



> CERTIFICATION

Drinking water supply systems

NF certification by the CSTB:
Guaranteeing the quality and durability
of products for public works contracts



Guaranteeing the quality and durability of your drinking water supply systems:

> Pressure Piping and Biaxially Oriented Pressure Piping

DT3 and DT5 Pressure Piping and Biaxially Oriented Pressure Piping are especially well-suited to the construction of drinking water supply systems. Public and private principals need to have durable, reliable products installed, the project managers want to secure their projects and avoid problems on the

worksite, while manufacturers want easy access to public calls for tenders. The easily identifiable NF 055 quality mark, issued by the CSTB, an independent and impartial organization authorized by AFNOR Certification, meets these needs.

Simplification of specification and verification for public works contracts

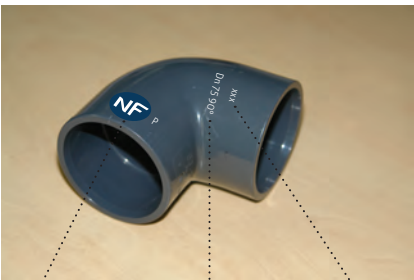
The NF 055 certification facilitates:

- > the specification and analysis of bids by public authorities;
- > the selection by public buyers, ensuring them that the products are certified and comply with regulations and Section 71 of the General Technical Specifications (Fascicule 71);
- > acceptance in batches, required by Section 71 of the General Technical Specifications.

Marking you can trust

- > The certificates indicate all of the certified characteristics that are specific to each product.
- > Clarity of the certified characteristics enables specifiers or users to make the best choices at an early stage for the execution of the construction project.
- > Certificates are available on the website of the CSTB to allow verification that the mark has been issued: <http://evaluation.cstb.fr/certifications-produits-services/produit/tubes-raccords-pvc-non-plastique-rigide/>
- > The logo shows that the NF 055 quality mark has been obtained.
- > NF 055 certified products can be identified by special marking.

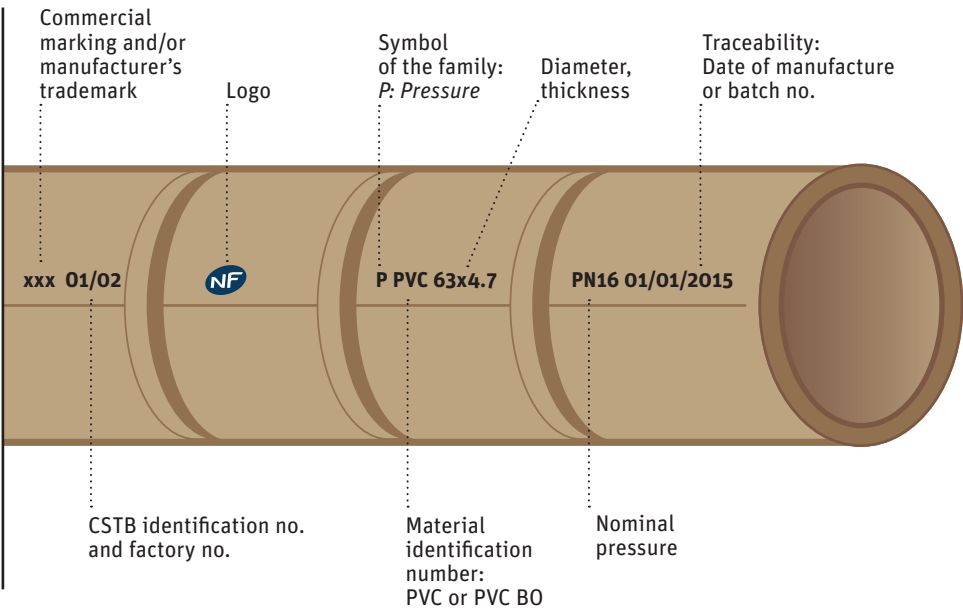
EXAMPLE OF MARKING



Pressure Piping for DN > 50 mm fittings

Nominal size and connection angle values

Commercial marking and/or manufacturer's trademark



Performance certified by the CSTB

The CSTB (Scientific and Technical Center for Building), an independent certification body certified by COFRAC (the French national accreditation body), is authorized by AFNOR Certification to issue the NF mark for unplasticized rigid PVC pipes and fittings (NF055).

> Verification of compliance with the standard

The CSTB verifies the compliance of products with the requirements of the certification standard of the NF 055 mark. This mark is available to all applicants whose products fall within the scope of application of the standard.

> Laboratory testing

The purpose of the tests performed after sampling of the products at the site is to verify the performance levels claimed by the manufacturer and the durability and reliability of the products over time (see Certified characteristics, below).

> Results of the testing

The outcome of the verification (audits and tests) is examined twice a year by the CSTB, with the help of the mark's special committee.

Led by the CSTB, this committee is made up of experts who are representative of the profession, such as industrial companies, specifiers, users and government agencies.

A standard developed by the CSTB

1.

COMPLIANCE WITH PRODUCT STANDARDS

The certification standard of the NF 055 mark applies to thermoplastic products used for building water supply systems. Prime contractors demand durability of pressurized systems of at least 50 years. The NF 055 mark certifies the technical maturity of the certified products, in compliance with the product standards concerning pressurized water supply systems.

2.

CERTIFICATE OF SANITARY CONFORMITY (ACS)

In addition to compliance with French and European standards, the certification standard of the NF 055 mark also certifies the existence of a Certificate of Sanitary Conformity (ACS) for both pipes and joints (PVC pressure pipes and fittings and PVC-BO pipes). The ACS is a legal requirement. Certificates of Sanitary Conformity are valid for five years. NF 055 certification ensures the validity of these certificates.

> Additional requirements for the sanitary compliance of elastomer pipes and joints

The composition must comply with the requirements of the ministerial order dated May 29, 1997 and its appendices (J.O. of June 1, 1997), as well as the related application circulars concerning materials and items used in stationary facilities for the production, treatment and distribution of water for human consumption.

3.

COMPATIBILITY OF BIAXIALLY ORIENTED PIPES WITH OTHER MATERIALS

In order to ensure the functionality and durability of the structure, compatibility with all the accessories is checked.

> Additional requirements for Pipe / Accessory joints

The applicant must provide a formalized operating procedure for testing compatibility between the pipes and the accessories. According to this operating procedure, the applicant must offer at least two clamp saddles and two self-anchored flange connections for five different pipe diameters.

The compatibility of the joints between the PVC-BO pipes and their accessories must be indicated in the commercial documents or the technical manual.

Certified characteristics

The following characteristics undergo type tests or annual or semiannual inspections in the laboratories of the CSTB or in the laboratories of the plant, in the presence of auditors.

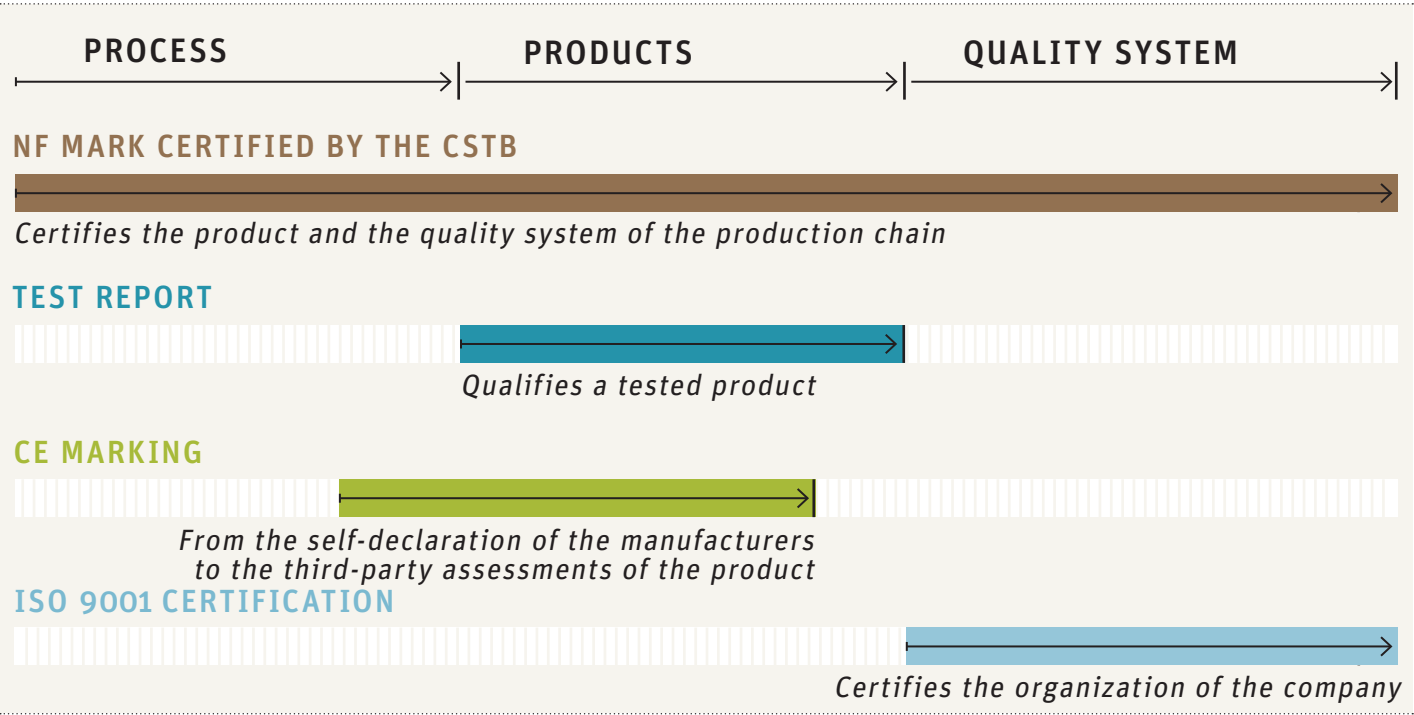
Depending on the products and materials, the following characteristics are certified:

Products concerned	Characteristics certified
Pipes and fittings	Aptitude à la fonction
- NF EN ISO 1452-2 Compact PVC pressure pipes	> Pressure-tightness of the assemblies
	> Sizing characteristics
	> Ring stiffness (for BO pipes)
- NF EN ISO 1452-3 Compact PVC pressure fittings	> Tensile strength
	> Impact strength
	> Resistance to alternating pressure stress conditions (for fittings)
- NF T 54948 Biaxially oriented PVC pressure pipes	
	Other certified characteristics:
	> Compatibility of the assemblies between cast-iron fittings and BO pipes
- NF EN 681-1 or -2 Seals	> Longitudinal heat shrinkage
	> Quality of the elastomer sealing rings
	> Heat behavior (oven test)
	> Density
	> Vicat hardness
	> Verification of the absence of lead





Mark the difference



NF mark	<p>Rigid non-plasticized PVC pipes and fittings (NF 055)</p> <ul style="list-style-type: none">> The NF mark is a voluntary procedure that guarantees the user that the product complies:<ul style="list-style-type: none">- with the product standards and thus the concerned areas of application- with any additional requirements- with all of the requirements of the certification standard, which includes the quality management requirements, allowing continuous control of the production process.> For all of the verifications, the NF mark requires inspection by a third-party organization. In this instance, the organization is the CSTB - the Scientific and Technical Center for Building, a public stakeholder serving innovation in construction and one of the first European certifiers of construction products, which grants the right to use the NF 055 mark.
Test report	<ul style="list-style-type: none">> A test report providing the results of measurements. The test report is not a certification of products within the meaning of Article L 115-27 of the Consumer Code.
CE marking	<ul style="list-style-type: none">> CE marking is the responsibility of the manufacturers, who must declare the performance of the key characteristics of their products, which are regulated.> To date, components that are certified NF 055 are not subject to CE marking.
ISO 9001 Quality System Certification	<ul style="list-style-type: none">> The ISO 9001 certification certifies a company's quality management system. It enables the manufacturer to substantiate that its organization enables the company to meet its customers' requirements.> The ISO 9001 certification is not a product certification.

Where can you get NF 055-certified products?

From companies whose products bear the NF 055 mark, and their distributors.

List of NF 055 products and standards:

www.marque-nf.com and **www.evaluation.cstb.fr**
([evaluation.cstb.fr/certifications-produits-services/
produit/tubes-raccords-pvc-non-plastifie-rigide/](http://evaluation.cstb.fr/certifications-produits-services/produit/tubes-raccords-pvc-non-plastifie-rigide/))

The NF 055 mark, “Rigid non-Plasticized PVC pipes and fittings” also applies to:

- > Pipes and fittings for water drainage systems.
- > Pipes for irrigation systems.
- > Pipes and fittings for rainwater trap drainage systems.



CONTACT

PIPING SYSTEMS

Gildas Moreau

> gildas.moreau@cstb.fr

SCIENTIFIC AND TECHNICAL CENTER FOR BUILDING

84 avenue Jean Jaurès – Champs-sur-Marne – 77447 Marne-la-Vallée cedex 2

Tel: +33 (0)1 64 68 82 82 – www.cstb.fr

MARNE-LA-VALLÉE / PARIS / GRENOBLE / NANTES / SOPHIA ANTIPOLIS

CSTB
le futur en construction