intended for the inner layer of the profiles.

2.1.2.2. Physicochemical and mechanical properties of the profiles

The UV-exposed layer of co-extruded profiles must have a minimum thickness of 0.5 mm.

a) General properties of PVC-U profiles

The table below applies to mono-material PVC-U sections or PVC-U sections co-extruded with a PVC-U core.

Characteristics and test methods	Specifications	Non-decorated PVC-U	RPT	Film coated	Painted
Appearance NF T 54-405-1 standard	Clean, smooth surface with no scratches, pitting or bubbling and consistent in colour.	X	X		
	Clean surface without imperfections			X	X
2.1.3.	Extruder's specifications (L* a* b*) - for opaque bright colours where L*1 – a* 0.5 b* 0.8 ±E* ± 1 - for opaque non-bright colours and translucent compounds: E* 3,5	X	X		X For experimental purposes only
	- for uniform films, specifications (L* a* b*): - for bright colours: where L*1 - a* ± 0,5 b* ± 0,8 ±E* Δ 1 - for non-bright colours: ΔE* ≤ 3,5			X For experimental purposes only	
Decoration	- for films: Appearance conforming with a standard registered model			X	
Paint layer thickness: NF EN ISO 2808 standard	Thickness 35 µ +/- 10 µ dry per coat				X
Brilliance	Painter's declared value				X For experimental purposes only
Linear weight (g/m) - NF T 54-405-1 standard	Extruder's declared value (PM) $P\min = P_M - 0.4P_M{}^{0.7}$	X			
- NF EN 13245-1 standard			X	X	X
Traction: NF EN ISO 527-1 & 2 + NF T 54-405-1 Flow limit stress (MPa) Extension at point of failure (%)	 ≥ 37 ≥ 100	 X	 X	 X	 X
Traction impact resistance at 23°C (kJ/m2) NF T 54-405-1 + NF EN ISO 8256 standards	Producer's declared value: ≥ 450 (for experimental purposes)	X		X	X

Thermal stability time (DHC) (min) (3)+ Para. 2.1.3.	- - for stabilized compositions Ca/Zn ou Sn ≥25min - - for stabilized compositions Pb ≥50min	X	X		

Characteristics and test methods (cont.)	**Specifications** (cont.)	**Non-decorated PVC-U** (cont.)	**RPT** (cont.)	**Film coated** (cont.)	**Painted** (cont.)
Impact resistance at 23 °C (J) -NF T 54-405-1 and/or NF EN ISO 6603-1+ Para. 2.1.3	Extruder's declared value with respect to the following levels: level 5: ≥ 5 level 10: ≥ 10 level 15: ≥ 15 - Energy at 50% of failure conforms to the level declared	X Special case: For roller blind slats: Tests carried out on both exposed faces unless the manufacturer declares that the slat is only intended to be rolled on one face			
- NF EN 13245-1 and/or NF EN ISO 6603-1+ Para.				X	X
Hot shrinkage at 100°C (%) NF EN 479 standard	Extruder's declared value with respect to the following levels: level 2: ≤ 2 level 3: ≤ 3	X	X	X(2)	X
2.1.3	Ee/Eo ratio 120.10-7	X Only for roller blind slats and louver blinds and for the panels of leaf shutters		X Only for roller blind slats and louver blinds and for the panels of leaf shutters	X Only for roller blind slats and louver blinds and for the panels of leaf shutters
2.1.3	No reaction observed	X Only for swimming pool safety cover profiles			
Thermal resistance Standard NF EN 13245-1 § 6.2	No defects coated: peeling/blistering/delamination varnished: blistering/flaking			X	X
Resistance to peeling (N/mm) NF EN 13245-1 § 6.4(1)	≥ 2			X	
NF EN 13245-1 standard Para.	No defect: category 0				X
Scratch resistance Standard NF EN ISO 1518 / XP CEN/TS 15186	No fault				X

(1) provision of specific test pieces by the extruder (partial coating with about 100 mm with no film)
(2) measurement on a profile sample with or without a film (as per the applicant's choice)
(3) Not applicable to non-UV resistant virgin vinyl compositions intended for the inner layer of the profiles.

b) General properties of PVC-UE profiles

The table hereinafter applies to single-material or bi-material PVC-UE profiles or to co-extruded PVC-U profiles with a PVC-UE core.

Characteristics and test methods	Specifications	Undecorated PVC-UE, TB, Varnished	Film coated
Appearance	Clean, smooth surface without scratches, blemishes	X	
	Clean surface without imperfections		X
Colour § 2.1.3.	Extruder's specifications (L* a* b*) - for bright colours: where L*1 - a* ± 0,5 b* ± 0,8 ±E* Δ 1 - for non-light colours: ΔE* ≤ 3,5	X	
	- for uniform films, specifications (L* a* b*): - for bright colours: where L*1 - a* ± 0,5 b* ± 0,8 ±E* Δ 1 - for non-bright colours: ΔE* ≤ 3,5		X experimental
Decoration	- for films: Appearance conforming with a standard registered model		X
Linear weight (g/m) standard NF EN 13245-3	Value declared by the extruder (P_M): ± 0.125 P_M	X	X
Traction: NF EN ISO 527-1 & 2 + NF T 54-405-1 Flow limit stress (MPa) Extension at point of failure (%)	 ≥ 37 ≥ 100	X	X
Impact-tensile strength at 23°C (kJ/m²) NF T 54-405-1 + NF EN ISO 8256 standards	Producer's declared value: ≥ 450 (for experimental purposes)	X	X
Impact strength at 23°C (J) standard NF EN 13245-3	Value declared by the extruder with respect to the levels: level 5: ≥ 5 level 10: ≥ 10 level 15: ≥ 15 - Energy at 50% of break complies with the level declared	X	X
Heat resistance at 75°C (%) standard NF EN 479:1995	≤ 3% no delamination	X	X(1)(2)
2.1.3 Only for roller blind slats and louver blinds and for the panels of leaf shutters	Ee/Eo ratio 120.10-7	X	X
Reaction with hydrogen sulphide (§ 2.1.3.)	for pool safety covers only: No reaction observed	X	
Flexural strength (N) - *for pool cover applications of PVC-UE profiles* according to standard NF P 90-308 §5.3.1.2	Value declared by the extruder: Lower acceptable limit: -10% of the nominal value	X	
Water absorption NF P 90-308 (§ 5.3.3.3)	for pool safety covers only: ≤ WE declared by the manufacturer	X	
Resistance to peeling (N/mm) NF EN 13245-1 § 6.4	≥ 2		X(2)

(1) measurement on a profile sample with or without a film (as per the applicant's choice)
(2) provision of specific test pieces by the extruder (partial coating with about 100 mm with no film)

2.1.2.3. Durability

a) Durability properties of compositions and profiles

The table below does not apply to non-UV resistant virgin vinyl compositions for the inner layers of the profiles.

Characteristics and test methods	Specifications
Natural ageing: Standard NF T 54-405 over 1 and 2 years	
Surface condition after natural ageing over 1 and 2 years	no noticeable defect
Changes in the shade after 1 year of ageing: . Delorme rating according to NF T54-405	Rating ≥ 8
. inspection based on a grey scale(1) in accordance with the NF EN ISO 20105-A02 standard.	≥ 4
. colorimetry(1) following ISO 18314-1 + § 2.1.3.	ΔE* ≤ 4 (compared to the representative sample) Δb* ≤ 2 (compared to the representative sample)
. brightness(2)	Value declared by the varnisher. Lower acceptable limit: -50% of nominal value
Changes in shade after 2 years of ageing: . Delorme rating according to NF T 54-405	Rating ≥ 7 for PVC-U Rating ≥ 8 for varnished and coated products
- inspection based on a grey scale(1) in accordance with the NF EN 20105-A02 standard.	≥ 3
. colorimetry(1) following ISO 18314-1 + § 2.1.3.	ΔE* ≤ 4 (compared to the representative sample) Δb* ≤ 3 (compared to the representative sample)
. brightness(2)	Value declared by the varnisher. Lower acceptable limit: -50% of nominal value
Impact-tensile strength after 2 years of ageing (kJ/m2) following NF EN ISO 8256 *only for PVC-U compositions and profiles*	≥ 250 with no individual value < 120
Flexural strength (MPa) after 2 years of ageing *only for pool cover applications of PVC-UE profiles* according to standard NF P 90-308 § 5.3.1.2	Value declared by the extruder: Lower acceptable limit: -10% of the nominal value
Resistance to peeling (N/mm) according to EN13245-1 and 3 Appendix C after 2 years *only for coated profiles*	≥ 2
Cross-hatch test NF EN ISO 2409 after 2 years *only for varnished profiles*	No defect: category 0
Accelerated ageing: according to standard NF EN 513 after 4000 h + § 2.1.3.3 **Condition of surface after ageing**	no noticeable defect
Change in colorimetric properties (determined 24 h after the end of the test)	ΔE* ≤ 5 (compared to the representative sample) Δb* ≤ 3 (compared to the representative sample) for experimental varnished and coated products: ΔE* ≤ 4 (compared to the representative sample) Δb* ≤ 2 (compared to the representative sample)
Impact-tensile strength (kJ/m2) according to standard NF T 54-405 + NF EN ISO 8256 *only for PVC-U compositions and profiles*	≥ 250 with: - no fragile test pieces - no individual value < 120 after elimination of outliers

Flexural strength (MPa) - *only for pool cover applications of PVC-UE profiles* according to standard NF P 90-308 § 5.3.1.2	 Value declared by the extruder: Lower acceptable limit: -10% of the nominal value

Characteristics and test methods (cont.)	**Specifications (cont.)**
Accelerated ageing: according to standard NF EN 16472 over 1500 h + § 2.1.3.3 **- Condition of the surface after ageing**	no noticeable defect
- Changes to the colour: every 500 h (determined 24 h after each sampling) and after 1500 h For light PVC-U colours: colorimetry following ISO 18314-1 + § 2.1.3. For non-light PVC-U colours: Delorme rating according to NF T 54-405 For varnished and coated products (all shades), determined 24 h after the end of the test, colorimetry following ISO 18314-1 + § 2.1.3. measured at the same locations on the samples.	 $\Delta E^* \leq 5$ (compared to the representative sample) $\Delta b^* \leq 3$ (compared to the representative sample) Rating≥ 7 $\Delta E^* \leq 3$ (compared to the representative sample)
- Impact-tensile strength (kJ/m2) according to standard NF T 54-405 + NF EN ISO 8256 *only for PVC-U compositions and profiles*	≥ 250 with: - no fragile test pieces - no individual value < 120 after elimination of outliers
- Flexural strength (MPa) - *only for pool cover applications of PVC-UE profiles* according to standard NF P 90-308 § 5.3.1.2	 Value declared by the extruder: Lower acceptable limit: -10% of the nominal value

(1) For varnished and coated profiles, as a guide only
(2) For varnished profiles, as a guide only

b) Durability properties of films for coating

Characteristics and test methods	**Specifications**
Reaction of the film to radiation (Visible, UV and IR) ageing according to standard NF EN ISO 4892-1 and 2 method A cycle 1 - over 2000 h and 4000 h	Producer's declared value
Characterisation of the IRTF micro film (optional test) ageing according to standard NF EN ISO 4892-1 and 2 method A cycle 1 - over 4000 h	Producer's declared value

2.1.3. ADDITIONAL TEST METHODS

2.1.3.1. ASH CONTENT

The test is carried out according to standard NF EN ISO 3451-5 (method A) with the following additional requirements:

- quantity of sample: 5 ± 0.5 g.
- procedure: the procedure is that of method A of standard NF EN ISO 3451-5, the calcination temperature being 950 ± 50°C.

The method, in a calcination furnace, is the reference method; the use of a microwave oven is allowed; in this case, a correlation for the duration, at a defined temperature, must be established and communicated to LNE

2.1.3.2 VERIFICATION OF THE COLOUR (colorimetry)

The test is carried out according to standard ISO 18314-1 with the following additions:

- colour space L* a* b* defined in EN ISO 11664-4
- standard illuminant D65, defined in EN ISO 11664-2. The measurement includes specular reflection and geometry di:8 (without light trap).
- using a visual field with an angular subtense of 2° (or 10° accepted with correlation), defined in EN ISO 11664-1;

Measure the colour differences on the sample to be tested (ΔL* Δa*Δb*) and on each face in the case of a sample with a symmetrical geometry.

Reference representative samples are kept at LNE.

LNE may need to determine "deduced LNE specifications". These are carried out on the basis of the specifications declared in the certification file, with a sample being sent by the holder for whom a colorimetric measurement of an identified area has been made, and the measurement of this same area by LNE.

In the case of translucent compositions, the verification is carried out under the following conditions:

The test is carried out on a pressed plate with a thickness of 1mm ± 0.1 mm of surface area to sufficiently avoid light interference during the measurement (measurement zone with a diameter at least equal to three times the diameter examined by the spectrocolorimeter) .

The sample is placed on a reference and inert white plate reserved for measurements of this type of material (ceramic calibration plate for example)

The measurement is carried out according to the conditions identical to those of the opaque compositions: measurement of the colour differences on the sample to be tested (ΔL* Δa*Δb*ΔE).

2.1.3.3. Accelerated ageing

- Samples:

Samples subjected to exposure are cut from the profiles, which must have a shape and dimension that allows the collection of impact-tensile test pieces (12 test pieces). The profile should not have a partition; otherwise, the spacing between partitions must be ≥ 25 mm:

usable length by type of profile composition: 3 x 1 metre
width of the profile or assembled sections: 150 mm maximum
. thickness of the profile: 10 mm maximum

- Tests carried out in accordance with the NF EN 513 standard using method 1, in accordance with table 1 of §9, while observing the following specifications:
  - Duration of exposure: 4000 hours.

- Tests performed according to standard NF EN 16472:
  - Duration of exposure: 1500 hours.
  - temperature of black sample: 50°C
  - length of time protected against UV during immersion of samples: 1/3 of the cycle
  - rotation of the sample carrier: 6 per day

2.1.3.4. Impact

A) Method NF EN ISO 6603-1

a) Calculation of distance between centres

- the centre-to-centre spacing of the test piece material is determined for each profile as a function of the arrow under static load under the following conditions:

test pieces/length: 950 mm ± 10 mm.
Store three test pieces at 23°C ± 2°C for 12 h.

Equipment
- a flat surface for laying out the materials,
- two parallel materials of width 20 mm, the upper end being half-cylindrical and of height greater than 200 mm,
- a comparator with a precision of 1/10 mm

Operating procedure
- test temperature: 23°C ± 2°C
- centre-to-centre spacing of the materials: 800 mm
- place the test piece perpendicular to the position of the materials so that the inner face of the profile rests on the supports
- preload the profile in the middle of the supports with a mass of 100 g and adjust the comparator to 0
- add a mass of 1000 g in the middle of the supports. Allow to stabilise about 1 minute and measure arrow F_{1000}
- perform the same test on the other two test pieces

Note: the shape of the profiles may require machining in order to fit the supports or special supports may need to be used so that the profiles rest linearly on the supports.

Reporting of results:
The F value of the profile arrow is the arithmetic mean of the three measured values.

Depending on this value of the arrow, the centre-to-centre spacing of the test piece material for the impact test is set according to the table below.

Arrow F (mm)	Centre-to-centre distance (mm)
$F < 10$	200
$10 \leq F < 20$	175
$20 \leq F < 40$	150
$40 \leq F < 80$	125
$80 \leq F$	100

b) Impact test

The test is carried out with a 1 or 2 kg striker.
Use the material described in standard NF T 54-405 (The supports have a radius of 5 mm) by using the centre-to-centre distance calculated above and calculate the impact energy by the so-called staircase method described in standard NF EN ISO 6603-1.

B) Constant energy level method described in NF T 54-405
The test carried out according to method NF T 54-405 and the test equipment is described in NF EN 477. The supports have a radius of 5 mm.

In the case of the method that follows standard NF T 54 405, the number of failures must not be greater than 1 in 10 for the declared energy level.

2.1.3.5. LIGHT TRANSMITTANCE (opacity of the non-machined profile):

Diagram of the equipment used (figure below).

It consists of a parallelepiped chamber to test the specimen strips. There should be no parasitic light transmittance between the slats and the periphery of the sample.

One end of the chamber consists of a polished aluminium plate with a 100 W bulb or a low-energy bulb in the centre.

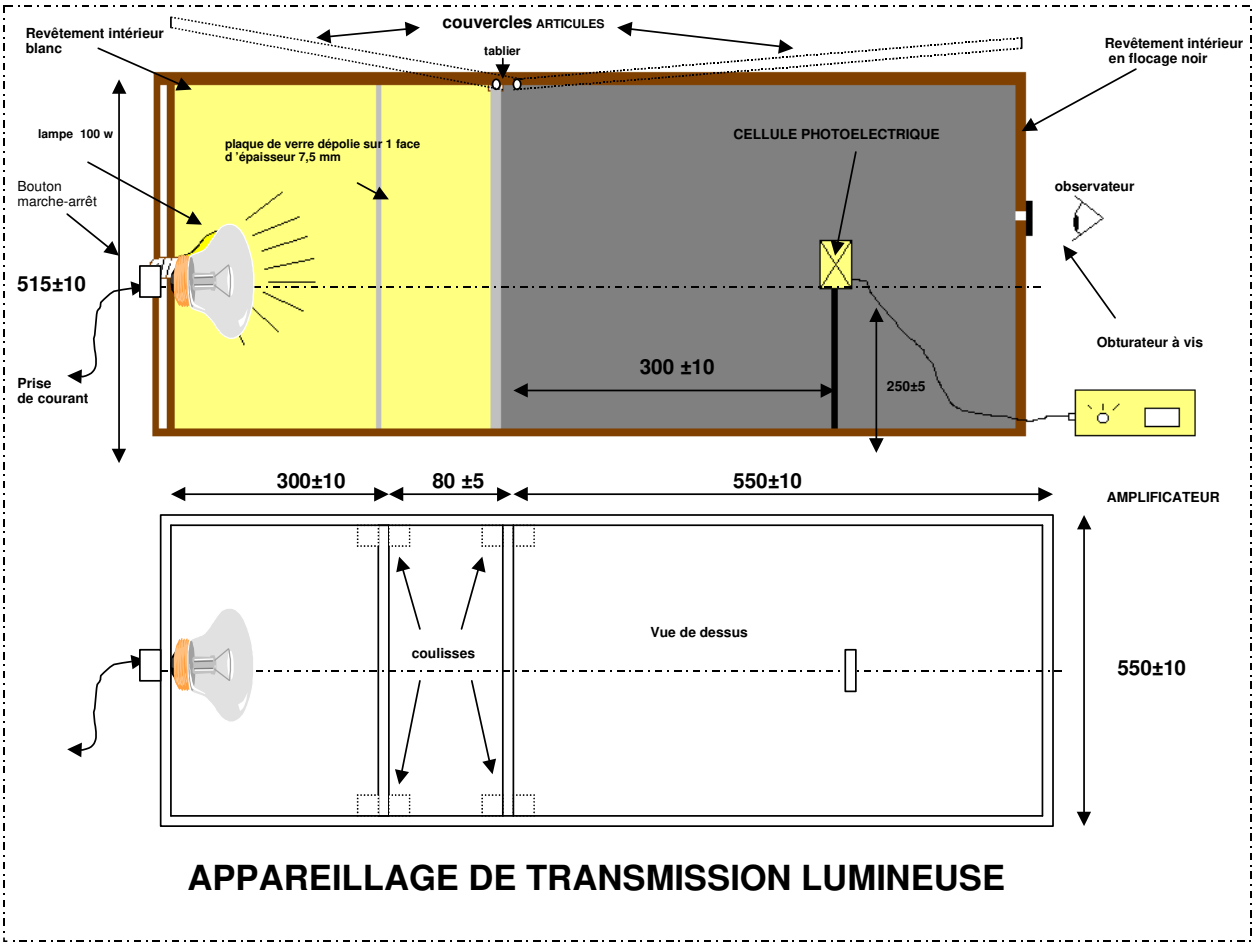
Ground glass is positioned between the bulb and the slats to be tested.

A photoelectric cell placed on the opposite side to the light is wired to a current to voltage amplifier for measuring illuminance (detectable minimum of 10-3 lux with a resolution of 10-4 lux).

Operating procedure:

- Before any operation, connect the lamp (off position) and cover the cell.
- check the illuminance of the vacuum tube lamp, the display should be 1000 ± 50 lux (Eo). (1)
- Form strip made up of 10 slats approximately 500x500 mm and place it on the runners provided for this purpose (horizontal positioning for rolling shutters and vertical for louvered shutters). Ensure there is a good seal.
- Measure the illuminance through the strip (Ee). (Wait 2 minutes for stabilisation before reading the result)

Calculate the Ee/Eo ratio.



APPAREILLAGE DE TRANSMISSION LUMINEUSE

Revêtement intérieur blanc	White interior lining
Couvercle articules	Hinged lid
Revêtement intérieur en flocage noir	Black flocking interior lining
Lampe	Lamp
Bouton marche arrêt	On/Off button
Prise de courant	Plug
Plaque de verre dépolie sur 1 face d'épaisseur 7,5 mm	7.5mm glass plate, polished on 1 face
Cellule photoele citrique	Photoelectric cell
Observateur	Observer
Obturateur à vis	Screw cap
Aplificateur	Amplifier
Coulisses	Sliding doors
Vue de dessus	Top view
APPAREILLAGE DE TRANSMISSION LUMINEUSE	LIGHT TRANSMITTANCE EQUIPMENT

As an exception, it is accepted that holders who do not have the appropriate equipment available may establish an internal method for verifying light transmittance that can be examined and validated during admission and follow-up audits. E.g.: visual or measurable direct method or correlated indirect method. The required verification frequency (see 2.3.2.6) remains applicable.

2.1.3.6. Reaction to contact with hydrogen sulphide

(Method only applicable for white or light colours).

Equipment
. Glass stirrer
. Pipette
. Test tube 16/160
. Test tube holder
. Protective goggles
. Protective gloves
. Fume hood

Chemicals/Reagents
. Sodium sulfate hydrate (flakes) 250 g
. Hydrochloric acid 25%
. Distilled water

Preparation of solutions
Handling and preparation of solutions is to be carried out under a fume hood while wearing personal protective equipment.

a) Solution 1:
Place 10 ± 1 ml of distilled water in a test tube and then add 1 to 2 ml of hydrochloric acid. Agitate with a glass stirrer.

Note: the order indicated (first water and then hydrochloric acid) must be adhered to; otherwise, there is a risk the acid could splatter!

b) Solution 2:
Put 2 to 3 flakes of sodium sulphide into a test tube and fill half of the test tube with distilled water (about 10 ml). Sodium sulphide should dissolve in the water (agitate lightly if necessary).

This solution should be prepared just before use.

Test procedure

The test must be carried out at a temperature of 20°C ± 5°C under a fume hood.

a) Sand the surface of the profile with sandpaper (particle size 240 μm)

b) Add 1 to 2 ml of solution 1 (hydrochloric acid solution) to solution no. 2 (sodium sulphide solution) using the pipette and mix with a glass stirrer.

c) Pipette 1 to 2 drops of this solution onto the sanded surface of the profile and spread lightly (with a glass stirrer or with a cotton swab, for example).

Results

No reaction should occur: there should be no discoloration of the surface of the profile after 2 minutes.

2.1.3.7. Thermal Stability (DHC)

Stabilised Ca/Zn compositions

The Ph-metry method according to standard NF EN ISO 182-2 at 200°C should be used. The reusable type method **must be used** for test cells
Cutting of samples in accordance with the recommended punching method.
It is acceptable to carry out the test at 190°C. Target values must then be reported to the standard's laboratory.

Tin-stabilised compositions
The referencing methods are based on conductimetry or potentiometry, in accordance with NF EN ISO 182-3 and NF EN ISO 182-4.

2.1.3.8. Translucency

The test is carried out according to standard NF P 38-511 with the following specifications:

- tests on a pressed plate with a thickness of 1 mm ± 0.1 mm

2.1.3.9. Heat shrinkage

The test is carried out according to standard NF EN 479 with the following specifications:
- Tests on both faces of each specimen
- The outcome of this test for this property is considered to be compliant if both results (face A and face B) are less than or equal to the value declared by the extruder (for PVC-U profiles) or ≤3% (for PVC-UE profiles).
- The outcome of the test for this property is considered to be non-compliant if at least one of the 2 results (face A and/or face B) is clearly greater than the value declared by the extruder (for PVC-U profiles) or >3% (for of PVC-UE profiles).

2.1.3.10. Tensile strength:

Standards NF EN ISO 527-1 and NF EN ISO 527-2 as well as standard NF T 54-405 apply to the tensile strength test.

However, the dimensions of the test pieces must comply with those of type 1BA given in Table A.1 of ISO 527-2.
NOTE for this table: "The specimens of type 1BA and 1BB are proportionally scaled in relation to type 1B, respectively using a 1:2 and 1:5 reduction factor, except that thickness" is not applicable.

2.1.3.11. Flexural modulus of elasticity

The test was carried out in accordance with the NF EN ISO 178 standard, while observing the following specifications:
- Specimens:
  - the operator must stack the blades/strips and carry out the machining in the direction of extrusion.
- Method:
  - Case III of the standard is the referencing method used

2.2. QUALITY MANAGEMENT SYSTEM REQUIREMENTS FOR PRODUCERS COMMERCIALISING VINYL COMPOSITIONS

2.2.1. GENERAL REQUIREMENTS

For the products concerned in the brand application, the producer's quality management system must comply with the provisions of standard NF EN ISO 9001: 2015 - Quality management systems – Requirements, the only permitted exclusion relating to §8.3 of the standard (design and development).

This conformity must be certified by an organisation that meets the requirements of ISO/IEC 17021.

2.2.2. SPECIFIC QUALITY REQUIREMENTS

2.2.2.1. Operational planning and control - § 8.1 standard ISO 9001

When planning the making of the product, the manufacturer must take into account points -a, - b, -c, -d and -e of § 8.1. of the standard.

2.2.2.2. Requirements for products and services - §5.1.2 and 8.2 of ISO 9001

The technical specifications or general conditions established in the framework of the contract with the extruders must include the specifications, the test methods and any correlations with reference to these rules.

Certificates of analysis must be sent to the extruders for each delivery. As a minimum, they must include the results of the measurements of density, ash content (only for compositions with $L^* > 35$), DHC and colorimetry made on the composition delivered.

They must make it possible to define the batch's conformity with the certification rules (information about the specifications, test methods and possible correlations or reference to the general conditions).

The producer must release for the NF market only batches recognised as conforming to the specifications (see § 2.1.) For all applications for which the composition is approved for NF mark certification.

2.2.2.3. Type and extent of control of externally provided processes, products and services - § 8.4.2. of standard ISO 9001

The manufacturer must ensure the quality of the raw materials involved in the manufacture of the products (materials necessary for the manufacture of the vinyl composition) for which he holds the right to use the NF mark.

For example, clearly-defined and regular inspections upon receipt of certificate of conformity to suppliers' technical specifications or general conditions.

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

2.2.2.4. Identification and tractability - § 8.5.2 of standard ISO 9001

The manufacturer must provide instructions for the identification of the product

Traceability is a requirement of the NF mark; therefore, the provisions defined in standard ISO 9001 regarding the unique identification of the product must be taken into account.

This identification must make it possible to ensure traceability and to find the past history of the product.

2.2.2.5. Preservation - § 8.5.4. of standard ISO 9001

Storage
The manufacturer must use the designated storage areas to prevent damage or deterioration of the product while it is awaiting use or delivery.
To detect any deterioration, the condition of the product in storage must be evaluated at appropriate and defined intervals.

2.2.2.6. Resources for monitoring and measurement - § 7.1.5 of standard ISO 9001

Requirements a, b, c, d, e of the standard must be taken into account for the inspection and test equipment likely to have an influence on the tests carried out under the NF mark.

Inspection, measuring and testing equipment must be used to ensure that the measurement uncertainty is known and compatible with the required measurement capability.

2.2.2.7. Release of products - § 8.6 of standard ISO 9001

When planning the making of the product, the manufacturer must take into account points c and d of § 8.1. of the standard.

The inspection plan put in place must make it possible to ensure that the products comply with the specifications defined in § 2.1. It must at least include inspection of the properties of finished products with the defined and minimum frequencies noted in the following table:

Properties	Minimum frequency
Density	Once per batch and per composition
Ash content	
DHC(1)	
Colorimetry(1)	
Vicat softening temperature	Once per batch and per composition(2)

(1) Not applicable, for non-UV resistant virgin vinyl compositions intended for internal layers of profiles.
(2) For new compositions, this frequency is applied after validation of the declared initial value (by inspections of 10 batches produced)

With the exception of the Vicat, subcontracting of these inspections is not allowed.

This subcontracting is possible provided that it does not cause any disruption to the manufacturing process (due to the response time, for example).

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 turn-

around times required, the written communication of results, the procedure to follow in case of non-compliance).

The results must be recorded for each corresponding batch.

The other tests (see §2.1.2.2 c) can be considered as reference tests.

The certificate of analysis of the material accompanying each batch, defined in § 1.2, must contain the following information:
- Commercial description of the product appearing on the NF certificate
- Density
- Ash content (only for compositions with L* > 35)
- DHC
- Colorimetry

For non-UV resistant virgin vinyl compositions intended for the internal layers of profiles, and as a replacement for the aforementioned certificate of analysis, a set of general conditions must be established between the producer and the extruder, which must include the following information:
- Commercial description of the product appearing on the NF certificate
- Density
- Ash content (only for compositions with L* > 35) [1]
- Vicat
- Flexural modulus of elasticity

2.2.2.8. Non-conformity and corrective action - § 10.2. of standard ISO 9001

The manufacturer must process a non-conforming NF product in one of the following ways:

- by taking actions to eliminate non-compliance

- by authorising its use, its release or its acceptance as a derogation; in this case, prior agreement of LNE must be obtained.

- by taking actions to stop its use (scrapping, for example).

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

[1] Not applicable, for non-UV resistant virgin vinyl compositions intended for internal layers of profiles.

2.3. QUALITY MANAGEMENT SYSTEM REQUIREMENTS FOR EXTRUDERS AND EXTRUDER FORMULATORS

The current chapter lists the minimum quality management system requirements which the applicant/holder must meet in order to use the NF mark. This assures that products which use the NF mark are manufactured in accordance with the current certification rules.
Therefore, it must describe and ensure the updated status of a quality management system that effectively controls the production of certified products and manages the checks and testing carried out when the raw materials used in the manufacture of the finished product are received, during the manufacture of the finished product and on the finished product.

2.3.1 LEADERSHIP

2.3.1.1 Quality policy

The applicant/holder's management much 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.

2.3.1.2 Roles, responsibilities and authority within the company.

2.3.1.2.1 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 standard are implemented permanently.

2.3.1.2.2 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
- appoint competent individuals to verify that the product meets the specified requirements (see 2.1).

2.3.2 PERFORMANCE EVALUATION

2.3.2.1 Management Review

At planned intervals, management should review the established quality management system in order to:

- comply with the requirements of these certification rules,
- ensure that it always remains appropriate and effective.

Documented information from these reviews should be kept and made available.

The monitoring of objectives related to the quality of the products and the efficacy of the actions implemented must be a part of each management review.

2.3.2.2 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).

As a matter of principle, it is preferable for the auditornot to audit their own work.

2.3.3 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 assure 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.

2.3.4 PURCHASES

2.3.4.1 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 number and scope of any requirements placed on suppliers and purchased products.

Purchase documents must describe the purchased product and provide a reference. If this is not possible, they must state the applicable version of the purchase specifications.

The manufacturer must ensure the quality of the materials involved in the manufacture of products for which it holds the right to use the NF mark:

. raw materials necessary for the manufacture of the polyvinyl composition (in the case of an extruder formulator)
. polyvinyl composition (extruder buying it from a producer)
. reprocessed or recycled material

For example: defined and regular inspections upon receipt or certification of conformity to suppliers' technical specifications or specifications.

For extruders buying the material from a producer, a certificate of analysis must accompany each batch delivered.

For extruders buying lamination films, an analysis certificate must be issued for each batch delivered, or a certificate of compliance with specifications which must as a minimum include: the thickness of the film, extension at point of failure, tensile strength, colour, gloss, stability at 100°C, and analysis of the covering sheet.

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

2.3.4.2 Subcontracting of NF manufacturing

Subcontracting operations are governed by the following principles:

- The holder who has requested the subcontracted job, 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 at that of the subcontractor, 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 subcontracted manufacturer and by the subcontractor (in particular, the manufacturer's lot and identification numbers and any testing carried out must be recorded.
- Orders must state clearly which product is being ordered (reference, technical specifications, quantity, time periods etc.) They must make reference to the specifications made in the design brief, if this is not possible, they must indicate the Certificate of Analysis.

2.3.5 IDENTIFICATION AND TRACEABILITY

The applicant/holder must provide instructions on product identification by marking products in accordance with the requirements of § 2.4 below.

The NF mark 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 product and its history to be traced. It should be possible to trace the lots of the raw materials used and the tests carried out upon their receipt, during the manufacturing process 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, as far as the final product). They must keep any documentation required for traceability.

For the present NF mark, the production batches are defined in § 1.2 of these certification rules for all manufacturers.

In the event of using extruders with multiple releases, traceability must be ensured per release and it must be possible to differentiate each release.

2.3.6 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.

To do this, the applicant/holder should:

- define the production methods associated with the types/product ranges,
- define the manufacturing parameters for each type/product range at each stage of production,
- arrange access to manufacturing instructions, product properties, inspection plans and associated monitoring equipment during production activities,

The manufacturing equipment must be kept in good condition.

2.3.7 TESTING

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

2.3.7.1 Tests to carry out upon receipt

The applicant/holder must ensure that product 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 for technical specifications given by the suppliers, or design briefs.

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

2.3.7.2 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.

Therefore they must ensure that all the inspections and tests required, including those specified when the product is received (see §2.1.4.1), during manufacture or on the finished products (see table below), have been carried out on a defined regular basis and that the results obtained show that the product complies with the requirements.

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

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

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

- **Extrusion of the profiles:**

The inspection plan put in place must make it possible to ensure that the products comply with the specifications defined in § 2.1. It must include at least the following inspections of properties according to the test methods described in §2.1.2.2:

During manufacture:

- appearance,
- linear density,
- conformity of the dimensions to the profile inspection plans,
- for coated profiles: visual inspection of the quality of application and distribution of the adhesive, the position of the film and its quality of application and inspection of the pullout resistance at the end of the bar.

On finished products (according to the application):
- tensile properties (may be subcontracted),
- shrinkage,
- impact strength, (method NF T 54-405 may be used, the method in standard ISO 6603 being the reference method in case of problems)
- verification of the colour.

The other tests (see §2.1.2.1) can be considered as reference tests (qualification for the use of new composition, new production equipment, new type, etc.).

The frequencies should be defined by the extruders and should, as a minimum, meet the following requirements when applicable to the type of profile being tested:

Properties	Minimum frequency
Appearance, linear density and dimensions	At the start and once per post and per extruder
Tensile strength:	Once a month, from one profile (for each monthly test, take a different reference sample for the profile/composition/extruder group)
Shrinkage	Once per campaign and at least once per week
Impact	Once per campaign and at least once per week And once/48 h for coated profiles
Colorimetry	Once per post and per extruder
Light transmittance	Once per campaign and at least once per week
Peeling resistance	Once per post/film type/geometry of coated profiles
Performance after heating at 150°C/30 min or 70°C 24 h or RALGZ716 (120°C/30 min)	Once per 24h/film type/geometry of coated profiles.

In the case of extrusions with multiple releases, the impact, shrinkage and linear density tests should be carried out on the profiles from each release.

The results must be recorded for each corresponding batch.

- **Production of polyvinyl compositions:**

Extruders formulating their own polyvinyl compositions must provide verification of the identifying properties of the material in their inspection plan.
The frequencies must be defined by the formulator extruders and must meet the following requirements as a minimum:

Properties	Minimum frequency
Density	Once per month and per composition
Ash content(1)	
Thermal degradation (DHC)(1)	
Vicat softening temperature	Once per batch and per composition(2)

(1) Not applicable, for non-UV resistant virgin vinyl compositions intended for internal layers of profiles.
(2) For new compositions, this frequency is applied after validation of the declared initial value (by inspections of 10 batches produced)

The results must be recorded for each corresponding batch.

2.3.7.3 Recording of tests:

Documents relating to testing must be drawn up and kept, in order to prove that the products conform to the requirements of this certification. They must be legible, easy to identify and accessible.

The applicant/holder must ensure that the documents relating to testing carried are identifiable, properly stored, protected and accessible. They must also ensure the amount of time that they will be kept for, and their subsequent elimination.

2.3.7.4 Subcontracted testing:

For the extrusion of profiles Subcontracting of the tensile strength test is possible provided that it does not cause any disturbance in the manufacturing process (due to response time, for example).
For the production of polyvinyl compositions Subcontracting of the tensile strength test is possible provided that it does not cause any disturbance in the manufacturing process (due to response time, for example).

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 turn-around 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.

2.3.8 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 un uninterrupted calibration chain, described by documents (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. If the service provider is not COFRAC accredited or equivalent, depending on the country of origin of the applicant/holder, it must in all cases have established standards that are regularly integrated with the national standards for the standardisations concerned.

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, in order to allow the validity of the calibration to be checked.

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 apply to every laboratory, regardless of whether they carry out all, or a part of the internal measurement checks.

2.3.9 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 mark in the following ways:
- By carrying out actions which eliminate the non-conformity.
- By allowing its use, release or acceptation by derogation- in this case, the previous agreement must be obtained from the client and from LNE.
- By carrying out actions which prevent it from being used (e.g. scrapping of 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.

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

2.3.10 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.

2.3.11 Product preservation

2.3.11.1 Storage

The applicant/holder must provide areas or premises for the storage of stockin 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.

2.3.11.2 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.

2.3.12 Manufacturing conditions

PVC profiles must be manufactured, for visible parts, with NF-approved and UV-resistant polyvinyl compositions, whether manufactured by the extruder formulator or supplied by a producer.

In the case of two-colour slats, the 2 compositions used must be approved for NF mark certification.

2.3.13 Use of reprocessed or recycled material

In accordance with the usage criteria defined in NF T 54-405:

- The use of reprocessed materials of internal origin is acceptable to the extent that it is verified that their use does not modify the mechanical properties of the profile.
- The use of reprocessed materials of external origin or recycled materials is permitted for inner layers and for non-visible outer layers in the case of co-extruded profiles (see §1.1).

In the event of resorting to a subcontractor to convert its profiles or scrap into reprocessed material, the extruder will use an operating procedure to describe how to manage traceability and the associated records.

In the case of reprocessed material of internal origin made from scrap collected from external workshops, a certificate of analysis must be provided along with the batch of material. This certificate of analysis must contain Vicat and Density information as a minimum The provisions put in place for this collection are to be specified in an internal operating procedure for the applicant.

2.4. MARKING REQUIREMENTS

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

As well as allowing for identification and traceability of a product, marking a product with the NF logo ensures that users will receive better protection: it also protects holders from abusive use of the product and from counterfeit goods.

Without prejudice of the sanctions laid down in the General Rules of the NF mark, any incorrect announcement of the certified features and any fraudulent use of the NF logo expose the holder to lawsuits for fraud and/or misleading advertising.

It is strictly forbidden to use or affix the AFNOR logo, or AFNOR/LNE certification without prior agreement from those institutions.

The holder undertakes to respect the NF mark'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 mark to the LNE before use.

REMINDER:
Article R 433-2 of the Consumer Code [Code de la Consommation] states that:
"When reference is made to certification in advertising, labelling or in the presentation of any product or service or in associated documents of any nature, 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 warranty mark,*
- *The name of the certification reference system used, The conditions under which the certification reference system can be consulted or obtained".*

2.4.1. MARKING AN NF-CERTIFIED PRODUCT

Each certified profile must permanently and visibly display the NF logo in line with the requirements of the graphic charter and in accordance with the specific standards and regulations in force.

CERTIFIÉ PAR LNE
NF
EXTRUDED PRODUCTS BASED ON NON-PLASTICISED POLYVINYL COMPOSITIONS FOR EXTERIOR USES

On the product, in case of technical and/or material difficulties with the reproduction of the NF logo, in accordance with the graphic charter, the words "CERTIFIED BY LNE" and the title of the application "EXTRUDED PRODUCTS BASED ON NON-PLASTICISED

POLYVINYL COMPOSITIONS FOR EXTERNAL USES" may be omitted. This logo is defined in §1.3 of these certification rules.

The NF logo displayed on the product must be accompanied by the following information:

⓪ - the logo NF and application number 132
① - a reference that identifies the holder of the NF mark and the production plant (serial number of the manufacturer assigned during the notification of certification by LNE)
② - the commercial designation of the manufacturer's profile or logo and the code identifying the application, i.e.:

CS	=	closure slat		LS	=	louvered shutter
GD	=	garage door		SLS	=	sliding louvered shutter
RS	=	rolling shutter		PF	=	pool fence
S	=	shutter	PC	=	pool cover	
FS	=	French shutters		RPT	=	thermal break
VB	=	Venetian blind		WC	=	wall coverings
VAR	=	various				

If two applications are possible for the same profile, the 2 codes are affixed to the slat.

③ - codification to ensure the traceability of the product
(for example: the manufacturing batch number (see definition in Part 1 § 1.2.) and the date of manufacture (year: Last 2 digits of the year of manufacture, and week no. and day no.), this coding must be formalised in the manufacturer's quality documents.
④ - the material used (material code defined by LNE) and the type of material.
⑤ - It is recommended that the above information be set out as follows.

XX	-	XXXX	/	XXXX	-	X	-	XX
Declared Vicat temperature value		Declared level for flexural modulus		Declared linear weight value		Declared shrinkage value		Declared impact value

The dimensions of this marking and the means used are left to the discretion of the manufacturer within the limits of legibility of the information provided.

This marking of profiles must be done on the extrusion line.

For coated or varnished profiles, the marking must be legible after coating or varnishing.

When the profile manufacturer assembles the profiles themselves, a mark must be placed on the final slat as a minimum.

As a guide, this marking may be in the form of a line as per the diagram below.

NF 132	XXX	000-RS	XXXXX	-	B-PVC-U	80/2600/850/3/10
⓪	①	②	③		④	⑤

As a derogation, when the use of the logo NF presents technical and/or material difficulties, the letters NF in brackets may be placed on the certified profile in capital letters of the same height as the rest of the marking: (NF).

The English version "certified by LNE" is available with LNE.

2.4.2. MARKING ON NF CERTIFIED PRODUCT PACKAGING OR ON THE ACCOMPANYING DOCUMENTATION (INCLUDING LABELS)

CERTIFIÉ PAR LNE

EXTRUDED PRODUCTS BASED ON NON-PLASTICISED POLYVINYL COMPOSITIONS FOR EXTERIOR USES

The logo NF must be displayed on the unit packaging (set of profiles) or on the accompanying documentation for the product with the following information:

- the logo NF in line with the graphic charter, as defined above
- the website www.marque-nf.com or www.lne.fr
- the name of the certifying body and its address
- the identification number of the holder and the production plant
- the commercial description of the product on the certificate
- the main properties certified
  - Vicat softening temperature
  - Appearance - colour
  - Flexural modulus of elasticity
  - Shrinkage
  - Impact strength (if feasible)
  - Durability

The presentation and formatting of this sheet is left up to the manufacturer.
As a guide, an example for a profile is given below:

CERTIFIÉ PAR LNE

EXTRUDED PRODUCTS BASED ON NON-PLASTICISED POLYVINYL COMPOSITIONS FOR EXTERIOR USES

www.marque-nf.com or www.lne.fr

LNE
1 rue Gaston Boissier
75015 PARIS

• Identification of the holder:	• identification of the product:
- Name - address:	- commercial reference:
- NF identification no.:	- batch no.:

COMPLIES WITH STANDARD NF T 54-405

MAIN PROPERTIES CERTIFIED
- Vicat softening temperature
- Appearance - colour
- Flexural modulus of elasticity
- Shrinkage
- Impact strength
- Durability

2.4.3. MARKING ON DOCUMENTATION (TECHNICAL AND COMMERCIAL DOCUMENTS, POSTERS, ADVERTISEMENTS, WEBSITES, ETC.)

References to the NF mark in the documentation(order confirmations, invoices, delivery slips, advertising leaflets, catalogues, etc.) must be made in such a way that there is no risk of confusion between the certified products and the rest.

Reproduction of the NF mark on documentation and advertising must be carried out in accordance with the requirements of the graphic charter (see illustrated marking in section 2.4.2).

It is recommended that the holder submit to LNE beforehand all commercial documents where the mark is mentioned, including during modification of these documents.

The holder must communicate, at the request of LNE, any document in which reference is made, directly or indirectly, to the NF mark.

2.5 COMMITMENTS OF THE APPLICANT/HOLDER

The applicant/holder commits in general to giving LNE the means to carry out the operations necessary for the correct progress of the evaluation and follow-up of their file and in particular to:

- comply at all times with the requirements defined by these certification rules, and to implement the necessary changes within the deadlines prescribed by LNE in the event of changes in the certification rules,
- communicate the information and working documents necessary for a proper evaluation procedure to representatives authorised by LNE;
- only communicate information that the applicant/holder knows is fair and sincere;
- appoint a responsible individual as an LNE interlocutor;
- designate recipients within the company who will receive LNE test and audit reports and inform LNE of changes to be made in case of a change of recipient within the company or e-mail address;

- introduce the staff assigned to the various tasks to the authorised LNE representatives;

- instruct staff to work with authorised LNE representatives, and to agree to participate in any interviews;

- provide authorised LNE representatives with a way to access and move around the sites and work areas, including the subcontractors' sites, as the case may be;

- inform the authorised LNE representatives about the safety and hygiene provisions and instructions applicable to the sites and work areas and the staff there, and make any equipment necessary available to them for this purpose;

- pay LNE the sums due for the evaluation, in accordance with the financial conditions defined and accepted by the applicant/holder

- Authorise the presence of an observer who is required to respect confidentiality. This observer can be imposed on LNE by the standards or agreements of which they are a signatory. Information regarding the presence of this observer is always communicated to the applicant/holder by LNE prior to the audit.

- take the necessary measures in the event of non-compliance, within the deadlines specified by LNE,

- return the duly completed non-compliance sheets to the lead auditor within 3 weeks of the last day of the audit,

- implement the necessary actions to enable the certificate to be issued within a maximum of 11 months after the initial audit. After this period, a new initial audit will have to take place before certification,

- send the samples taken under the conditions defined in Parts 3 and 4 to the standard's laboratory.

It is also the responsibility of the certificate holder to:

- display the NF mark only on the products covered by the certificates issued by LNE and in accordance with the applicable requirements;

- reserve the product's commercial name only for the products covered by the certificates issued by LNE and in accordance with the applicable requirements;

- communicate to LNE beforehand any modification of the product or any information likely to affect conformity with the requirements of the present rules, the methods of evaluation being defined in part 4,
- make available to LNE any data or information necessary to establish and maintain the certificate;

- keep a record of all claims of which the holder is aware of the conformity of the product(s) with the certification requirements and make these records available to LNE upon request, and
    - take any appropriate action with respect to these claims and imperfections in the products that affect their compliance with the requirements of the certification,

- document the actions taken.

- in the event of suspension, reduction, withdrawal or refusal of renewal of the certificate, stop using any references to the certification of the products concerned and stop using all the means of communication that make reference to this,

- authorise follow-up evaluations during the period of validity of the certificate, on the basis of the frequency specified in Part 4 and any duly justified additional assessment.

- make statements about certification consistent with the content of the certificate,

- not use the certification issued by LNE in a manner that could damage LNE, nor make a declaration regarding the certification of its products that LNE may consider misleading or unauthorised;

- reproduce the certificates in their entirety, including the appendices in case of supply to a third party.

LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

Organisme certificateur mandaté par
AFNOR Certification

CERTIFICATION RULES
NF MARK FOR UNPLASTICISED VINYL-BASED EXTRUDED PRODUCTS FOR OUTDOOR USE

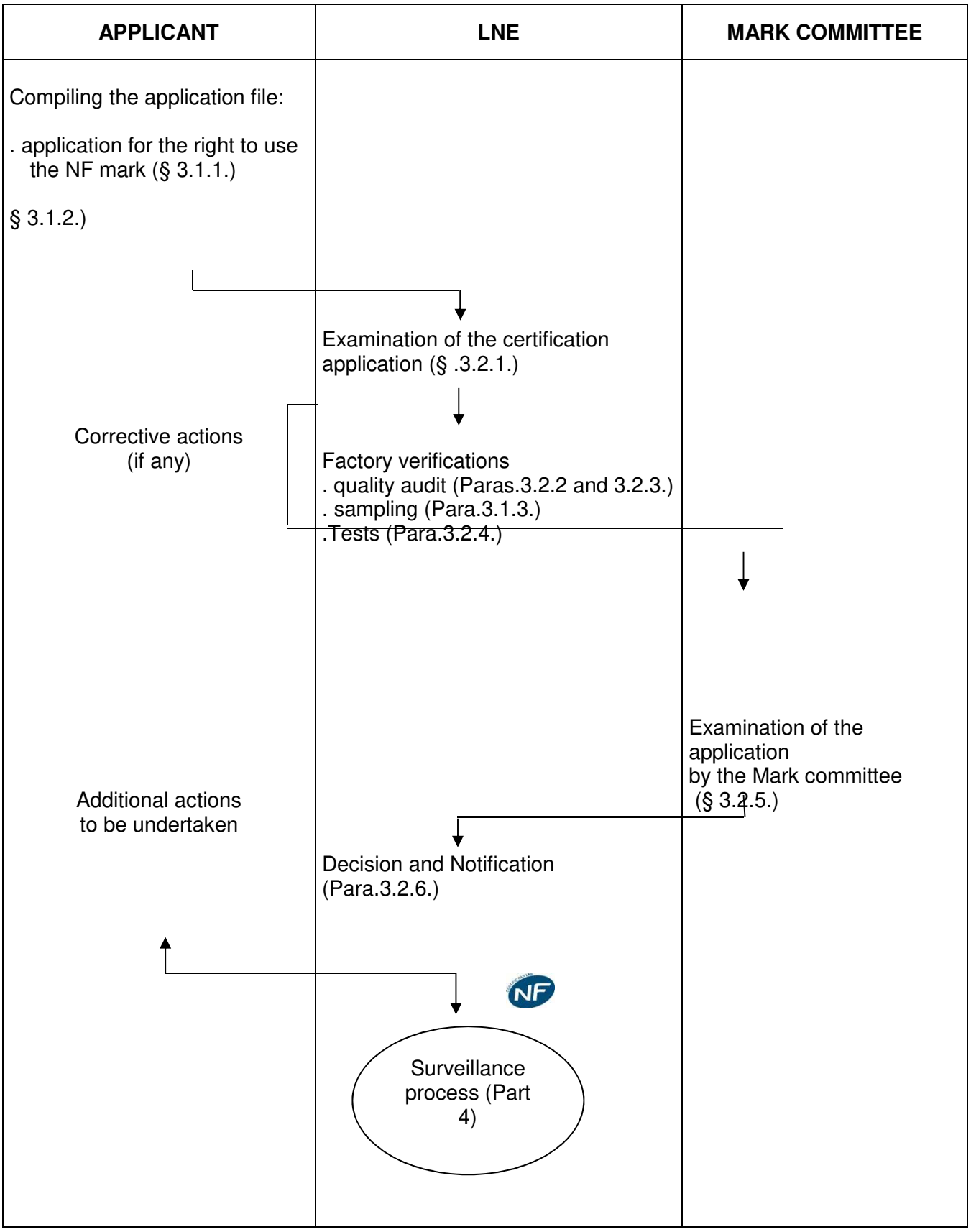
PART 3

OBTAINING CERTIFICATION

CONTENTS

Rev. 19 February 2022

PROCESS FOR OBTAINING CERTIFICATION



Before making the application, the applicant must be sure to meet, at the time of the application, the conditions defined in these Certification Rules (reference standard), especially those in Part 2, regarding his product and sites in question.

They must undertake to comply with said conditions throughout the period of using the NF mark.

If they fail to respect these rules, the applicant/holder exposes himself to the interruption or suspension of the processing of his file. Notably, it is not possible in any circumstances to make reference to the NF mark before obtaining the right to use the NF mark, or to present forged products for certification.

3.1. COMPILING THE APPLICATION FILE

Any company manufacturing one or more products covered by this application of the NF mark can request the right to use the mark. A request of this kind is known in this document as an "application" and the person formulating it as the "applicant".

3.1.1. APPLICATION FOR THE RIGHT TO USE THE NF MARK

Any manufacturer wishing to obtain the right to use the NF mark on a product it manufactures must first read carefully the certification rules for the Mark and declare its acceptance of them.

The application is drawn up on the manufacturer's letterhead paper as shown in the template (Form no. 1a) and must be sent to LNE.

It must specify the models and ranges presented for acceptance:

a) Applications for the acceptance of compounds (for producer or formulator-extruder)

The application specifies the commercial reference of the compound(s) submitted for acceptance.

Where appropriate, this reference may be temporary and may be modified at the time the compound is marketed; LNE must, however be informed of this.

The application can only be received if the inspections described in part 2 of these regulations have been carried out beforehand over at least 10 samples taken during production for each vinyl compound concerned by the application.

When the applicant is not from a country of the European Economic Area, they must submit their application together with a representative established in the European Economic Area who is duly accredited and responsible for all production likely to be NF-certified and marketed on French territory.

They are known as the "authorised agent".

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

The compound acceptance application may be combined with an application for acceptance (or extension of acceptance) of an extruder. In this case, the producer and the extruder each draw up an application.

b) For acceptance application for PVC-U or PVC-UE profiles

Profiles covered by applications for acceptance must be extruded using a compound that carries the NF mark or a compound whose acceptance is requested jointly with that of the profiles.

The application specifies the references of the profiles submitted during the application, making it possible to define the ranges of profiles and the reference profiles (cf §1.2 Part 1):

- **<u>Range of profiles</u> (see Para. §1.2 part 1):**

  This is how ranges are assembled in order to cover all the profiles applying for acceptance.

  Note: this division into ranges enables the samples required for testing to be identified on the basis that an extruder manufactures profiles whose linear weight falls between -20% and +50% of that of a given profile.

The application can only be received if the inspections described in part 2 of these regulations have been carried out beforehand over at least 10 samples taken during production for each profile concerned by the application).

The applicant must send with his application a file containing, for each factory that manufactures the products for which acceptance to the mark is being sought, the documents or information specified hereafter (in Para.3.1.2.1. for compounds and Para.3.1.2.2. for profiles).

All the documents must be written in French or English.

If the applicant is not from a country within the European Economic Area, he must present his application jointly with an agent set up within the European Economic Area, duly accredited and responsible for all the production for which acceptance to the NF mark is being sought and commercialised on French territory.

They are known as the "authorised agent".

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

3.1.2. DOCUMENTS TO BE SUPPLIED

3.1.2.1. Documents to be supplied by compound producers (producers or formulators)

- Standard certification application letter (Form no. 1a) written on the Producer's letterhead paper as shown in the enclosed model (with its appendix co-signed and the associated mandate co-signed) (as shown in Form no. 1d) for applicants from outside the European Economic Area.
- The general information sheet (Form 1b),
- Compound technical sheet including the compound's commercial reference (or temporary reference), specifications of the compound for which the NF mark is required (Form 1c).

3.2.4.1.)

- Organisation chart of the site(s) the application concerns (job roles and staff),
- Is the site(s) a subsidiary of a group? Does it have subsidiaries? (if yes, specify)
- Presentation of the activities of the site(s) the application concerns
- Description of the means of production used in the manufacture of certified products for the site or sites concerned
- Description of the inspection methods for the site(s)

- If the company is ISO 9001 certified, the following documents must be submitted:
    - Manual and/or quality plan(s) (if applicable),
    - Description of the different processes with definition of incomings, outgoings, activities taken into account in each process
    - Certificate of conformity of the quality management system whose scope and framework includes the sites and activities concerned by the NF mark and currently valid,
- In all cases, a description of the quality management provisions put in place:
    - Description of the manufacturing process (processing steps, material flow) and associated inspection plan (accuracy of measurements and tests carried out and their frequency).
- Technical file:
    - Product nomenclature and component datasheet
    - Results of the design validation tests carried out by the manufacturer on the product that is the subject of the application,
    - Records of the results of self-monitoring tests on at least 10 samples of each composition (see § 3.1.1a).
    - Description of the final testing area
    - Precise definition of a production batch (see definition in Part 1, § 1.2) followed by the applicant
    - The product and packaging marking project

All the documents must be written in French or English.

3.1.2.2. Documents to be supplied by extruders

- Standard certification application letter (Form no. 2a) written on the Extruder's letterhead paper as shown in the enclosed model (with its appendix co-signed and the associated mandate co-signed (as shown in Form no. 1d) for applications from outside the European Economic Area)
- General information sheet (Form 2b)

Identification sheet of profiles for which the NF mark is requested: Forms 2 c-d-e-f-g (according to application)

- Organisation chart of the site(s) the application concerns (job roles and staff),
- Is the site(s) a subsidiary of a group? Does it have subsidiaries? (if yes, specify)
- Presentation of the activities of the site(s) the application concerns
- Description of the production methods used in the manufacture of certified products for the site(s) concerned
- Description of the inspection methods for the site(s)
- If the company is ISO 9001 certified, the following documents must be submitted:
    - Manual and/or quality plan(s) (if applicable),
    - Description of the different processes with definition of incomings, outgoings, activities taken into account in each process
    - Certificate of conformity of the quality management system whose scope and framework includes the sites and activities concerned by the NF mark and currently valid,
- In all cases, a description of the quality management provisions put in place:
    - Description of the manufacturing process (processing steps, material flow) and associated inspection plan (accuracy of measurements and tests carried out and their frequency).
    - Description of production roll-out and the related inspection plan (indicating measurements and tests carried out and their frequency) and the methods used, with correlations if the method used is different from the reference method (see Para.2.1.3.)
    -
- Technical file:
    - a full-scale drawing of all profiles (preferably sent by e-mail: word or .bmp format)
    - The records of the results of the self-test tests on at least 10 samples of each profile (see § 3.1.1b).
    - method used to test light transmission (description or diagram to be supplied for shutters and louver blinds);
    - Precise definition of a production batch (see definition in Part 1, § 1.2) followed by the applicant
    - The product and packaging marking project
    - For film-coated PVC-U profiles: the film used must be covered by a declaration, as must the glue.
    - For painted PVC-U profiles: the paint used must be covered by a declaration

All the documents must be written in French or English.

FORM No. 1a

APPLICATION FOR THE CERTIFICATION OF A COMPOUND
(to be drawn up on the producer applicant's letterhead paper)

For the attention of the General Manager of
LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS
Environmental Safety & Performance Certification Unit (Pôle Certification Environnement Sécurité et Performance)
1, rue Gaston Boissier
75724 PARIS CEDEX 15

PURPOSE: Application for the certification of a vinyl compound intended for use in the extrusion of unplasticised vinyl-based extruded products for outdoor use

Dear Sir,

I the undersigned (name and position) .....
representing the company (identification of the company - head office).....
apply to LNE to make the checks required to obtain acceptance of the following compound:

Commercial reference(s) for compound(s)
(please state whether or not this is a temporary reference)
intended for use in the extrusion of profiles in accordance with the NF T 54-405-1 standard; for the applications (1):

These products are manufactured in the factory of (company identification and full address of the factory): .....
.....

<Option in case of modification of a certified product:>

The products concerned by this application differ from the NF certified product due to the following modifications: *(description of modifications).*

This product replaces the certified product: … ☐ *no* ☐ *yes reference of the product*

This new product concerned by this application is identified under the following references: …… .

I hereby declare that the other features of the products concerned by this application are in strict conformity to the product that is already NF certified and manufactured in the same conditions.

Option in case of maintenance application:

This application also relates to products sold by ..... under the references (see attached maintenance application).

I declare that I am familiar with the reference standards, the general rules of the NF Mark and the certification rules and I undertake to comply with them throughout the period of use of the NF mark.

I attest that these products satisfy the regulatory requirements applicable to them and I undertake not to present forged products for certification.

Date

Stamp and signature of the applicant

(1) Specify the application(s) for which the compound may be used (closures, fencing, swimming pool protection (safety covers, shelters, gates, etc.)) or any other outdoor use (see 2.4.1)

APPENDIX FORM No. 1a

APPENDIX TO THE CERTIFICATION APPLICATION REGARDING A COMPOUND (1)

Furthermore, I authorise the company (2).....
....
....
represented by Mr. (name and capacity) .....

who accepts the terms of the attached mandate, to act on my behalf on the French territory for all matters relating to the use of the NF mark.

Option: For such purposes, I ask that the fees incumbent on me be invoiced directly to them.

I undertake to notify LNE immediately if I appoint a new authorised agent to replace the authorised agent named above.

Yours faithfully,

Date

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

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

(1) This appendix is only to be completed by applicants located outside the European Economic Area. It must be accompanied by a co-signed mandate (see sample Form 1d)
(2) The designation of the representing company must include: company name, legal form, head-office and Companies Register number.
(3) The signatures of the applicant and his/her agent must be preceded respectively by the hand-written words "Proxy agreed" and "Acceptance of proxy agreed".

FORM 1b
GENERAL INFORMATION SHEET

- **Applicant's corporate name:**

Address of the applicant:
Contact:
Telephone:
Website of the company or site(s) mentioned in the application:
E-mail:
ISO 9001 certified site: Yes ☐ No ☐

- **Contact information of the correspondent(s) for receiving the test and audit reports from LNE via email:**

Name of the contact	Job-position	E-mail	Audit report	Test report

LNE retains an original document comprised by an authenticated edition of the document sent, for a period of 30 years.
LNE monitors its security procedures for its internal network, but cannot be held responsible for any problem arising during electronic transfer of the document, especially with regards to confidentiality and integrity. You are considered to expressly accept this condition.

- **Billing address** (if different from the address mentioned for the corporate name of the applicant), with undertaking if different from the applicant

……
……

- **Location of the various steps of manufacturing**

	Address and contacts of the site responsible for each stage*	Size of the site mentioned in the certification	Area of the site
Design			
Manufacture (details, if applicable, of the outsourced manufacturing)			
Final check			
Marking			
Packaging			
Storage			

Any aspect not covered by the applicant is subject to a contract defining the respective responsibilities with its provider

Trademark:

* Owner of the trademark:

List of distributors, people responsible for the market launch, whose name appears on the package*:

Issued at
on

Signature

* Indicate the company name, address, contact person, phone number and e-mail address if different from the applicant.

FORM No. 1c

SPECIFICATIONS[1] OF THE VINYL COMPOUND
TECHNICAL DATASHEET

Commercial reference
(stating the physical form of the compound: powder and/or granules) :

- Type of stabiliser :

Opaque compound or translucent compound :

Reference characteristics :

- Density (kg/m3) according to NF EN ISO 1183-1 :

- Ash content (%)
in accordance with NF EN ISO 3451 [2] :

- Dehydrochlorination (DHC) (min.) [2]
. in accordance with NF EN ISO 182-2 at 200°C :
. in accordance with NF EN ISO 182-3 and -4 at 200°C :

- Vicat Softening Temperature (°C)
in accordance with NF EN ISO 306 - method B-50 :
. single-piece test piece :
. stacked test pieces :

- Modulus of elasticity in flexure (MPa) according to the NF EN ISO 178 standard
level retained:
. nominal reference value:
preparation of test pieces from pressed plate:
preparation of test pieces from profiles :

- Traction impact resistance (kJ/m2) :
in accordance with NF EN ISO 8256

- Colour :

- Colorimetry specifications (L* / a* / b*)
2.1.3. of these rules) :

Applicant's name

Date

Stamp and signature

[1] the reference values can be readjusted following acceptance on the production control statistics database, subject to the new nominal value remaining within the initial tolerances
[2] If a method other than the reference method indicated in Part 2 is used, specify the method and correlations with the results obtained with the reference method.

FORM No. 1d
EXAMPLE OF A MANDATE

(to be drawn up on the applicant/authorised agent's letterhead paper)

List of information to be supplied:

- Corporate name: _____
- Address: _____
- Country: _____
- Telephone:_____ Fax: _____
- SIRET No.:_____ NAF code: _____
- Name and profession of the legal representative: _____
- Name and profession of the correspondent (if different): _____
- VAT ID number: _____
- Email address of contact person: _____
- Email address of the Company:_____
- Website:_____

Identification of the roles of the authorised agent to be included in the mandate between applicant/holder and authorised agent

Applicant/Holder: .....

Authorised agent:.....

Minimum requirements which must be shown in the mandate:

- assignments and associated responsibilities
- financial aspects (invoicing relating to the NF mark)
- complaints
- certifying body contact

Mandate:

The mandate should be mentioned in the applicant/holder's quality system.

A copy of the mandate in French or English should be attached to the co-signed admission application.

Compliance with the mandate arrangements is checked during audits.

Date of the initial mandate

Signatures of the representative of the authorised agent and the applicant

FORM No. 2a

CERTIFICATION APPLICATION FOR PVC-U or PVC-UE PROFILES
(To be drawn up on the extruder applicant's letterhead paper)

For the attention of the General Manager of
LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS
Environmental Safety & Performance Certification Unit (Pôle Certification Environnement Sécurité et Performance)
1, rue Gaston Boissier
75724 PARIS CEDEX 15

PURPOSE: Certification application for the NF mark in respect of Unplasticised vinyl-based extruded products for outdoor use

Dear Sir,

I the undersigned (name and position) .....
representing the company (identification of the company - head office).....
request LNE to carry out the verifications required for obtaining the right to use the NF Mark for the profiles specified in the enclosed table, complying with standard NF T 54-405-1.

These profiles are manufactured in the factory of (company identification and full address of the factory) .....

Option in case of modification of a certified product:

The products concerned by this application differ from the NF certified product due to the following modifications: *(description of modifications).*

This product replaces the certified product: …… .. ☐ *no* ☐ *yes reference of the product*

This new product concerned by this application is identified under the following references: …… .

I hereby declare that the other features of the products concerned by this application are in strict conformity to the product that is already NF certified and manufactured in the same conditions.

Option in case of maintenance application:

This application also relates to products sold by ..... under the references (see attached maintenance application).

This application for acceptance may be combined with that relating to the compound named below (reference, name and address of producer): .....

I declare that I am familiar with the reference standards, the general rules of the NF Mark and the certification rules and I undertake to comply with them throughout the period of use of the NF mark.

I attest that these products satisfy the regulatory requirements applicable to them and I undertake not to present forged products for certification.

Date

Stamp and signature
of the applicant

APPENDIX FORM No. 2a

APPENDIX TO THE CERTIFICATION APPLICATION FOR PROFILES (1)

Furthermore, I authorise the company (2).....
....
....
represented by Mr. (name and capacity) .....

who accepts the terms of the attached mandate, to act on my behalf on the French territory for all matters relating to the use of the NF Mark.

Option: For such purposes, I ask that the fees incumbent on me be invoiced directly to the company. For such purposes, I ask that the fees incumbent on me be invoiced directly to them.

I undertake to notify LNE immediately if I appoint a new authorised agent to replace the authorised agent named above.

Yours faithfully,

Date

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

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

(1) This appendix is only to be completed by applicants located outside the European Economic Area. It must be accompanied by a co-signed mandate (see sample Form 1d)
(2) The designation of the representing company must include: company name, legal form, head-office and Companies Register number.
(3) The signatures of the applicant and his/her agent must be preceded respectively by the hand-written words "Proxy agreed" and "Acceptance of proxy agreed".

FORM 2b
GENERAL INFORMATION SHEET

- **Applicant's corporate name:**

Address of the applicant:
Contact:
Telephone:
Fax:
E-mail:

- **Contact information of the correspondent(s) for receiving the test and audit reports from LNE via email:**

Name of the contact	Job-position	E-mail	Audit report	Test report

LNE retains an original document comprised by an authenticated edition of the document sent, for a period of 30 years.
LNE monitors its security procedures for its internal network, but cannot be held responsible for any problem arising during electronic transfer of the document, especially with regards to confidentiality and integrity. You are considered to expressly accept this condition.

- **Billing address** (if different from the address mentioned for the corporate name of the applicant), with undertaking if different from the applicant

……
……

- **Location of the various steps of manufacturing**

	Address and contacts of the site responsible for each stage*
Design	
Manufacture (details, if applicable, of the outsourced production)	
Final check	
Marking	
Packaging	
Storage	

Any aspect not covered by the applicant is subject to a contract defining the respective responsibilities with its provider

Trademark:

* Owner of the trademark:

List of distributors, people responsible for the market launch, whose name appears on the package*:

Issued at

on

Signature

* Indicate the company name, address, contact person, phone number and e-mail address if different from the applicant.

FORM No. 2c

REFERENCE OF THE PROFILES COVERED BY THE CERTIFICATION APPLICATION

Non-decorated profiles

Vinyl compound used (reference and producer):
Intended applications (1):

Profile reference	Profile coding (2)	Value or level declared (cf. partie 2 § 2.1.)				
		Linear weight	Shrinkage	Impact	Colorimetry specification	Quantity produced annually

(1) Complete one table per application: closure profiles (roller blinds, louver blinds, etc.), fence profiles, profiles for swimming pool protection (safety cover, shelters, gates, etc.) or any other outdoor use or Complete a table per application mentioned in Para.2.4.1

(2) Corresponds to codes that may be added to the compulsory information in the profile marking (see Part 2 of the rules) i.e.:

XX	-	XXXX	/	XXXX	-	X	-	XX
Declared Vicat temperature value		Declared level for modulus in flexure		Declared linear weight value		Declared shrinkage value		Declared impact value

Applicant's name

Date

Stamp and signature

FORM No. 2d

REFERENCE OF THE PROFILES COVERED BY THE CERTIFICATION APPLICATION

Film-coated profiles

Vinyl compound used (reference and producer):
Declared characteristics of the film used:

- Thickness
- Surface density
- Brilliance
- Aspect / colorimetry
- Stability at 100°C
- Properties under traction (tensile strength, ultimate elongation)
- IR spectrum

Characteristics of the adhesive/glue used

Intended applications (1):

Profile reference	Profile coding (2)	Value or level declared (cf. partie 2 § 2.1.)				
		Linear weight	Impact resistance-traction	Impact	Colorimetry specification	Quantity produced annually

(1) Complete one table per application: closure profiles (roller blinds, louver blinds, etc.), fence profiles, profiles for swimming pool protection (safety cover, shelters, gates, etc.) or any other outdoor use

(2) Corresponds to codes that may be added to the compulsory information in the profile marking (see Part 2 of the rules) i.e.:

XX	-	XXXX	/	XXXX	-	X	-	X
Declared Vicat temperature value		Declared level for modulus in flexure		Declared linear weight value		Declared shrinkage value		Declared impact value

Applicant's name

Date

Stamp and signature

FORM No. 2e

REFERENCE OF THE PROFILES COVERED BY THE CERTIFICATION APPLICATION

Painted profiles

Vinyl compound used (reference and producer):

Characteristics of the paint used:
- Colorimetry
- Brilliance
- IR spectrum
- Solid content
- Viscosity

Intended applications (1):

Profile reference	Profile coding (2)	Value or level declared (cf. partie 2 § 2.1.)						
		Linear weight	Paint layer thickness	Brilliance	Impact resistance-traction	Impact	Colorimetry specification	Quantity produced annually

(1) Complete one table per application: closure profiles (roller blinds, louver blinds, etc.), fence profiles, profiles for swimming pool protection (safety cover, shelters, gates, etc.) or any other outdoor use

(2) Corresponds to codes that may be added to the compulsory information in the profile marking (see Part 2 of the rules) i.e.:

XX	-	XXXX	/	XXXX	-	X	-	X
Declared Vicat temperature value		Declared level for modulus in flexure		Declared linear weight value		Declared shrinkage value		Declared impact value

Applicant's name

Date

Stamp and signature

FORM No. 2f

REFERENCE OF THE PROFILES COVERED BY THE CERTIFICATION APPLICATION

Expanded cellular profiles

Registered formulation:

(indicate at least the main constituents of the formulation, content, supplier)

Intended applications (1):

Profile reference	Profile coding (2)	Value or level declared (cf. partie 2 § 2.1.)				
		Linear weight	Bending strength	Impact	Colorimetry specification	Quantity produced annually

(1) Complete one table per application: closure profiles (roller blinds, louver blinds, etc.), fence profiles, profiles for swimming pool protection (safety cover, shelters, gates, etc.) or any other outdoor use

(2) Corresponds to codes that may be added to the compulsory information in the profile marking (see Part 2 of the rules) i.e.:

XX	-	XXXX	/	XXXX	-	X	-	X
Declared Vicat temperature value		Declared level for modulus in flexure		Declared linear weight value		Declared shrinkage value		Declared impact value

Applicant's name

Date

Stamp and

signature

FORM No. 2g

REFERENCE OF THE PROFILES COVERED BY THE CERTIFICATION APPLICATION

Profiles for thermal bridge breaks

Vinyl compound used (reference and producer):
Intended applications: Thermal bridge breaks

Profile reference	**Profile coding** (2)	**Value or level declared (cf. partie 2 § 2.1.)**			
		Linear weight	**Colorimetry specification**	**Shrinkage**	**Quantity produced annually**

(2) Corresponds to codes that may be added to the compulsory information in the profile marking (see Part 2 of the rules) i.e.:

XX	-	XXXX	/	XXXX	-	X	-
Declared Vicat temperature value		Declared level for modulus in flexure		Declared linear weight value		Declared shrinkage value	

Applicant's name

Date

Stamp and

signature

3.1.3. SAMPLES TO BE SUPPLIED

Situation of a producer:

The sample is constituted for each vinyl compound submitted for acceptance by:

- 30 x 1-metre sections of profile extruded, with the material of the producer or extruder authorised to use the mark, which must be sent to LNE. The shape and dimensions of this profile must be such as to enable the traction impact resistance test to be conducted, i.e.: either no internal divisions or divisions spaced at ≥ 25 mm. These profiles can be sent by the producer (for the purpose in particular of the durability tests) or taken during the initial audit.

  The profiles shall be accompanied by details enabling the batches of compound profiles to be identified (data sheet contained in appendix to this part of the regulations), are sent by the producer at the latter's own risk, to the independent laboratory in charge of conducting the tests.

- 1 kg of granules taken during the initial audit as well as 3x1m of strips (from 1.5 to 2mm thick) ..

Situation of an extruder and formulator-extruder:

The sample consists of 10 x 1 m of each reference RPT profile as defined in § 3.1.1.b and/or 30 x 1 m of each reference profile (other applications) as defined in § 3.1.1.b, as well as 100g of granules of vinyl-based composition(s) from the same production batch .

If the application is made in conjunction with an application for admission of the compound used (the samples are common to the two applications) or if the profiles submitted for acceptance are extruded using a compound that has been authorised to carry the NF mark for over 5 years, but has not been used by extruders approved under the NF marking system; the shape and dimensions of the profiles must be such as to enable the traction impact resistance test to be conducted, i.e.: either no internal divisions or divisions spaced at ≥ 25 mm.

3.2. INITIAL ASSESSMENT PROCESS

3.2.1. EXAMINATION OF THE CERTIFICATION APPLICATION

The application and enclosed file sent to LNE are examined before factory verifications and tests are carried out.

Upon receiving the application, LNE checks that:
- all the requested documents are enclosed in the application file according to § 3.1.2.,
- the elements in the file comply with the requirements of the certification rules.

LNE checks that it has all the means for responding to the application and may request additional information required for the admissibility of the file when this is incomplete.

Once the application is admissible, LNE organises the inspections, and informs the applicant about the organisation methods (auditor, duration of the audit, audited sites, laboratories, sampled products, etc.) and, if applicable, the due date for the additional items.

The checks carried out in connection with the NF mark are as follows:

- audits so as to be able to cover the various participants in the design, manufacture, assembly, quality control, marking and packaging of the products (see Para. 3.2.2 or 3.2.3).
- tests on the products (see 3.2.4),

3.2.2. AUDIT: SITUATION OF A COMPOUND CERTIFICATION APPLICATION (PRODUCER)

The examination of the application consists of conducting an initial audit of the factory where the compounds submitted for acceptance are manufactured (and, where appropriate, an audit of the final product processing unit). It also includes, if applicable, an audit of the various sites participating and described in the certification application, on the basis of the same standard.

This audit is conducted according to the general principles defined in standard ISO 19011 for conducting a quality audit. In particular, the scope of the audit and details of the procedure are specified in an audit plan sent to the company before the audit.
This audit is conducted by auditors who have given an undertaking to observe professional secrecy.

This audit is conducted before marketing of a composition for which an acceptance application is made.

The language of the audit is French or English. If this is not the case, it is up to the company being audited to make available an interpreter to the auditor. In this case the duration of the audit may be increased (prior agreement with the company).

The NF auditor must have at his/her disposal all the resources necessary (documents, premises, installations, facilities) to perform his/her assignment, including competent people to carry it out.

The manufacturer must make available to the lead auditor all vinyl compounds covered by the certification application and needed for the sample.

The auditors:

- conduct a quality audit with the purpose of verifying the existence and effective implementation of the quality management system set up and its conformity with the quality requirements in Part 2 of these regulations
- check that the verifications required in Part 2 have been carried out on at least 10 samples (see Part 1) of each compound in order to verify the application of frequencies, operating procedures and criteria defined by NF certification rules and ensure that compliance testing on products covered by the certification application is conducted in their presence. It is preferable to carry out these tests on the compound sampled for tests in the mark laboratory.

  NOTE: test results obtained during the audit do not prejudge results obtained by the mark laboratory.
- examine(s), if necessary, the application of the contract with the authorised agent and/or the various sites participating and described in the certification request.

Take the samples required for the acceptance tests (cf. Para.3 1 3) from a manufactured batch from the producer's production line or warehouse.
The samples taken are marked by the auditors with a distinctive sign used to authenticate them later, and must be accompanied by information allowing the samples taken to be identified. They are sent within 15 days by the manufacturer, and under his responsibility, to the independent laboratory (see Part 5 of these Certification Rules) tasked with carrying

out the tests, accompanied by the sample sheet, unless the auditors decide to take charge of them.
A control sample (weighing ≈ 10 kg) clearly identified in the presence of the auditor must be retained by the producer for a minimum period of one year.
- conduct tests of the compounds submitted for acceptance (sampled batches) in the presence of the producer in order to verify the conditions under which the tests are conducted.

With the company's agreement, the auditors can take a copy of any document they consider necessary.

The duration of the on-site audit is:

Applicant	Duration of on-site audit (in days)
Producer showing up to 5 compounds	2
Producer showing more than 5 compounds	2.5

The duration of the audit can be adapted to the sites to be audited (with prior consent of the applicant).

The audit manager prepares an audit report which they then hand over to the applicant at the end of the final meeting, drawing special attention to the efficiency of the quality system set up, the strong points, the compliant points to be improved upon and a clear report of examples of non-conformity. It also includes the report of the tests carried out during the audit and the sampling sheet.

A non-conformity is classified as major when, on the basis of objective proof:

- there is a significant risk to the conformity of the product in relation to the specified requirements (these requirements are set out by the reference document, the company or its clients), or
- there is a significant risk in terms of the management system's ability to control product conformity for a specified requirement, or
- there is systematic or repeated non-compliance with a given requirement.

In all other cases, the non-conformity is classified as minor.

The applicant must respond to any notified non-conformity with a causal analysis, corrections and corrective actions. An action plan to address major or minor non-conformities is sent within three weeks following the end of the audit to the Audit Leader for assessment.

In the case of a major non-conformity:

- Tangible proof guaranteeing the implementation of the correction to eliminate this non-conformity must be sent with the action plan.
- LNE must receive tangible proof guaranteeing the implementation of the corrective action associated with this non-conformity within the timeframes it has specified.

In the case of minor non-compliance, LNE must receive tangible proof that guarantees that the correction to eliminate this non-conformity is implemented along with the associated corrective action. Failing that, it will be checked at the latest during the next on-site audit, unless specified otherwise by LNE.

The complete report is sent by LNE by email to the correspondent(s) designated by the applicant, with a copy (where applicable) to the authorised agent.

3.2.3. AUDIT:SITUATION FOR PVC-U OR PVC-UE PROFILE ACCEPTANCE APPLICATIONS (EXTRUDERS AND FORMULATOR-EXTRUDERS)

Examination of the application is preceded by an audit of the factory where the products presented for acceptance are manufactured. It also includes, where appropriate, an audit of the final transformation of the product or of the finishing (painting and film coating). This audit is conducted by auditors who have given an undertaking to observe professional secrecy.

This audit is conducted according to the general principles defined in standard ISO 19011 for conducting a quality audit. In particular, the scope of the audit and details of the procedure are specified in an audit plan sent to the company before the audit

The manufacturer must make available to the lead auditor all models/a model of each range of products covered by the certification application needed for the sample.

The auditors:

- conduct a quality audit with the purpose of verifying the existence and effective implementation of the quality management system set up and its conformity with the quality requirements defined in Part 2 of these certification rules.
- check that the verifications required in Part 2 have been carried out on at least 10 samples (see Part 1) of each profile in order to verify the application of frequencies, operating procedures and criteria defined by NF certification rules and ensure that compliance testing on products covered by the certification application is conducted in their presence. It is preferable to carry out these tests on the profiles taken for tests in the Mark laboratory.

  NOTE: test results obtained during the audit do not prejudge results obtained by the mark laboratory.
- take the samples required for the acceptance tests from a manufactured batch from the extruder / formulator-extruder's production line or warehouse. These samples must be validated according to the manufacturer’s inspection plan.
  The samples taken are marked by the auditor with a distinctive sign which is used to authenticate them later, and must be accompanied by information identifying the batch of material used in their manufacture.
  Unless the auditor decides to take them, the samples are sent within 15 days by the manufacturer, and at his own risk, to the independent laboratory responsible for conducting the tests along with the sampling sheet.
- examine(s), if necessary, the application of the contract with the authorised agent and/or the various sites participating and described in the certification request. In the situation of the use of multiple outlets, the compliance testing must be conducted on each outlet in the presence of the auditor. For tests conducted at the Mark laboratory, sampling will be done on only one of the outlets.

With the company's agreement, the auditors can take a copy of any document they consider necessary.

The duration of the on-site audit is:

Applicant	Duration of on-site audit (in days)
Extruder	3
Formulator-extruder:	4

The duration of the audit can be adapted to the sites to be audited (with prior consent of the applicant).

For an applicant to the NF mark for thermoplastic and natural fibre products, the duration of the joint acceptance audit NF132 and NF514 is mentioned in the reference standard NF514.

The audit manager prepares an audit report which they then hand over to the applicant at the end of the final meeting, drawing special attention to the efficiency of the quality system set up, the strong points, the compliant points to be improved upon, and a report of non-conformities with comments. It also includes the report of tests carried out during the audit and the sampling sheet.

A non-conformity is classified as major when, on the basis of objective proof:

- there is a significant risk to the conformity of the product in relation to the specified requirements (these requirements are set out by the reference document, the company or its clients), or
- there is a significant risk in terms of the management system's ability to control product conformity for a specified requirement, or
- there is systematic or repeated non-compliance with a given requirement.

In all other cases, the non-conformity is classified as minor.

The applicant must respond to any notified non-conformity with a causal analysis, corrections and corrective actions. An action plan to address major or minor non-conformities is sent within three weeks following the end of the audit to the Audit Leader for assessment.

In the case of a major non-conformity:

- Tangible proof guaranteeing the implementation of the correction to eliminate this non-conformity must be sent with the action plan.
- LNE must receive tangible proof guaranteeing the implementation of the corrective action associated with this non-conformity within the timeframes it has specified.

In the case of minor non-compliance, LNE must receive tangible proof that guarantees that the correction to eliminate this non-conformity is implemented along with the associated corrective action. Failing that, it will be checked at the latest during the next on-site audit, unless specified otherwise by LNE.

The complete report is sent by LNE by email to the correspondent(s) designated by the applicant, with a copy (where applicable) to the authorised agent.

3.2.4. ACCEPTANCE TESTS

3.2.4.1. Situation of a compound certification application (producer and formulator-extruder)

Certification testing of a composition includes:

a) a) profile tests sent by the producer during the application for certification (in particular for durability tests) according to test series A and B according to Table 1 below.
b) b) tests on the granules taken during the audit of the production site according to the series of tests C according to Table 1 below.

These tests are carried out by the independent laboratory and are defined in Table 1 below.

LNE will draw up and send a report containing the results of these tests by email to the correspondent(s) designated by the producer/formulator-extruder.
In case of non-compliance, the manufacturer shall inform LNE of its analysis of the causes and corrective actions taken while specifying the time taken.

Prior to the certification decision, any modification made to the material defined initially must be pointed out to LNE which will decide whether or not additional tests need to be carried out.

A technical file supplied by the applicant can be considered and can, at the request of the applicant, be submitted to the mark committee and to a group of experts whose composition is described in part 5. A favourable opinion results in acceptance of the vinyl compound even before the ageing test results are available. However, only these results can be used as a reference for notification of acceptance.

Such a technical file contains the following:

- the results of a natural ageing test conducted at a site meeting the requirements of the NF T 54-405 standard: and the forwarding of a report setting out:
  . the details of the testing station,
  . a report of the meteorological conditions throughout the exposure
  . the results of tests conducted before and after ageing by an official laboratory in accordance with the requirements of these regulations (see table 1 to 2 below), with precise identification of the compounds to be tested in order to ensure that the file submitted corresponds fully to the compound submitted for acceptance.

  Where no pre-ageing report is available, the exposed samples must be supplied to LNE in order that the latter can conduct tests to identify the compound.

TABLE 1

Admission tests for vinyl compositions destined for the extrusion of PVC-U profiles)
(Type 1, 2, 3 or 4)

TESTS (methods shown in part 2)		**SAMPLING**	**Tests tests**		
			A	B	C
Density at 23°C		Granules(1) or profiles (2) (3)	X	X	X
Ash content Illustrative figure for compositions of which L* 35			X	X	X
Thermal stability time (DHC)			X	X	X
Vicat softening temperature			X		X
Modulus of elasticity in flexure			X		X
Colour checking		Profiles	X	X	X
Tensile characteristics		Using 5 test pieces taken from the same 1-metre profile sample	X		
Traction impact resistance at 23°C		- before ageing: Using 10 test pieces taken from the same 1-metre profile sample	X		
Translucency (only for translucent compounds)		On 1 plate of thickness 1 ± 0.1 mm	X		
Reaction to contact with hydrogen sulphide (for swimming pool safety covers only)		on 1 20-cm profile sample	X		
Durability (natural ageing)	- Colour change check (grey scale, (for bright colours) colorimetry, Delorme score) after 1 and 2 years	using 1 50-cm test piece and 1 15-cm reference taken from the same sample (for each exposure duration)	X(4)	X(6)	

	- Impact resistance - traction at 23°C after 2 years	using 10 test pieces taken from the same profile sample and 1 15-cm reference taken from the same profile sample (for each exposure duration)	X(4)	X(6)	
Durability (Accelerated ageing NF EN 513) (5)	- Changes in colorimetry characteristics	using 1 exposed test piece and 1 15-cm reference taken from the same profile sample	X(4)	X(6)	
	- Impact resistance - traction at 23°C	using 10 exposed test pieces taken from the same profile sample	X(4)	X(6)	

A: Tests carried out on each reference composition submitted for certification, and in the case of shade variant on a composition reference.
B: For shade variants, Tests performed on other variants that have not been tested according to (A).
C: Sampling tests performed during the audit.
(1) Tests conducted on each compound submitted for acceptance,
(2) Tests conducted in the case of a variation in a light colour tint for applications other than swimming pools;
(3) Compound identification characteristics Tests on granules taken during the initial audit. In addition, for vinyl compositions destined for the extrusion of film-coated and painted PVC-U profiles, only these tests apply.
(4) Except for opaque compounds of the lower face of the bi-material profiles for swimming pool cover application.
(5) by decision of the manufacturer in the framework of bright colours, which does not apply to non-bright colours. However, a confirmation by natural ageing for 1 and 2 years must be carried out. Only natural ageing takes precedence.
(6) In the acceptance application, if the reference compound of a bright colour is accompanied by a variation in colour tint (identification characteristics other than identical colours, shading colours by modifying the content and/or the nature of the shading pigments) the ageing tests to be conducted will vary according to case:

- ***1st case: the colorimetric difference of the variation compared to the reference compound complies with:***

$\Delta L^* \leq 2$ and $\Delta a^* \leq 1$ and $\Delta b^* \leq 1{,}6$
there is no ageing test to be carried out.

- ***2nd case: the colorimetric difference of the variation compared to the reference compound complies with:***

$2 < \Delta L^* \leq 5$ and/or $\Delta a^* \geq 1$ and/or $\Delta b^* \geq 1{,}6$
Change in the colour via accelerated ageing according to NF EN 513 or NF EN 16472 (comparative study with respect to the reference compound) must be carried out (as chosen by the applicant and depending on the type of application).

- ***3rd case: the colorimetric difference of the variation compared to the reference compound complies with:***

$\Delta L^* \geq 5$
Considered as a new approval.

3.2.4.2. Situation of a request for a PVC-U or PVC-UE profile(extruder)

The tests to be carried out by the independent laboratory on the profiles sampled during the audit are defined in the tables 2 to 5 below:

Prior to the certification decision, any modification made to the range defined initially must be pointed out to LNE which will decide whether or not additional tests need to be carried out.

TABLE 2

Acceptance tests for non-decorated PVC-U profiles and RPT (Type 1 or 2)

TESTS (methods shown in part 2)	SAMPLING	PROFILE ACCEPTANCE TESTS	
		A 1st reference profile	B Other reference profiles
Density (1)	Profiles	X	
Ash content (1) (6) Illustrative figure for compositions of which L* 35		X	
Vicat softening temperature (1)		X	
Modulus of elasticity in flexure (1)		X	
Thermal stability time DHC (1)		X	
Colour checking (1)		X	X
Impact resistance-traction (2)(5)	Using 10 test pieces taken from the same 1-metre profile sample	X	
Appearance	Profiles	X	X
Linear weight		X	X
Tensile characteristics	Using 5 test pieces taken from the same 1-metre profile sample	X	X
Impact resistance at 23°C(5)	Using 10 test pieces taken from the same profile sample	X	X
Shrinkage	Using 3 test pieces taken from the same profile sample	X	X
Light transmission (opacity) (3)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm	X	X
Reaction to contact with hydrogen sulphide (4)	On a 20-cm profile sample	X	

(1) compound identification characteristics
(2) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
(3) for profiles where light transmission measurement is required in connection with their intended use (profiles for roller blinds; for other types of closure profiles: louver blinds))
(4) for profiles for swimming pool protection (only safety covers)
(5) Not applicable to profiles for thermal bridge breaks
(6) if coextrusion of PVC-U with PVC-U in an inner layer then these tests are to be performed on the profile consisting solely of the material of the outer layer.

TABLE 3

Acceptance tests for PVC-U solar blade profiles for swimming pool covers (Type 1 or 2)

TESTS (methods shown in part 2)	SAMPLING	PROFILE ACCEPTANCE TESTS	
		A 1st reference profile	B Other reference profiles
Density (1)	Measurement on opaque side and on translucent side	X	
Ash content (1) (3) Illustrative figure for compositions of which L* 35		X	
Vicat softening temperature (1)		X	
Modulus of elasticity in flexure (1)		X	
Thermal stability time DHC (1)		X	
Colour checking (1)	Measurement on opaque side and on translucent side	X	X
Impact resistance-traction (2)	Using 10 test pieces taken from the same 1-metre profile sample (on translucent side)	X	
Appearance	complete strip	X	X
Linear weight		X	X
Tensile characteristics	Using 5 test pieces taken from the same 1-metre long profile sample on the opaque face and the translucent face	X	X
Impact resistance at 23°C	using 10 test pieces taken from the same profile sample (complete strip)	X	X
Shrinkage	Using 3 test pieces taken from the same profile sample (complete strip)	X	X
Reaction to contact with hydrogen sulphide	On a 20-cm profile sample (translucent side)	X	

(1) compound identification characteristics
(2) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
3) if coextrusion of PVC-U with PVC-U in an inner layer then these tests are to be performed on the profile consisting solely of the material of the outer layer.

TABLE 4

Acceptance tests for film-coated PVC-U profiles (Type 3) and painted PVC-U (Type 4)

TESTS	SAMPLING	PROFILE ACCEPTANCE TESTS	
		A	B
		1st reference profile	Other reference profiles
Density (1)	Profiles	X	
Vicat softening temperature (1)		X	
Modulus of elasticity in flexure (1)		X	
Colour checking (1)		X	X
Impact resistance-traction (2)	Using 10 test pieces taken from the same 1-metre profile sample	X	
Appearance And decoration (only for film-coated PVC-U)	Profiles	X	X
Linear weight		X	X
Thickness of the coat of paint (only for painted PVC-U)	Using 3 test pieces taken from the same profile sample	X	X
Brilliance (only for painted PVC-U)	Using one test piece	X	X
Tensile characteristics (4)	Using 5 test pieces taken from the same 1-metre profile sample (non film-coated face)	X	
Impact resistance at 23°C	Using 10 test pieces taken from the same profile sample	X	X
Shrinkage (100°C)	Using 3 test pieces taken from the same profile sample	X	X
Thermal resistance	Using one test piece	X	X
Cross hatch test (only for painted PVC-U)	Using one test piece	X	X
Scratch resistance (only for painted PVC-U)	Using one test piece	X	X
Resistance to peeling (only for film-coated PVC-U)	Using 4 test pieces taken from the same profile sample	X	X
Light transmission (opacity) (3)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm	X	X
Durability natural ageing accelerated ageing NF EN 513 or NF EN 16472	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)	X	

(1) compound identification characteristics
(2) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
(3) for profiles where light transmission measurement is required in connection with their intended use (profiles for roller blinds; for other types of closure profiles: louver blinds))
(4) if the profile is film-coated on all its faces, the extruder should supply adequate samples

As a transitory measure, admission could be decided on the basis of results obtained after natural ageing for 1 year only in the case of compliant accelerated ageing.

TABLE 5

Admission tests for PVC-UE profiles

The table hereinafter applies to single-material or bi-material PVC-UE profiles or to co-extruded PVC-U profiles with a PVC-UE core.

TESTS		SAMPLING	PROFILE ACCEPTANCE TESTS	
			A 1st reference profile	B Other reference profiles
Density (1) (6)		Profiles	X	
Ash content (1) Illustrative figure for compositions of which L* 35			X	
Vicat softening temperature (1) (6)			X	
Modulus of elasticity in flexure (1) (6)			X	
Thermal stability time DHC (1) (6)			X	
Impact resistance-traction (4)(5) (6)		Using 10 test pieces taken from the same 1-metre profile sample	X	
Tensile characteristics (6)		Using 5 test pieces taken from the same 1-metre profile sample	X	X
Colour checking (1)		Profiles	X	X
Appearance		Profiles	X	X
Linear weight			X	X
Impact resistance at 23°C(5)		Using 10 test pieces taken from the same profile sample	X	X
Shrinkage (75°C)		Using 3 test pieces taken from the same profile sample	X	X
Reaction to contact with hydrogen sulphide (2)		On a 20-cm profile sample	X	
Résistance à la rupture en flexion(7)		Profiles	X	X
Water absorption (2)		On a 1-m profile sample	X	
Light transmission (3)		On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm	X	X
Durability - natural ageing - (Accelerated ageing NF EN 513)	Verification of appearance after 1 and 2 years: - Grey scale (for bright colours) - Colorimetry - Delorme score	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)	X	
	Flexural strength(7) after 2 years	Profiles		

(1) compound identification characteristics
(2) swimming pool profiles only
(3) closure profiles only
(4) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
(5) Not applicable to profiles for thermal bridge breaks
(6) if co-extrusion of PVC-U with a PVC-UE as an internal coat then these tests are to be carried out on the profile comprising only the material of the outer coat.
(7) pool-only application profiles and RPT application of PVC-U co-extruded PVC-U profiles, if the PVC-EU core has a structural role

3.2.4.3. Situation with a film-coated profile application

The characterisation of the film coating is carried out as indicated in table 6.

TABLE 6

Tests for film-coating films

Characteristics and test methods	Samples	Tests
Reaction of the film to radiation (Visible, UV and IR) ageing according to NF EN 4892-1.2 method A cycle 1 *Lab, Delta E, solar absorption and reflection, Solar transmission, IR emissivity* (initially, at 2,000 h and at 4,000 h)	1 A4 sheet per outlet and per range of colours	X only as an illustrative figure
Reaction of the film on supports of different colours with regards to radiation in new condition Visible, UV and IR radiation *Measurement of the absorption coefficient of a profile filmed on a bright colour support and on a dark colour support* (initially)	1 m of profile film per type of support and per range of film colours	X only as an illustrative figure
Characterisation of the IRTF micro film (optional test) ageing according to NF EN 4892-1.2 method A cycle 1 *Thickness of the various coats, Qualitative inspection, Chemical identification of the coats* (initially and at 4,000 h)	1 A4 sheet per outlet and per range of colours	X only as an illustrative figure
Ageing tests per colour of coated film ageing according to NF EN 4892-1.2 method A cycle 1 *Delta E, Delta b, Grey scale* (initially and at 4,000 h)	1 per colour	X

3.2.5. EXAMINATION OF THE APPLICATION BY THE MARK COMMITTEE

LNE conducts an assessment of the evidence and, if appropriate, conducts additional checks prior to presentation to the Mark Committee.

A summary of the audit observations and test results is presented, in anonymous form, to the Mark Committee.

The presentation of this report shall clearly show, where applicable, any points on which the products submitted for the inspections set up by the manufacturer do not strictly conform to the requirements of the standards or additional technical specifications or to the certification rules.

After examining the various documents in the file, the Mark committee proposes to award or refuse the certification.

Acceptance of the PVC-UE profile is declared on the basis of tests before ageing.

3.2.6. DECISION AND NOTIFICATION

On the basis of the results obtained during examination of the application and the recommendations of the mark committee, LNE notifies the applicant of one of the following decisions:

a) Certification approved
This decision may be accompanied by suspensive conditions which define the conditions to be met by the applicant before the certificate is awarded.

b) Certification refused
The certification decision must be made no later than one year after the initial audit.

In virtue of the certification decision notified by LNE, AFNOR Certification grants the right to use the NF mark.

When this right has been granted, the beneficiary is called the "Holder". Maintaining this right is subject to the results of the verifications defined in Part 4.

The exercise of the right to use the NF Mark is strictly limited to the products for which it was awarded, in other words the duly defined products from the duly defined factories, and manufactured under the conditions set out in these Rules.

3.2.7. APPEAL AGAINST A DECISION

The applicant may appeal against the decision taken. The procedure is set out in Article 11 of the General Rules of the NF mark. The appeal is filed by registered letter with acknowledgement of receipt within 15 working days.

LNE firstly proceeds with the re-examination of the file in view of the factors justifying this challenge. It notifies confirmation of the decision or the new decision to the applicant within 30 working days.

Should the applicant wish to maintain its challenge, an appeal may be made by the applicant or certification beneficiary against the decision of LNE.

Explanations for this appeal, which does not have a suspensive effect, must be given. It is lodged by sending a registered letter with acknowledgement of receipt within 15 working days.

It is examined by LNE within 30 days of receipt and, if it concerns the certification decision or certification rules, gives rise to an examination by the Mark committee. LNE informs the plaintiff, within this time limit, as to whether or not it maintains its decision.

If the appeal is maintained after processing and submission to the mark committee for their opinion, the appeal is presented to the Certification and Impartiality Preservation Committee of LNE, which proposes its conclusions after examination.

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

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

APPENDIX TO PART 3

NF MARK 132

UNPLASTICISED VINYL-BASED EXTRUDED PRODUCTS FOR OUTDOOR USE

SAMPLES SENT TO LNE BY THE MANUFACTURER IDENTIFICATION SHEET FOR ACCEPTANCE OR EXTENSION OF ACCEPTANCE

Company reference:

Activities: Extruder: Producer:

Date of application for acceptance or extension of acceptance:

Identification of profiles

Identification, of profile (1)	Reference	
	Batch No.	
	Date of manufacture	

identification of material used	Reference	
	producer	
	Batch No.	
Quantity		30 x 1m or 15 x 1m
Profile with area identified for colorimetric measurements (2)	quantity	1 x 1 m
	observer used	
	L* a* b* colorimetric coordinates measured on the area identified	

3.2.4.1. part 3): for extensions of acceptance or the acceptance of compounds, the shape and dimensions of profiles must be such as to enable the traction impact resistance test to be conducted (either no internal divisions or divisions spaced at ≥ 25 mm)
(2) for comparison with the declared values and monitoring of the values targeted

The profiles should be sent to LNE, Direction des Essais (DE) – Pôle Chimie et physico-chimie des matériaux – 29, Avenue Roger Hennequin 78197 TRAPPES - France for the attention of Mr MONTAUFRAY, accompanied by this sheet.

A copy of this sheet should be sent to: Pôle Certification Environnement Sécurité et Performance – 1, rue Gaston Boissier – 75724 Paris Cedex 15.

Name and signature
of the manufacturer's representative

LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

Organisme certificateur mandaté par
AFNOR Certification

CERTIFICATION RULES
NF MARK FOR UNPLASTICISED VINYL-BASED EXTRUDED PRODUCTS FOR OUTDOOR USE

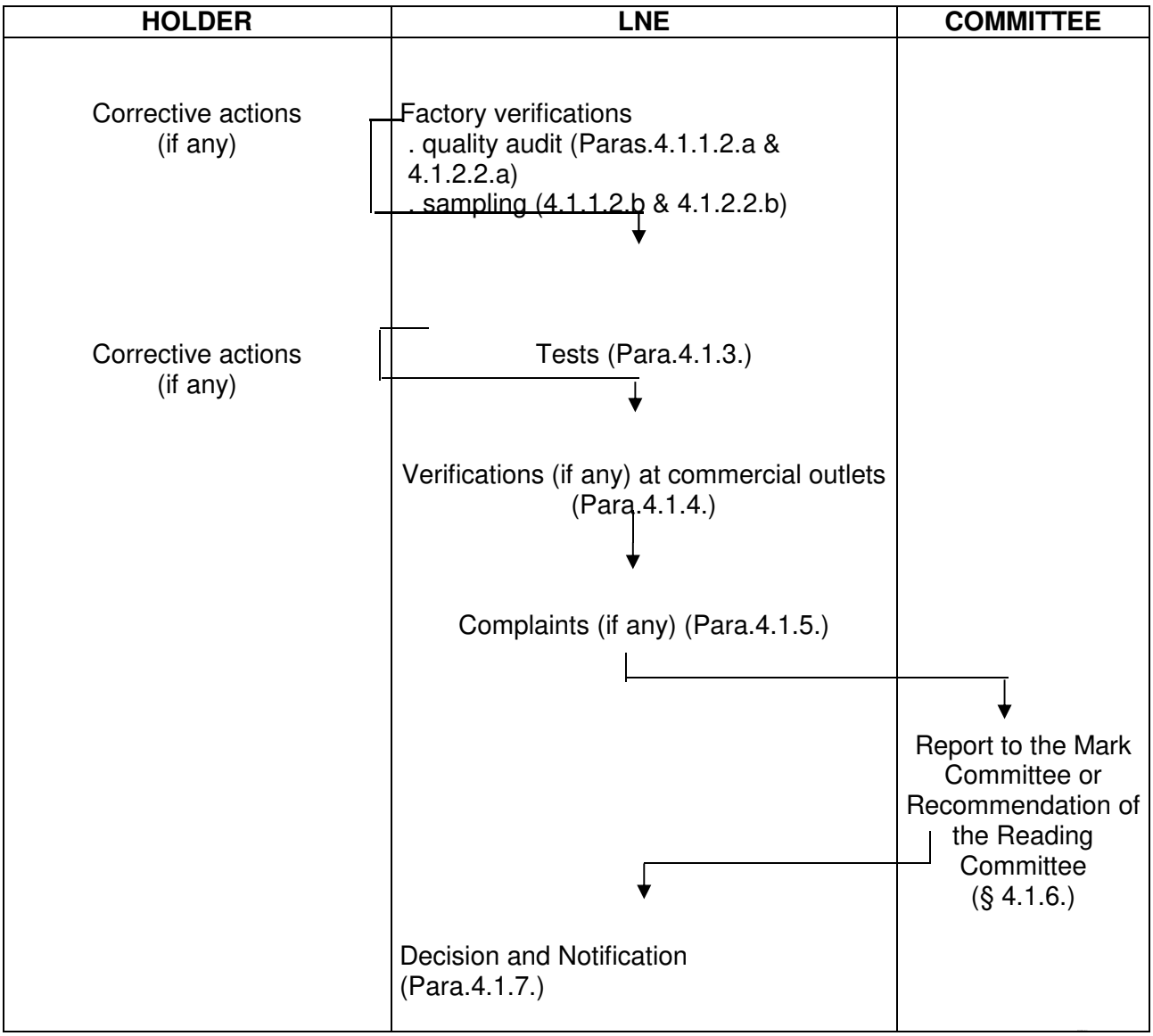
PART 4

MONITORING OF CERTIFIED PRODUCTS - MODIFICATIONS AND DEVELOPMENTS

CONTENTS

Rev. 19 February 2022

SURVEILLANCE PROCESS



Throughout the duration of the certification, the holder must:

- comply with the requirements defined and marking arrangements described in part 2 and systematically inform LNE of any change in the certified product's characteristics, and/or to its organisation which is likely to affect the certification, and to comply with the defined requirements:
  - -modifications concerning the holder (§ 4.2.1.)
  - -transfer of the production site (§ 4.2.2.)
  - -modification of the accepted product (Para.4.2.3.)
  - -temporary stoppage of production (§ 4.2.4.)
  - -definitive stoppage of production or surrendering the right of use (§ 4.2.5.)
- inform LNE of any request for change in the certification: new products (Para.4.2.3.)

In addition, LNE reserves the right to carry out any checks it deems necessary following:
- a modification concerning the certified product or the quality organisation of the various intervening sites and described in the original certification application file.
- complaints, challenges, disputes of which it has been informed and relating to the use of the NF Mark.

4.1. CERTIFIED PRODUCT SURVEILLANCE PROCESS

LNE organises surveillance of certified products.

The first follow-up audit occurs no later than six months after the certification decision.

The purpose of this surveillance is to monitor compliance by the manufacturer with the requirements of these certification rules.

The surveillance methods depend on the decisions made as a result of previous inspections.

4.1.1. SITUATION WITH PRODUCERS OF VINYL COMPOUNDS

The following provisions apply to producers; for formulator-extruders, the verifications are made as part of the profile verifications (see Para.4.1.2.)

Audit

An audit is conducted at least every 3 years at the main manufacturing site and the site responsible for final inspection of certified products with samples of accepted compounds.

LNE defines, on a case-by-case basis, which sites are to be audited in addition and the associated frequency among different intervening sites and described in the original certification application.

Additional audits may be carried out by proposal of the Mark Committee or on the initiative of LNE, in particular for non-conformities related to material features observed during extruder follow-up or when for production frequencies and use in during extruder follow-up (compounds not used within the framework of the NF132 mark).

The examinations carried out concern primarily any modifications made since the previous audit that affect manufacturing, inspection methods or organisation of the quality management system.

This quality audit is conducted according to the general principles defined in standard ISO 19011 for conducting a quality audit. In particular, the scope of the audit and details of the procedure are specified in an audit plan sent to the company before the audit.
The audit must include verification of the specific requirements of the NF mark (see § 2.2. Part 2).

During each audit, products are sampled for testing in the mark's laboratory (see §2.1.2.1 e of this standard). The items to test consist of: (a) samples of about 1 kg drawn from each composition admitted to the NF mark and which have been validated in relation to the manufacturer's (quality) control plan and (b) strips/profiles (1.5 to 2 mm thick) representing at least 500 g of each composition admitted to the NF mark and which have been validated in accordance with the manufacturer's control plan.

They must be accompanied by information allowing the manufacturing batch to be identified.

They are marked by the auditor with a distinctive sign used to authenticate them later and sent within less than 15 days by the manufacturer, and under his responsibility, to the Mark laboratory charged with carrying out the tests, unless the auditors decide to take charge of them.

During the audit, the auditor has conformity tests carried out in his presence on accepted sections, in order to verify the conditions under which inspections are carried out by the manufacturer.. That is, at least the tests of the control plan mentioned in paragraph 2.3.2.6. These tests are carried out on the same batch as that sampled for tests in the mark laboratory.

NOTE: test results obtained during the audit do not prejudge results obtained by the mark laboratory.

With the manufacturer's agreement, the auditor can take a copy of any document he/she considers necessary.

The audit reports drawn up by the quality management system certifying body must be sent to the auditor or consulted on site.

The duration of the on-site audit is:

Holder	Duration of on-site audit (in days)
Producer having up to 5 compounds	1.5
Producer having more than 5 compounds	2

The duration of the audit can be adapted:

- depending on the sites to be audited in accordance with the requirements of § 3.2.1 (with prior consent of the holder)
- if a holder has several authorised agents,
- if several holders use the same subcontractor.

The audit manager prepares a report which they send to the applicant at the end of the final meeting, in particular drawing special attention to the effectiveness of the quality system set up, the strong points, the compliant points to be improved upon, and a clear report of examples of non-compliance. It also includes the report of tests carried out during the audit and the sampling sheet (cf. b -4.1.2).

A non-conformity is classified as major when, on the basis of objective proof:

- there is a significant risk to the conformity of the product in relation to the specified requirements (these requirements are set out by the reference document, the company or its clients), or
- there is a significant risk in terms of the management system's ability to control product conformity for a specified requirement, or
- there is systematic or repeated non-compliance with a given requirement.

In all other cases, the non-conformity is classified as minor.

The holder must respond to any notified non-conformity with a causal analysis, corrections and corrective actions. An action plan to address major or minor non-conformities is sent within three weeks following the end of the audit to the Audit Leader for assessment.

In the case of a major non-conformity:

- Tangible proof guaranteeing the implementation of the correction to eliminate this non-conformity must be sent with the action plan.
- LNE must receive tangible proof guaranteeing the implementation of the corrective action associated with this non-conformity within the timeframes it has specified.

In the case of minor non-compliance, LNE must receive tangible proof that guarantees that the correction to eliminate this non-conformity is implemented along with the associated corrective action. Failing that, it will be checked at the latest during the next on-site audit, unless specified otherwise by LNE.

The complete report is sent by LNE to the holder, with, if applicable, a copy to the authorised agent.

4.1.2. FOR EXTRUDERS AND FORMULATOR-EXTRUDERS

Audit

At least two audits are conducted per year at the main profile production site and at the site in charge of final inspection of certified products.

LNE defines, on a case-by-case basis, which sites are to be audited in addition and the associated frequency among different intervening sites and described in the original certification application.

The examinations carried out concern primarily any modifications made since the previous audit that affect manufacturing, inspection methods or organisation of the quality management system.

This quality audit is conducted according to the general principles defined in standard ISO 19011 for conducting a quality audit. In particular, the scope of the audit and details of the procedure are specified in an audit plan sent to the company before the audit.

Checking the quality management system involves mandatory checking of the requirements, which are specific to the NF mark (see § 2.3. Part 2) during the audit.

At each audit:
- one or more sample(s) of products is/are taken for tests at the Mark laboratory in order to check the validity of the results obtained by the manufacturer, so that all the types of compounds (rigid, film-coated, painted, cellular expanded PVC) are sampled over one year.

The samples relate to 10 m of RPT profiles or 30 m of profiles for another selected application which have been validated in accordance with the manufacturer's control plan, as well as 100g of the vinyl-based composition coming from the same production batch so that it is possible to alternate the ranges and the compositions.
Products carrying the NF mark must be made available during the inspection (together with batch numbers and/or dates of manufacture).

The samples taken must be accompanied by the information required to identify the compound and profile batches (manufacturing batch nos., date of manufacture, etc.).

They are marked by the auditor with a distinctive sign used to authenticate them later and sent within less than 15 days by the manufacturer, and under his responsibility, to the independent laboratory charged with carrying out the tests, unless the auditors decide to take charge of them.

During the audit, the auditor has conformity tests carried out in their presence on accepted sections, in order to verify the conditions under which inspections are carried out by the manufacturer. Namely, as a minimum the tests of the control plan referred to in paragraph 2.3.2.6. It is preferable to carry out these tests on the type sampled for tests in the mark laboratory.

In the situation of the use of multiple outlets, the compliance testing must be conducted on each outlet in the presence of the auditor. For tests conducted at the Mark laboratory, sampling will be done on only one of the outlets.

NOTE: test results obtained during the audit do not prejudge results obtained by the mark laboratory.

With the manufacturer's agreement, the auditor can take a copy of any document he/she considers necessary.

In the event of non-conformity with the specifications contained in the reference standards and/or the requirements of these regulations, the batches concerned must be identified and isolated until a decision is reached. If necessary, the manufacturer may decide to reject these batches.

The causes of such non-conformity must be identified and appropriate corrective action taken. LNE must be notified of these provisions.

However, this frequency can be reduced to one per year, in the 1st half of each year, according to the opinion of the Mark Committee, 2 years after admission if:

- The manufacturing site is certified to ISO 9001: 2015 for the manufacture of NF profiles whose scope and framework includes the sites and activities concerned by the NF mark and currently valid,
- No non-compliance is found on physical and/or mechanical features (excluding material features in the case of a non-formulating extruder) at the plant and/or mark laboratory.

This frequency can be changed to 2 per year in the event of a non-conformity observed and after consultation with the mark committee, if applicable.

Additional audits may be carried out at the proposal of the Mark Committee or following LNE's initiative.

The audit reports drawn up by the quality management system certifying body must be sent to the auditor or consulted on site.

The duration of the on-site audit is:

Holder	Duration of on-site audit (in days)
Extruder	1.5
Formulator-extruder:	2

The duration of the audit can be adapted:
- depending on the sites to be audited in accordance with the requirements of § 3.2.1 (with prior consent of the holder)
- if a holder has several authorised agents,
- if several holders use the same subcontractor.

For a holder admitted to the NF mark for thermoplastic and natural fibre products, the duration of the on-site joint audit NF132 and NF514 is mentioned in the reference standard NF514.

The audit manager prepares a report which they send to the applicant at the end of the final meeting, in particular drawing special attention to the effectiveness of the quality system set up, the strong points, the compliant points to be improved upon, and a clear report of examples of non-compliance. It also includes the report of tests carried out during the audit and the sampling sheet (cf. b -4.1.2).

A non-conformity is classified as major when, on the basis of objective proof:
- there is a significant risk to the conformity of the product in relation to the specified requirements (these requirements are set out by the reference document, the company or its clients), or
- there is a significant risk in terms of the management system's ability to control product conformity for a specified requirement, or
- there is systematic or repeated non-compliance with a given requirement.

In all other cases, the non-conformity is classified as minor.

The holder must respond to any notified non-conformity with a causal analysis, corrections and corrective actions. An action plan to address major or minor non-conformities is sent within three weeks following the end of the audit to the Audit Leader for assessment.

In the case of a major non-conformity:
- Tangible proof guaranteeing the implementation of the correction to eliminate this non-conformity must be sent with the action plan.
- LNE must receive tangible proof guaranteeing the implementation of the corrective action associated with this non-conformity within the timeframes it has specified.

In the case of minor non-compliance, LNE must receive tangible proof that guarantees that the correction to eliminate this non-conformity is implemented along with the associated corrective action. Failing that, it will be checked at the latest during the next on-site audit, unless specified otherwise by LNE.

The complete report is sent by LNE to the holder, with, if applicable, a copy to the authorised agent.

4.1.3. TESTS conducted in the mark laboratory

4.1.3.1. Tests on vinyl compounds (using samples taken on the producer's premises)

The tests carried out by the mark laboratory on the samples taken during the audits are defined in part 2, Para.2.1.2.1.

LNE sends the correspondent(s) designated by the holder a test report by email on sampling carried out during the audit.

The holder informs LNE of any corrective actions adopted following the detection of nonconformities.

4.1.3.2. Tests on profiles

The tests carried out by the mark laboratory on the samples taken during the audits and/or in the distribution circuit are defined in the tables below.

LNE sends the correspondent(s) designated by the holder a test report by email on sampling carried out during the audit.

IMPORTANT NOTE:

If non-conforming results are detected by LNE, the manufacturer must apply the measures stipulated in Part 2, Para. 2.3.2. (Control of non-conforming product) to inform its customers and call in the products.

The holder informs LNE of any corrective actions adopted following the detection of nonconformities. In case of material non-compliance, the holder must collect from the material producer the corrective actions adopted.

TABLE 1

Tests on non-decorated PVC-U profiles (Type 1 or 2)

TESTS (methods shown in part 2)	SAMPLING	Opaque profiles All applications	Translucent profiles for swimming pool safety covers	two-colour profiles for swimming pool safety covers
Density (1)	Profiles	X	X	On opaque and translucent sides
Ash content (1) Illustrative figure for compositions of which L* 35		X	X	
Vicat softening temperature (1)		X	X	
Modulus of elasticity in flexure (1)		X	X	
Thermal stability time (DHC) (1) (once a year)		X	X	
Colour checking (1)		X	X	
Appearance		X	X	On complete strip
Linear weight		X	X	
Tensile characteristics	Using 5 test pieces taken from the same 1-metre profile sample	X	X	
Impact resistance at 23°C	Using 10 test pieces taken from the same profile sample	X	X	On complete strip
Shrinkage	Using 3 test pieces taken from the same profile sample	X	X	
Light transmission (opacity)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm	X (2)		
Reaction to contact with hydrogen sulphide	On a 20-cm profile sample	X	X	On translucent side
Durability (natural ageing)	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)	X	X	Complete strip exposed on translucent side

(1) compound identification characteristics
(2) for profiles where light transmission measurement is required in connection with their intended use (situation for roller blinds and louver blinds)

TABLE 2

Tests for film-coated PVC-U profiles (Type 3)

TESTS	SAMPLING
Density (1)	Profiles
Vicat softening temperature (1)	
Modulus of elasticity in flexure (1)	
Colour checking (1)	
Decoration	
Appearance	
Linear weight	
Tensile characteristics (4)	Using 5 test pieces taken from the same 1-metre profile sample (non film-coated face)
Impact resistance at 23°C	Using 10 test pieces taken from the same profile sample
Shrinkage (100°C)	Using 3 test pieces taken from the same profile sample
Thermal resistance	Using one test piece
Peeling resistance	Using 4 test pieces taken from the same profile sample
Light transmission (opacity) (3)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm
Durability (natural ageing).	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)

(1) compound identification characteristics
(2) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
(3) for profiles where light transmission measurement is required in connection with their intended use (profiles for roller blinds and louver blinds)
(4) if the profile is film-coated on all its faces, the extruder should supply adequate samples

TABLE 3

Tests for painted PVC-U profiles (Type 4)

TESTS	SAMPLING
Density (1)	Profiles
Vicat softening temperature (1)	
Modulus of elasticity in flexure (1)	
Colour checking (1)	
Appearance	
Linear weight	
Paint layer thickness	Using 3 test pieces taken from the same profile sample
Brilliance	Using one test piece
Tensile characteristics	Using 5 test pieces taken from the same 1-metre profile sample (non-painted face)
Impact resistance at 23°C	Using 10 test pieces taken from the same profile sample
Shrinkage (100°C)	Using 3 test pieces taken from the same profile sample
Thermal resistance	Using one test piece
Cross hatch test	Using one test piece
Scratch resistance	Using one test piece
Light transmission (opacity) (3)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm
Durability (natural ageing)	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)

(1) compound identification characteristics
(2) tests conducted at the producer's expense where the compound used has been authorised to carry the NF mark for over 5 years, but has not been used within the NF mark framework
(3) for profiles where light transmission measurement is required in connection with their intended use (profiles for roller blinds and louver blinds)

TABLE 4

Tests for PVC-UE profiles

The table hereinafter applies to single-material or bi-material PVC-UE profiles or to co-extruded PVC-U profiles with a PVC-UE core.

TESTS	SAMPLING
Colour checking (1)	Profiles
Appearance	Profiles
Linear weight	
Impact resistance at 23°C	Using 10 test pieces taken from the same profile sample
Shrinkage (75°C)	Using 3 test pieces taken from the same profile sample
Reaction to contact with hydrogen sulphide (2)	On a 20-cm profile sample
Water absorption (2)	On a 1-m profile sample
Bending strength	Profiles
Light transmission (3)	On test pieces 50 cm long, giving an apron of roughly 50 x 50 cm
Durability (natural ageing)	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)

(1) compound identification characteristics
(2) swimming pool profiles only
(3) closure profiles only
(4) only if external PVC-U coat

TABLE 5

Tests for PVC-U profiles for thermal bridge breaks (Type 1 or 2)

TESTS (methods shown in part 2)	SAMPLING
Density (1)	Profiles
Ash content (1) Illustrative figure for compositions of which L* 35	
Vicat softening temperature (1)	
Modulus of elasticity in flexure (1)	
Thermal stability time DHC (1)	
Colour checking (1)	
Appearance	
Linear weight	
Tensile characteristics	Using 5 test pieces taken from the same 1-metre profile sample
Shrinkage	Using 3 test pieces taken from the same profile sample
Durability (natural ageing)	using 1 50-cm test piece and 1 15-cm reference taken from the same profile sample (for each exposure duration)

(1) compound identification characteristics

4.1.4. VERIFICATIONS AT COMMERCIAL OUTLETS

In addition to the previous measures, LNE may request verifications to be carried out in the distribution circuit. The results are sent to the holder concerned.

4.1.5. COMPLAINTS

If there are user complaints, the inspections may include sampling or tests at the places where accepted products are marketed or used (in this case the holder is invited to arrange for representation during the sampling and tests).

4.1.6. REPORT TO THE MARK COMMITTEE

A summary of all the inspections carried out is presented by LNE at least once a year to the Mark Committee.

The documents examined during each session of the Mark Committee must be presented in anonymous form.

Sanctions may be proposed by the Mark Committee, if necessary.

4.1.7. DECISION AND NOTIFICATION

On the basis of the inspection results and any proposals from the Mark Committee or from recommendations from the LNE reading committee, LNE notifies the holder of one of the following decisions:

a) Maintenance of certification with a possible request for corrective action

b) Maintenance of certification, with formal notification to stop any infringements observed, within a given time period, eventually accompanied by increased inspections, tests and audits (which may be unannounced).

c) Suspension of the certification (suspension has a maximum duration of 6 months and is renewable once only. After this, withdrawal of the certification is pronounced.)

d) Withdrawal of certification.

For sanctions b), c) and d), the fees for additional verifications are charged to the holder, regardless of their results. The decisions are enforceable as from the date of notification.

If there is a serious breach of the Certification Rules, LNE may, as precautionary measure and after confirmation of the breach, make any of the decisions listed above. The decisions are reported to the Mark Committee.

Certificates are renewed by periods of 3 years.
When the decision comes before the expiry of the certificate, the renewed certificate has a duration greater than 3 years.

4.1.8. APPEAL AGAINST A DECISION

The procedure is set out in Article 11 of the General Rules of the NF mark. The appeal is filed by registered letter with acknowledgement of receipt within 15 working days.

LNE firstly proceeds with the re-examination of the file in view of the factors justifying this challenge. It notifies confirmation of the decision or the new decision to the applicant within 30 working days.

In the event that the holder perseveres with their dispute, an appeal may be made by the beneficiary of the certification against the LNE's decision.

Explanations for this appeal, which does not have a suspensive effect, must be given. It is lodged by sending a registered letter with acknowledgement of receipt within 15 working days.

It is examined by LNE within 30 days of receipt and, if it concerns the certification decision or certification rules, gives rise to an examination by the Mark committee. LNE informs the plaintiff, within this time limit, as to whether or not it maintains its decision.

If the appeal is maintained after processing and submission to the mark committee for their opinion, the appeal is presented to the Certification and Impartiality Preservation Committee of LNE, which proposes its conclusions after examination.

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. MODIFICATION TO COMPANY ORGANISATION OR CERTIFIED PRODUCT AND CHANGES IN CERTIFICATION

4.2.1. MODIFICATION CONCERNING THE HOLDER

In the case of merger, liquidation or acquisition of the holder's company, any right to use the Mark that it might exercise shall cease automatically (see article 4 of the General Rules of the NF mark). The holder must inform LNE without delay of any decision likely to result at a later stage either in a modification of the company's legal status or a change in the company name.

Non-compliance with this obligation observed by LNE can lead to suspension or withdrawal of the right to use the NF mark. Following possible consultations with the Mark Committee, it is up to the LNE to examine the terms of any new certification that may be requested.

In case of merger or consolidation involving only a change of company name, without modification of the product, manufacturing process, material and human resources, quality organisation and methods of control, the NF certificate may be updated upon receipt of written notification of the new company name on the company's letterhead paper.

In the event the authorised agent changes, the application according to forms 1a-b-c-d Part 3 or forms 2 is to be sent to LNE. A complete examination is conducted by LNE. The examination procedure can be simplified in view of the conclusions of the last audit, the last test results in the case where the product covered by the application is identical to the previous certified model. The notification of the modification is notified to the holder without consultation of the mark committee except if there is a special problem or the committee's opinion is necessary.

In the event an additional authorised agent is designated, the application according to forms 1a-b-c-d Part 3 or forms 2 is to be sent to LNE. A complete examination is conducted by LNE. The examination procedure can be simplified in view of the conclusions of the last audit, the last test results in the case where the production and inspection conditions are unchanged with respect to the previously accepted model. The notification of the modification is notified to the holder without consultation of the mark committee except if there is a special problem or the committee's opinion is necessary.

4.2.2. MODIFICATION CONCERNING SITES COVERED BY THE CERTIFICATION

Before total or partial transfer of an activity described in the application file, the holder shall inform LNE in writing of any new arrangements envisaged. As of the date of transfer, no mention of the mark should be made until reception of LNE's decision.

LNE's decision comes after the audit of the new site and, where appropriate, presentation to the Mark Committee and / or LNE reading committee (maintained certification or investigation of a new application, with reduced or complete tests as appropriate).

4.2.3. MODIFICATION OF THE ACCEPTED PRODUCT

NF certified products shall conform to the technical file that was submitted with the application for acceptance, and shall take into account any observations made when the certification was granted.

Any modification (including modifications concerning the manufacturing and inspection means and the quality management system that could have a determining effect on production conformity) that the holder wishes to make to accepted products must also be communicated to LNE in writing. In addition, the holder shall notify the corresponding "distributor" certificates, if appropriate.

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 30 days.

The samples necessary to carry out testing will be sent by/under the responsibility of the applicant to the mark laboratory tasked with carrying out the tests. The samples required for carrying out tests are sent by the holder and under his responsibility, to the Mark laboratory charged with carrying out the tests.

In the event of a new commercial reference of a model already admitted to the NF Mark (vinyl compound or profile), the maintenance application according to appendix 1 and 2 of this part must be sent to LNE who will examine the application and notify the extension of approval without consulting the mark committee.

In the event that the product covered by the request for change has received approval to maintain the right to use the NF mark, the application shall include a new maintenance application, jointly signed by the holder and distributor.

4.2.3.1. Modification of certified vinyl compounds

Any change, whether or not resulting in a change to the compound identification characteristics set out in the technical file submitted with the application for acceptance, will require an extension to that acceptance. This application must be sent to LNE (cf. forms 1a and 1c) and may give rise to the conducting of verification tests.

In particular:

For the modification of the colorimetric characteristics of a bright colour:

. if the new nominal values of L*, a*, b*, are within the tolerance range of the initial composition (L* ± 1; a ± 0.5; b ± 0.8), the modification is considered to be a readjustment of the colorimetric characteristics and only a determination thereof will be carried out. Colorimetric measurements have to be carried out by the manufacturer on an identified area of a 1 m profile sample. This sample and the identification sheet of the appendix to part 3, should be filled in and given to LNE. The determination of new target values is checked by LNE.

If the nominal values of L*, a* and b* are outside the tolerance range of the initial composition (L* ± 1; a ± 0.5; b ± 0.8), the decision is declared on the basis of the results of identification feature audits (in (1) of Table 1 - Part 3) and of an accelerated or natural ageing test (according to this same table), without consulting the Committee if no particular problem is found. Colorimetric measurements have to be carried out by the manufacturer on an identified area of a 1 m profile sample. This sample and the identification sheet of the appendix to part 3, should be filled in and given to LNE. The determination of new target values is checked by LNE.

For any change in the chemical nature of the stabilisers, the application is considered to be a new vinyl compound.

4.2.3.2. Modification of profiles

Any change, whether or not resulting in a change to the certified characteristics of the profile with respect to those set out in the technical file submitted during acceptance, will require a request for modification. This application must be sent to LNE (cf. forms 2a and 2c to 2g) and may give rise to the conducting of verification tests.

The modifications are processed as indicated in table 1 hereinafter.

Table 1 – Acceptance extension arrangements for profiles

Type of change	Application to be sent to LNE	Examination of the application	Extension notification conditions
① New geometry(ies) of profiles extruded from vinyl compound already carrying the NF mark and used by the holder	Application for extension (forms Part 3)	- If the linear weight of the new profiles means they can be incorporated into an existing range: No test	without consulting the mark committee
		-Where this is not the case - Creation of one or more additional profile ranges - Tests conducted in the mark laboratory: test series B according to table 2 to 5 of Part 3 on the reference profiles of these ranges	without consulting the mark committee, if there are no particular problems
②. New geometry for profiles, extruded using a vinyl compound already carrying the NF mark, but not used by the holder	Application for extension (forms Part 3)	- Creation of one or more ranges - Tests conducted in the mark laboratory: . test series A according to table 2 to 5 of Part 3 on the 1st reference profile and test series B according to table 2 to 5 of Part 3 on the other reference profiles.	without consulting the mark committee, if there are no particular problems
③. Profiles extruded using a vinyl compound already carrying the NF mark, but not yet used by the holder (these profiles have been previously approved using a different material)	Application for extension (Forms part 3)	- Tests conducted in the mark laboratory on one of the reference profiles . test series A in accordance with table 2 to 5 of Part 3, - Submission of a file containing the results obtained by the manufacturer on the other reference profiles . test series B in accordance with table 2 to 5 of Part 3	without consulting the mark committee, if there are no particular problems
④. Profiles extruded using a vinyl compound not yet approved for the NF mark (variation in colour tint or not) These profiles have been previously approved using a different material.	Application for extension made jointly with compound acceptance (Forms part 3)	- Tests conducted in the mark laboratory: - on one of the reference profiles: . test series A in accordance with table 2 to 5 of Part 3 jointly with the acceptance tests of the compound - on the other reference profiles: . test series B in accordance with table 2 to 5 of Part 3	after acceptance of the compound. Without consulting the mark committee, if there are no particular problems
⑤. Extruded profiles with a vinyl compound already carrying the NF mark having undergone a modification in the colour by the producer	Extension request + identification sheet + One 1 m sample with the manufacturer's measurement area (Forms part 3)	- Tests conducted in the mark laboratory : Determination of the new colorimetric target values on the 1st reference profile. - Submission of a file containing the results obtained by the manufacturer on the other colour reference profiles	without consultation the mark committee, No change to the certificate.

4.2.4. TEMPORARY STOPPAGE OF PRODUCTION

The holder shall keep LNE informed of any temporary stoppage of production of all the products admitted to the NF mark if it is less than 6 months longs.

Before expiry of the suspension, the manufacturer must warn LNE if manufacture is restarted. The sale of products is then subject to auditing and/or testing (as defined by LNE).

For compounds (producer and formulator-extruder):
In case of non-production of NF compounds, certifications are maintained together with the reference of these compounds on lists of admitted products
However, producers and extruders wishing to use the compound concerned must notify LNE when manufacture recommences.
Sales of this compound (and its use under the NF mark by an extruder) are subject to prior testing and an audit of the production site (where appropriate).

For extruders:

The holder must request a provisional suspension to the right of use of the mark (maximum length: The holder must apply for a provisional suspension of the right to use the mark (maximum duration of 1 year) insofar as they no longer has any products bearing the NF mark in stock. After this period, the right of use is withdrawn.

Before expiry of the suspension, if production is restarted, the holder must notify LNE which will carry out an audit before the products are marketed under the NF mark.

4.2.5. DEFINITIVE STOPPAGE OF PRODUCTION OR SURRENDER OF THE RIGHT OF USE

If the holder ceases production of an accepted product definitively or if it surrenders the right to use the mark, it must inform LNE, indicating the time it considers necessary for depletion of the remaining stock of products bearing the mark. LNE lays down the conditions under which this stock can be depleted, after seeking the Mark Committee's opinion if necessary.

The certificate issued by LNE remains valid as long as it remains with the holder of NF-marked product stock, as surveillance checks on certified products are maintained.

4.6 CHANGE IN CERTIFICATION: ADDING OF NEW PRODUCTS

The application for a new profile and/or a new material, must take the form of an application for extension of the right to use the NF Mark according to the requirements of Part 3 and a site audit is not necessary.

APPENDIX 1 of part 4

FORM
MAINTENANCE APPLICATION FOR THE RIGHT TO USE

(to be prepared on the requesting manufacturer’s letterhead paper or to be completed with the company stamp and signature of the company’s legal representative).

For the attention of the General Manager of

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS
Pôle Certification Environnement Sécurité et Performance1, rue Gaston Boissier
75724 PARIS Cedex 15

Purpose: Maintenance application for the right to use the NF mark applicable to Unplasticised vinyl-based products for outdoor use

Dear Sir,

I am hereby requesting, in my position as .....(1), representing the company.....(2), the maintaining of the right to use the NF mark for the products designated hereinafter, in accordance with the measures of the NF certification rules - Unplasticised vinyl-based extruded products for outdoor use (NF132)

which differ from the products admitted to the NF mark only by the brand and the commercial reference.

This application pertains to products sold through means of (3):

Reference of the basic model	with NF certification	New mark(s)
Trademark and commercial reference already approved	No. of the right to use the NF Mark already granted	and/or requested trade reference(s)

The commitment from the above mentioned distributor is attached (see Appendix 2).

Stamp and signature of Holder
or of authorised agent (*):

Date

---

(1) Position
(2) Identification of the company (head office)
(3) Distributor's name and address
(*) Concerns a manufacturer outside the European economic area

APPENDIX 2 of part 4

DOCUMENT ENCLOSED WITH THE MAINTENANCE APPLICATION FOR THE RIGHT TO USE THE NF MARK 132

(Distributor's undertaking to be written on the distributor's letterhead paper)

I the undersigned,

_____

acting as

_____

of the company:

_____

acknowledge that the substitution of the trademark _____ for that of the manufacturer of the .... of the above mentioned models leads me to accept the relevant responsibilities.

In particular, I declare that I hold an exclusive right to use these trademarks and references, having registered them in compliance with industrial property legislation in force,

and I agree to market the abovementioned model(s) for which this application is made without making any change of any type whatsoever.

Issued at on

Signature

Distributor's stamp:

Stamp and signature of producer or authorised agent:

LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

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PART 5

PARTICIPATING ORGANISATIONS

CONTENTS

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5.1. AFNOR CERTIFICATION

AFNOR is the owner of the NF mark and has granted an exclusive operating licence to AFNOR CERTIFICATION. AFNOR Certification manages and oversees the NF certification system, which defines the rules of governance and the modalities of operation of the NF mark.

5.2. MANDATED BODY

AFNOR Certification entrusts management of the Mark application to LNE.

Under this authorisation, LNE is answerable to AFNOR Certification for all management operations entrusted to it, as set out in Article 3 of the General Rules of the NF Mark.

All persons involved in the NF mark process are bound to professional secrecy under Article 8 of the General Rules of the NF mark. If necessary, on request from manufacturers, an agreement can be signed between LNE and the manufacturer.

5.3. AUDIT BODY

LNE entrusts audits to the following organisations:

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS (LNE)
1, rue Gaston Boissier
75724 PARIS CEDEX 15
Tel. 01 40 43 37 84

However, it may call upon the expertise of duly qualified external auditors according to LNE's procedures. This outsourcing of audits is formalised in the form of contracts (due to independence and confidentiality requirements).

The holder or applicant must facilitate the operations that agents in charge of audits are required to carry out in the context of their mission.

LNE must be informed of any challenge concerning the members of an audit team within 10 days from when the audit team receives the notification in order for it to be taken into account.

5.4. TEST BODIES

LNE entrusts the tests to the independent laboratories named below:

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS (LNE)
Direction des Essais (Test Directorate)
Pôle Chimie et physico-chimie des matériaux
29, avenue Roger Hennequin
78197 TRAPPES Cedex
Tel. 01 30.69.10.00.

SEVAR SARL - SEVN Bandol
75 rue Cuvier
BP 24
83150 BANDOL
Tel. 04.94.29.79.80

5.5. MARK COMMITTEE

5.5.1. COMMITTEE MEMBERS

A Mark Committee is formed. The members are appointed by LNE after approval by LNE.

The attributions of the mark committee are to:
- give an opinion on the certification rules and their updating
- give an opinion on projects for communication or promotional activities relating to the mark. A special budget, decided each year in discussion with the committee, is set aside for promotional actions
- give an opinion on files presented for certification and in the event of an appeal against a decision.

The committee must give these opinions in compliance with principles of impartiality.

It can be consulted by LNE on any file within the content of its surveillance activities.

LNE calls the members of the committee together or informs them in writing at least once a year to present a summary of all the checks performed.

All committee members undertake to:
- contribute their expertise to the operation of the NF mark,
- maintain confidentiality on all information of an individual nature that is provided, and until this publication by AFNOR Certification or LNE,
- attend meetings regularly, and if necessary, regularly inform their deputy, and to communicate all relevant documents,
- contribute to the development of the NF mark that is to say, promote products or services certified under the mark.

The members have a two-year mandate, renewable by tacit agreement.

In order to preserve the credibility and effectiveness of the Committee's work, LNE reserves the right to terminate a member's mandate in the following cases:
- non-compliance with the confidentiality agreement,
- repeated unjustified absences from Committee meetings,
- Failure, in general, to comply with the above commitments.

The chairman of the Mark Committee is appointed under the same conditions, after consulting the Mark Committee. He or she coordinates the committee and searches for consensus. The rule is alternation between the colleges. However, the mandate of the chairman may be extended by one or more years if no candidate representing another college presents himself.

Members of the Mark Committee exercise their functions on a strictly individual basis. However, if a member is absent, a proxy is appointed by LNE.

LNE draws up the minutes of comments and proposals made during a committee meeting. These minutes are sent to all members of the Mark Committee.

If necessary LNE invites AFNOR Certification to take part in committee meetings.

5.5.2. MEMBERS OF THE COMMITTEE

1 Chairman (appointed by the Committee members)
1 Vice-Chairman:

1 representative of the authorised body: LNE – Pôle Certification Environnement Sécurité et Performance

Suppliers, manufacturers, distributers

5 representatives of the vinyl compound producers that are Holders of the NF Mark including 1 representative of Plastics Europe France
5 representatives of the extruders that are Holders of the NF Mark whence 1 representative of the Syndicat National de l'Extrusion plastique (National association of plastic Extrusion)

Users, purchasers, distributors

3 assemblers (representing different applications)
1 representative of SNFPSA (Syndicat de la fermeture, de la protection solaire et des professions associées) (Association of doors, sun protection and associated professions)
1 representative of the FPP (Federation of swimming pool professionals)

Experts, technical organisations

One representative of the BNPP (standardisation office for plastics and plastics technology)
1 representative of the test laboratories (LNE)
1 representative of the qualified auditors (LNE)
1 representative of the SEVAR SARL (Bandol natural ageing test station)
1 representative of the CSTB

5.5.3. AGEING SUBCOMMITTEE

The “ageing” subcommittee is responsible for making measurements of products that have been exposed for one or two years (natural ageing). It reports on the results of its analyses to the Committee. A minimum of 5 validated experts are needed to validate the rating.

It schedules its meetings based on the reports from SEVAR SARL, at most one month after such reports.

The "ageing" subcommittee includes experts designated from the representatives of the vinyl compound producers, extruders, assemblers, LNE and other associated or subcontractor organisations or laboratories.

5.5.4. BUREAU

For reasons of efficiency, the Mark Committee may delegate its powers to a bureau whose members are appointed in name and must be chosen from the members of the Mark Committee.

The bureau comprises the Chairman of the Mark Committee, a representative of manufacturers, a representative of users, the representative of LNE, the representative of the laboratories and the representative of the qualified auditors.

The bureau meets as and when required.

A report of the work undertaken by the bureau is given during meetings of the Mark Committee.

5.5.5. SUB-COMMITTEE or WORKING GROUP

To manage certain non-recurrent tasks of a technical nature not requiring the members of the Mark Committee to meet, a sub-committee or working group can be created, its members being appointed in person and chosen from the members of the Mark Committee.

In the case of a working group, professionals or other persons may be called in from outside.

The missions of this sub-committee or working group are specified by the Mark Committee.Its powers are generally limited to preparing projects or proposals or supplying additional information on a given subject on behalf of the Mark Committee.

5.6. LNE READING COMMITTEE

The reading committee is responsible for rendering an opinion on the certification decision and is composed of at least:

- one management representative (who can act as certification project manager having not participated in the audit),
- a certification project head independent of the file presented (who has not participated in the audit and is not in charge of the file),
- a certification project head in charge of presenting the file.

The committee is chaired by the LNE management representative.

The reading committee is responsible for:

- reviewing the audit and test reports and formulating an opinion and a recommendation on the decisions to be taken,
- where appropriate, considering in the first instance appeals against decisions of LNE and formulating an opinion on the follow-up,
- evaluating the quality of reports.

LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS

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PART 6

APPLICABLE FEES – INVOICING TERMS

CONTENTS

Rev. 19 February 2022

The pricing schedule for the current year is available free of charge on LNE's website (www.lne.fr) or on request from LNE.

6.1. APPLICABLE FEES

Fees for the services involved in obtaining certification and surveillance of certified products are indicated in a list of charges which may be revised annually. The list of charges for the current year is sent to all holders of the mark.

A special budget, decided each year in discussion with the committee, is set aside for promotional actions.

The fees are given in Euros, excluding tax. With regard to test fees, samples must be delivered to the Mark laboratory carriage-free and customs-cleared if necessary.

6.1.1. LIVING AND TRAVELLING EXPENSES ARE INVOICED AS FOLLOWS:

Accommodation and travel expenses are met by the applicant or holder as defined in the schedule of rates.

6.1.2. CANCELLATION OF AN AUDIT

Cancellation of an audit whose date has been fixed by agreement between LNE and the audited company is invoiced as follows:

- cancellation 15 days to 8 days before the scheduled date: 50% of the audit fee
- cancellation 7 to 3 days before the scheduled date: 75% of the audit fee
- cancellation 2 days before the scheduled date: 100% of the audit fee.

Travelling expenses can be invoiced up to 100% if they are not reimbursable or subject to retention/penalties.

6.2. TERMS OF PAYMENT

6.2.1. COLLECTING PAYMENT

LABORATOIRE NATIONAL DE METROLOGIE ET D'ESSAIS, the mandated body, is empowered to collect all payments.

Invoices issued by LNE must be paid within 45 days.

The applicant or holder must settle these invoices under the terms set out: any failure on the part of the holder will prevent LNE from exercising the inspection and operating responsibilities incumbent on it by virtue of these regulations.

If the first enforcement order, sent by registered letter with acknowledgement of receipt, does not result in payment of the total amount due within one month, LNE will be entitled to take precautionary measures with regard to the certifications issued under the NF mark, for all the holder's accepted products.

6.2.2. OBTAINING CERTIFICATION

The services correspond to examination of the files, the audits and tests, for each application.

The fee for examination of the file is paid as a single sum when the application is filed and covers file examination, presenting the file to the Committee and the contribution to the general management of the mark.

No fees relating to examination of the application can be refunded, regardless of the result of the examination.

6.2.3. CERTIFIED PRODUCT SURVEILLANCE

Invoicing covers the right to use the NF mark, passed on to AFNOR Certification, file monitoring, the audit and tests.

In the event that approval is given during the year, the amounts invoiced correspond to the services provided; file monitoring (technical investigation of the file) is billed on a pro rata basis.

Once a product has been certified, an annual fee for the right to use the NF mark is invoiced by LNE to the holder and passed on to AFNOR Certification.

This licence fee is intended to cover:

- general operation of the NF mark (monitoring of bodies in the NF network, management of the NF mark committee)
- defence of the NF mark: filing and protecting the mark, legal advice, processing of unauthorised use of the NF mark, legal costs,
- contribution to the general promotion of the NF mark.

The amount relative to the file monitoring (technical examination of the file) remains due even if the certification is withdrawn or suspended following a decision by LNE or at the holder's request.

As long as it remains in the holder's stock of NF-marked products, inspections are maintained as well as the billing of related costs, as file monitoring (technical investigation of the case) is invoiced pro rata temporis.

6.2.4. ADDITIONAL VERIFICATIONS

Costs resulting from additional verifications resulting from a decision by LNE are payable by the applicant/holder, regardless of the results.